



# Employment and Social Developments in Europe 2015



# Employment and Social Developments in Europe 2015

**European Commission**

Directorate-General for Employment, Social Affairs and Inclusion  
Directorate A

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# Foreword



The Employment and Social Developments Review presents evidence and analysis that will help policy makers identify challenges, set priorities and develop the most appropriate policy responses. This year's edition confirms that in many parts of the European Union, we still have a long way to go; the 2008 financial crisis has taken a heavy toll on our economies and social fabric but we are now turning a corner.

There are some signs that the employment and social situation in the EU is slowly improving. Unemployment is falling, and employment is rising, especially in those countries that were hit hardest by the crisis. After a slight decrease in 2013, following three consecutive years on the rise, the proportion of persons at risk of poverty or social exclusion in the EU in 2014 remains broadly stable. While these are first signs of a much needed convergence in Member States' employment and social performance restarting, discrepancies remain large.

Furthermore, we need to translate the more favourable macro-economic environment into more and better opportunities for people in the EU. This is particularly the case for the 11 million long-term unemployed and the 4.6 million unemployed young people in the EU, whose number is only now starting to go down. The Council adopted in December 2015 a recommendation on long-term unemployment which represents a strong commitment by the Member States to offer better pathways into employment and out of poverty.

To build upon this nascent growth, Europe needs to invest more in the skills of people, facilitate mobility, modernise labour law and social protection systems to be fit-for-purpose in the 21<sup>st</sup> century, as well as foster entrepreneurship and innovation. This is a broad reform agenda, to which the Commission intends to make a significant contribution. Indeed, the Commission work programme 2016 foresees a pillar of social rights, a new skills agenda, a fresh start to support working parents and people with care responsibilities, a labour mobility package and proposals for a better management of migration, including their successful social integration.

This Review provides much of the evidence that will underpin our work on these ambitious initiatives. In addition, it highlights the important role of social dialogue in tackling these challenges and achieving a well-functioning social market economy.

I hope that this edition of the Employment and Social Developments Review will prove a valuable tool for policy makers, social partners, civil society, researchers and citizens and that it will enhance the quality of the public debate on employment and social issues in Europe.

A handwritten signature in blue ink, consisting of a series of loops and a long horizontal stroke at the end.

**Marianne Thyssen**  
Commissioner for Employment,  
Social Affairs, Skills and Labour Mobility



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# Executive Summary

*The Employment and Social Developments in Europe (ESDE) review analytically underpins the policy actions of the European Union and its Member States in pursuit of the Europe 2020 employment and social goals. As in previous years, the opening section of the ESDE review provides an overview of the most recent developments, trends and challenges in the employment and social fields. This is followed by an in-depth look into several themes linked to the Commission's current employment and social policy agenda.*

*The ESDE review provides useful analytical insights that feed into the European Semester process, the Mobility Package, the EU Blue Card, the Skills Package and the development of the European Pillar of Social Rights initiative.*

*The ESDE is divided into three thematic parts focusing respectively on 'Promoting Job Creation', 'Improving Labour Markets' Efficiency', and 'Investing in People'. Each part is in turn divided into individual chapters. A summary of the key findings per chapter is provided below:*

## **PART I: PROMOTING JOB CREATION**

### ***Chapter I.1: Boosting job creation through self-employment and entrepreneurship***

Promoting self-employment and entrepreneurship has the potential to create jobs and give unemployed and disadvantaged people an opportunity to fully participate in society and the economy.

About 16% of all employed people in the EU are self-employed. More than two thirds are solo self-employed, though the share varies across Member States. Women account for only a third of those self-employed and have a much lower propensity to hire employees than men. Micro-enterprises account for around 30% of all EU employment, of which nearly a third is in the wholesale/retail and motor vehicle and motorcycle repair sectors. In several Member States, a significant share of those self-employed is employed in the agriculture, forestry and fishing sectors. The data suggests that some groups, such as young people, women, older people and ethnic minorities, may be facing stronger barriers to starting and expanding a business.

*Micro-enterprises account for almost a third of total employment in the EU*

*Social and labour market policies combined with other relevant policies can support start-ups...*

Comparable survey data point to significant bottlenecks in stimulating self-employment and entrepreneurship. In 2014, less than 50% of 18-64 year olds in the EU believed that they had the necessary skills and knowledge to start a business. Evidence gathered by the OECD and the Commission suggests that improved framework conditions (including access to financing, efficient public administration, taxation, and business development support services), stronger entrepreneurship education and well-targeted social and labour market policies could help overcome existing bottlenecks and address the challenges faced by people who have adverse starting conditions. Policies put forward include developing facilities for child and elderly care, providing financial support to those who are long-term unemployed and tackling gender and age discrimination.

*... as well as business expansion in a sustainable and inclusive way*

Empirical evidence indicates that most start-ups remain small with limited job growth. Research results emphasise that labour market and social policies can contribute to strengthening the capacity of one-person start-ups and micro and small enterprises to sustain job creation. Such policies include encouraging managerial skill formation especially among women and young people, supporting micro and small firms' innovation capacity, and reducing hiring and firing costs.

### *Chapter 1.2: Labour legislation in support of job creation*

Labour legislation is seen as a key determinant of job creation together with other institutional, public administration and product market conditions. In the EU, it reflects more than two centuries of history, with country differences in rules and procedures resulting in different legal and institutional traditions (e.g. civil law vs. common law in national systems). Labour legislation was adopted at the EU level to ensure a level playing field in the EU single market by setting minimum requirements in a number of areas. The aim is to remove distortions and unfair or artificial advantages resulting from national laws and practices.

*The variety of contracts has increased as a result of socio-economic and structural changes...*

Structural changes such as technological progress and globalisation have an impact on the world of work and therefore labour legislation requirements. Technology can improve the protection of workers and allow for more flexible working arrangements, thereby encouraging labour market participation of women, older workers, those with family responsibilities, disabled workers and others whose labour market participation can be boosted by flexible working arrangements. However, it challenges the traditional concepts of work organisation, working time, employment relationship and place of work.

As a result, there is an increased diversity of employment contracts in the Member States. Atypical or non-standard work contracts go beyond regulating part-time, fixed-term or seasonal work, to cover a wide range of situations including on-demand, on-call, casual or intermittent or agency work, project contracts, job-sharing, lending and pool arrangements, and crowd-sourcing. Contracts can be classified along three dimensions: employment relationships; work patterns; and level of networking and cooperation.

Research suggests that some new contracts (employee sharing, job sharing and interim management) offer a potential win-win situation, while others (casual work or crowd employment) raise serious concerns as they bring about work uncertainty, spells of (uncovered) unemployment, fewer working hours, less social protection and lower autonomy in work decisions. This means that both flexibility and security need to be achieved. Work under the envisaged European Pillar of Social Rights initiative is ongoing. It aims to take into account the changing realities of Europe's societies and world of work when modernising and addressing the gaps in existing legislation and identifying benchmarks built on best practices with a view to promoting upwards convergence of employment and social performance.

*...sometimes leading to segmentation of labour markets*

The increased diversity of contractual conditions can result in labour market segmentation whereby groups of workers experience multiple disadvantages in terms of their working conditions, rewards (wages, training and career opportunities) and the risks they run, while facing barriers to mobility towards the better protected jobs. Segmented labour markets typically display a large use of (notably involuntary) temporary contracts, low transition rates from temporary to permanent regular contracts, or high shares of involuntary part-time contracts. Large differences exist across the EU: the share of workers with involuntary temporary contracts varies from 8.8% in Austria to 94.3% in Cyprus; the share of employees moving from temporary to permanent employment per year varies from about 10% in France to more than 60% in Estonia; the share of involuntary part-time

workers ranges from less than 12% in Slovenia, Belgium, Austria and the Netherlands to more than 60% in Bulgaria, Greece, Spain, Italy and Cyprus.

Employment Protection Legislation (EPL) as part of labour legislation varies across the EU for example in terms of worker protection in cases of unfair dismissal or in terms of severance payments. Since 2008, several Member States have carried out comprehensive reforms of their EPL for open-ended contracts and collective dismissals. The efficiency of civil courts is also highly heterogeneous across the EU: in 2013, civil or commercial lawsuits in first instance lasted between 53 days in Luxembourg and 750 days in Malta. Available analysis indicates that an inefficient civil justice system can be a significant factor compounding the effects of strict EPL on employment flows as excessive trial lengths increase uncertainty about the resolution of employment law cases. In addition, combined with strict EPL for regular contracts, the length of lawsuits can reduce job-finding and dismissal rates, thereby hampering labour market dynamics.

*The effects of employment protection legislation are often compounded by the functioning of civil justice*

## PART II: IMPROVING LABOUR MARKETS' EFFICIENCY

### Chapter II.1: Preventing and fighting long-term unemployment

Long-term unemployment (unemployed for at least a year) affects about 11 million people, two thirds of whom (around 7 million) have been unemployed for at least two consecutive years. Although unemployment has been declining since 2013, long-term unemployment has only recently stopped rising. Long unemployment spells result in lower job-finding rates, a trend which has worsened during the crisis. The long-term unemployed currently have about half the chance of finding employment compared to the short-term unemployed. Long-term unemployment predominantly affects the low-skilled, the young (20-29) and workers coming from non-EU countries. And while older workers are less likely to become unemployed than other workers, once long-term unemployed, they face greater difficulties in finding a new job.

*Long-term unemployment is becoming one of the main challenges of the EU...*

Based on Labour Force Survey data for 2014, on average, 30% of the long-term unemployed were 'not registered with the Public Employment Services (PES)'; less than 30% 'received unemployment benefits' (less than 40% for the short-term unemployed) and less than 10% 'took part in training in the last 4 weeks'. Low participation in lifelong learning and training especially affects the low-skilled whose chances of finding a job tend to be rather bleak because they lack the skills needed. There are also wide variations between Member States in terms of policy coverage of the long-term unemployed, which partly explains differences in the effectiveness of the policies.

*...but policy intervention does not reach all*

The analysis shows that, all other things being equal, the long-term unemployed who have participated in training or education and have previous work experience are far more likely to move to a sustainable job, especially among the low-skilled. Being registered with the PES, especially in combination with receiving unemployment benefits, also significantly increases the chances of finding sustainable employment but the relevance of receiving benefits has declined in recent years and varies greatly across Member States.

*Training significantly increases the chances of moving to a sustainable job...*

Public Employment Service interventions, training and income support tend to have a greater impact on job-finding rates when they are combined and complementary. Their impact also depends on the quality of their delivery and design and varies a lot across population groups. This might suggest the need for more individualisation and targeting of policy measures.

*...especially when combined with complementary policy measures*

### Chapter II.2: Mobility and migration in the EU: opportunities and challenges

Mobility has been increasing across the EU over the past two decades, particularly after the EU's enlargement to the east. Yet, EU mobility is low compared to mobility in the US. Four percent of the EU's population aged between 15 and 64 years are living in an EU Member State other than their Member State of birth (mobile EU people). This compares to the situation in the US where, in the absence of a language barrier, nearly 30% of the working-age population live in a different state than that of their birth. In 2014, there were fewer than 15 million mobile people in the EU, up from slightly less than 12 million in 2006. This is roughly half the number of third-country (non-EU) migrants: there were 28 million third-country migrants aged between 15 and 64 years living in the EU. While most mobile EU people move primarily for

*Internal mobility and third-country migration can increase the EU's growth potential*

work-related reasons, migrants from third countries come to the EU for work, to join family members, for education or training, or to seek international protection.

In addition to global competitive challenges, future EU growth will be under greater pressure due to the steady decline of the working-age population in most EU Member States, which may combine or exacerbate skills mismatch in regional labour markets, often resulting in brain drain. In order to enhance its growth potential, the EU will need to achieve higher employment rates (including through intra-EU mobility), boost productivity growth, and be an attractive destination for the talent and entrepreneurship of students, researchers and workers (outside the EU). Assume the EU will achieve its 75% employment rate target by 2020. After 2020, if the EU is to keep its economic dependency ratio (number of non-employed people per one employed) constant, it will need an additional 30 million people in work in 2060, through increasing the employment rate and additional migration.

*Labour market performance of mobile EU citizens is higher than that of the native population*

Analysis shows that mobile EU workers tend to be young and well-educated and are attracted by well-performing labour markets where unemployment is low. They tend to have higher chances of finding a job and overall better employment prospects than the native population. For example, mobile EU people of working age who come from EU-10 Member States which joined the EU in 2004 and live in the host country for up to 10 years have an almost 50% greater chance of being in employment than the native population. Once unemployed or inactive, their chance of finding a job is almost 80% higher than that of natives. Intra-EU mobility can therefore have an overall positive impact on employment and improve labour market dynamics and labour allocation.

Evidence suggests that the EU fails to reap the full benefits of mobility. First, intra-EU mobility remains a modest phenomenon. Second, a 'migrant allocation index' reveals that mobile EU people<sup>(1)</sup> (as well as third-country migrants) tend to be under-represented in the host countries' fastest-growing sectors. And finally, mobile EU people tend to work below their formal qualification levels.

*Despite recent progress, third-country migrants still lack qualifications*

Migrants from third countries stand a comparatively lower chance of being employed than natives and EU-10 people. Qualifications may play a role, since a large portion of third-country migrants have low levels of education. Moreover, in many Member States a large share of third-country migrants did not come to fill their host countries' needs for skilled labour, but rather for family reasons, or, in some Member States, for international protection. Analysis also shows that the share of mobile EU people and third-country migrants with at least upper secondary education who work in low-skilled occupations (referred to as 'over-qualification' or 'brain waste') is significantly higher than that of the native population. Both mobile EU people and third-country migrants are at greater risk of working under temporary employment contracts compared to the native population. Evidence also points to a substantial wage penalty of foreign-born people working in EU Member States. Growth prospects could be enhanced by enabling mobile people to better capitalise on their formal qualifications and by promoting skills-oriented third-country migration.

*Foreign-born people overall do not pose a burden on welfare systems, but pressures on services provision can occur at local level*

The analysis suggests that foreign-born people overall do not pose a burden on the welfare systems of the host countries. In general, all groups of foreign-born people are less likely to receive benefits than native-born people when controlling for their labour market status. Potential and significant pressures on the provision of services can occur at local level. This may be especially the case if local funding mechanisms and public services provision are not adjusted accordingly to serve a larger population.

### **Chapter II.3: Social dialogue**

Social dialogue balances workers' and employers' interests and thereby contributes to both economic competitiveness and social cohesion. The EU is characterised by a wide variety of national systems of industrial relations. This diversity is recognised in the Treaty on the Functioning of the European Union. Successive rounds of enlargement of the EU have increased this diversity.

(1) The analysis on mobility and migration in this Review is based on the country of birth and the country of residence. Unless stated differently, the term 'EU mobile people' refers to people born in the EU who live in an EU Member State other than their country of birth, whereas 'third-country migrants' are people born outside the EU who are residents in an EU Member State. It should be noted that some 'EU mobile people' may not be EU citizens, and that people born as EU citizens outside the EU are included in the 'third-country migrants'.

Most Member States have at least one formal structure through which social partners are involved in policy-making. These vary considerably in number, objective, scope and composition. In addition, there may be informal or temporary structures which may have more or less influence.

Regardless of modalities specific to each Member State, social dialogue relies on social partners' capacity to organise workers and employers, to speak on their behalf and to find common ground. While this capacity differs widely across countries, several common trends challenge the existing collective bargaining systems in most Member States. Economic specialisation and new forms of employment complicate the organisation and representation of workers and employers.

*Social dialogue has been faced with challenges in recent years*

Trade union density – measured by the share of all employees that are trade union members – has been on the decline since the 1980s in the majority of Member States. Today, approximately one out of four employees is a trade union member. This has been driven to a certain extent by an increasing number of new employees who choose not to join a trade union. This trend appears to have slowed during the recent crisis, mainly due to a strong fall in employment. The trade union density is substantially lower among younger workers, workers on fixed-term contracts, in smaller establishments and in the private sector. Also, smaller companies are less likely to join employers' organisations than larger ones.

International competition pushes for a close link between costs and productivity, with a larger role for bargaining at company level. Some national systems have adapted gradually to these shifts, as workers and employers' representatives jointly organised the decentralisation of bargaining. In other Member States, the recent crisis has triggered sudden and deep reforms.

Interactions between public authorities and social partners on policy development and implementation take different forms. They include exchanges of information, consultation, and negotiations leading to agreements. Through these, social partners have been involved in the design and implementation of several major reforms and policies in recent years. This includes reforms in the framework of the European Semester in such areas as pensions, unemployment insurance, EPL and collective bargaining. These reforms at times entail a delicate balance between building broad consensus and addressing pressing challenges. This highlights the relevance of social dialogue in terms of promoting a sustainable and inclusive recovery. For social dialogue to play this role, efforts to build and develop social partners' capacity might be needed, particularly in those Member States where social dialogue is weak or has weakened due to the economic crisis.

*Social dialogue will be crucial in promoting a sustainable and inclusive recovery*

## PART III: REMOVING OBSTACLES TO JOB CREATION

### *Chapter III.1: Supporting skills development and matching in the EU*

A skilled workforce is crucial to a resilient and competitive economy and to the smooth functioning of the labour market, especially in the context of population ageing, technological change and globalisation which create new opportunities but demand ever changing skills and competences.

As many as four out of ten EU employers surveyed in 2013 reported difficulties in finding staff with the right skills. Further analysis indicates that less than half of the recruitment difficulties constitute genuine skill shortages, while almost a third can be attributed to unattractive pay. Atypical working hours and lack of training opportunities on the job, together with unattractive pay, reduce the ability of employers to attract workers. In addition, research shows that the companies which are unable to find workers with the required skills are often those unwilling to offer long-term contracts.

*Factors behind perceived skill shortages*

Employers can therefore play a role in reducing skill shortages, including through upgrading the skills of their staff. Lastly, employers who focus their hiring practices on candidates' 'potential' rather than solely on experience are more attractive to job applicants.

*Monitoring and forecasting of employment by sector is key for appropriate skill provision*

Evidence suggests that lack of skills has affected the new occupations of the green and digital economy. Apart from the high-end occupations in the new technologies, the demand has been strong in many traditional sectors of the economy such as health, engineering and teaching. Projected employment change in the EU between 2013 and 2025 suggests that 24% of all job opportunities (both newly created jobs and replacement needs) will be in the 'professionals' group, followed by 'shops and market sales workers' (16%), while 'plant and machine operators' will have the lowest share (4%). All occupational categories are likely to experience demand growth due to high replacement needs linked to demographic trends; however, relatively few new jobs will be created in medium-skilled occupations.

*Training opportunities depend on the size of the company*

Adult learning and professional training plays an important role in ensuring that skills are updated in view of structural drivers of change. An average of 10.7% of adults aged 25-64 in the EU stated that they attended some education or training at least once in 2014. However, training opportunities provided by employers depend on the size of the company: large companies (250+ employees) provide training opportunities on average for half of their employees; medium-sized companies (50-250 employees) for a third; and small companies (10-50 employees) for only a quarter.

### *Chapter III.2: The efficiency and effectiveness of social protection systems over the life course*

*A shift in social protection expenditure from unemployment and family to pension and health*

In the initial years of the crisis, social protection expenditure increased significantly. As expected, expenditure on unemployment, family, social exclusion and housing benefits increased sharply especially in 2009. However, health and pension expenditure also increased more than usual in real terms, which is not necessarily the most efficient stabilisation mechanism. Further, in 2012 expenditure did not respond to the second economic dip, which translated into a weakening of the stabilisation function of social protection systems. These developments have raised research and policy interest in social protection systems' efficiency and effectiveness. Since the early 2000s, the structure of social protection expenditure in the EU has witnessed a gradual shift from unemployment and family benefits to pension and health benefits. This raises the question of whether spending on these latter benefits could be made better tailored to the economic cycle or whether there are other possibilities for channelling available resources to the social protection areas which are comparatively underfunded, notably those that support social investment and ensure adequate income while facilitating participation in the labour market.

*Comprehensive family policies can improve employment and reduce child poverty*

In the EU, only 61.7% of mothers (aged 25-49) with children below 6 years are employed, compared to 76.9% of those without children. But there are large cross-country variations. One of the key issues in increasing labour force participation of women is therefore the compatibility of child-rearing and employment. The analysis finds that family policies, especially high-quality childcare services accessible to all children, and availability of part-time work, are positively associated with employment of women with children. Other policies that can help reconciling family and work life include access to parental leave, which can help increase the labour market participation of women.

In the EU, 64.3% of children under the age of 18 who live in jobless households live below the poverty threshold. Both the mother's working status and the number of additional workers in the household are the main determinants of child poverty. The mother's educational level, access to family benefits in low-income households and childcare are also key determinants of child poverty. This suggests that policies which support family incomes through cash benefits combined with measures to facilitate mothers' employment help reduce child poverty.

*The improvement of older workers' employment in recent years is the result of higher educational attainment, pension reforms, flexible working arrangements, and access to training and to care services*

The analysis shows that the improvement in the employment rate of older workers in the past decade is linked to a number of factors. The workforce has gradually become better educated, and pension reforms implemented in recent decades have encouraged longer working lives for both men and women. In spite of this improvement, there remain very sharp differences in labour market attachment at an older age, with for instance significant differences in retention and rehiring rates. The analysis shows that other dimensions also play a role in ensuring longer working lives, including flexible working time and work organisation, access to training by older workers, long-term care, and childcare provision.



# Key Features <sup>(1)</sup>

## 1. INTRODUCTION

This chapter describes the macro-economic, labour market and social developments in recent years, with a particular focus on the gradual labour market recovery and the social developments observed since 2013. The analysis also acknowledges the role of key structural changes such as population ageing that will have a significant impact on Europe's labour markets and social protection systems in the coming years.

The impact of the crisis has differed widely across Member States. Despite some signs of convergence since 2013 – with a reduction in unemployment rates and an increase in employment in the countries that have been hit hardest by the recent crisis – differences remain and are now much larger than they were in 2008. In some countries, income inequalities and poverty have also increased significantly, despite the recent stabilisation or even improvement in the general economic and labour market situation.

Challenges remain. While improved, the economic outlook remains moderate

and investment levels are significantly lower than on the eve of the crisis, with large disparities across Member States. Employment growth has been gradual but faster than the relatively weak economic growth would suggest. A stronger economic recovery based on stronger physical and human capital investment is therefore necessary to sustain labour market recovery.

While there are signs of economic recovery in all Member States, unemployment rates remain particularly high in some, with differences in both employment and unemployment rates now much greater than before the crisis. This divergence does not only result from asymmetries in the size and nature of the initial economic shocks but also from the uneven capacity of Member States' economies and institutions to absorb the shocks and limits their impact on labour markets and people's incomes.

Restoring convergence will depend on improving the resilience of the most vulnerable economies, notably by removing obstacles to growth and job creation and by strengthening labour market and welfare institutions. This is particularly important in EMU countries, where monetary and fiscal adjustment mechanisms are not available or limited. In this context, the 2016 Annual

Growth Survey (AGS)<sup>(2)</sup> sets out what more can be done at EU level to help Member States support growth, reinforce economic convergence, create jobs and strengthen social fairness. The Commission proposes to pursue an integrated approach to economic policy built around: boosting investment, accelerating structural reforms and pursuing responsible growth-friendly fiscal consolidation.

## 2. ECONOMIC RECOVERY IS FIRMING UP, BUT GROWTH REMAINS MODERATE AND IN NEED OF HIGHER INVESTMENT

Following more than a decade of real average annual GDP growth rates of over 2%, the EU experienced a double-dip recession in both 2009 and 2012 (**Chart 1** and **Table 1**) before the first signs of recovery in 2013. The recession was deeper and longer for the euro area (EA) with real annual GDP growth in the EA still negative in 2013. Since the beginning of 2014, the economic recovery has strengthened in both the EU and the EA, although at a modest pace, with real annual GDP growth reaching 1.9% in the EU and 1.5% in the EA between the second

<sup>(1)</sup> By Ana Xavier and Isabelle Maquet with the contributions of Magda Grzegorzewska, David Arranz and Eric Meyermans.

<sup>(2)</sup> See [http://ec.europa.eu/europe2020/making-it-happen/annual-growth-surveys/index\\_en.htm](http://ec.europa.eu/europe2020/making-it-happen/annual-growth-surveys/index_en.htm).

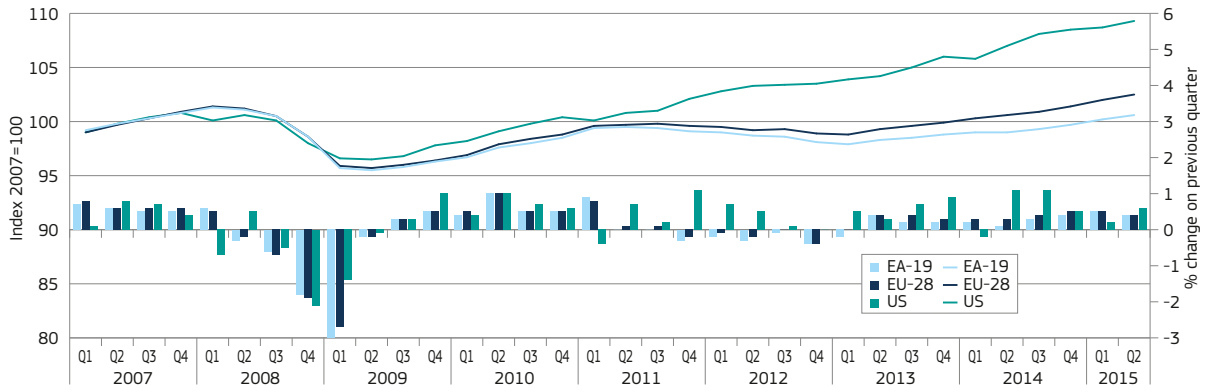
quarter of 2014 and the second quarter of 2015. As a result, GDP in the EU and in the EA has now recovered to 2008 levels (**Chart 1**). In contrast, GDP growth in the United States over this period has been considerably stronger than in the EU or EA. As a

result, GDP in the United States is now well above its pre-crisis level (**Chart 1**).

In the year to the second quarter of 2015, real GDP growth increased in virtually all Member States (**Chart 2**).

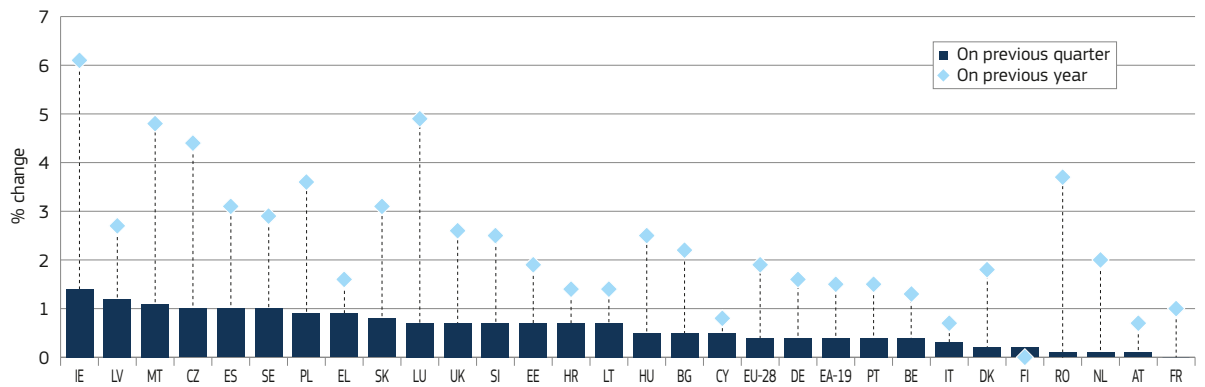
After remaining just above 2% in the EU and EA between 2000 and 2007, inflation dropped to very low levels, between 0% and 1%, during the crisis (**Chart 3**), though it now appears to be increasing.

Chart 1: Real GDP - EU, EA and US, 2007-2015, index 2007=100



Source: Eurostat, National Accounts, data seasonally adjusted [namq\_gdp\_k].

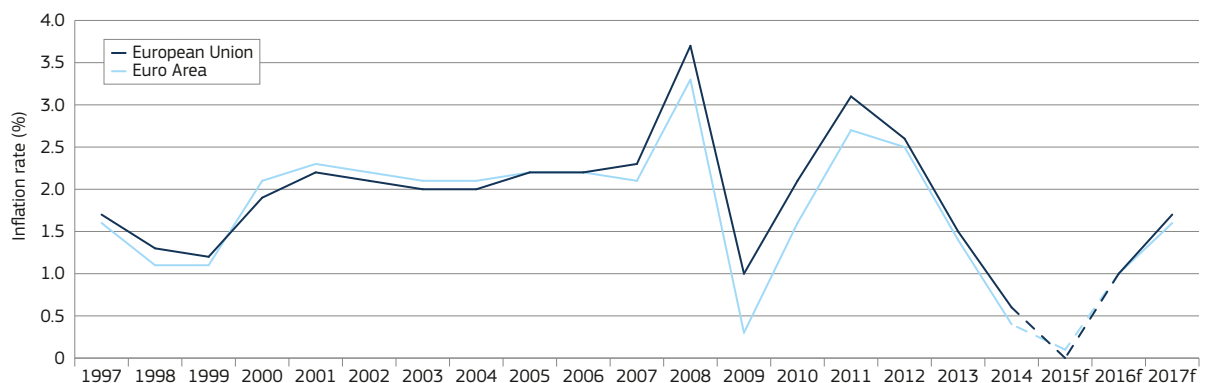
Chart 2: Real GDP growth - EU, EA and Member States, 2015Q2



Source: Eurostat, National Accounts, data seasonally adjusted [namq\_10\_gdp].

Note: EE MT: ESTAT News release; IE LU: 2015Q1.

Chart 3: Inflation rate based on the Harmonised consumer price index, 2005=100



Source: Eurostat and Commission services AMECO (forecast).

Note: 2015, 2016 and 2017 are forecast values.



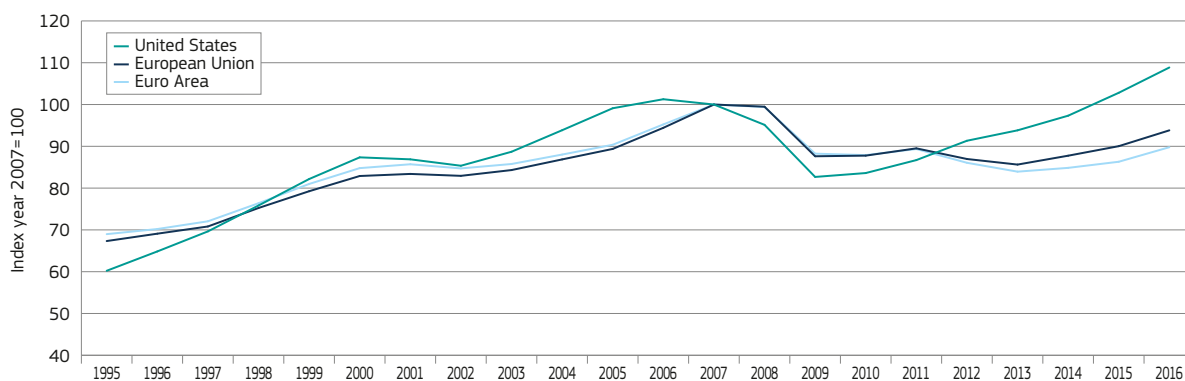
Table 1: Real GDP growth (annual) for the EU and EA, 1994-2016: Real GDP growth (annual) for the EU and EA, 1994-2017

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Growth real GDP EU	NA	NA	1.9%	2.7%	3.0%	3.0%	3.9%	2.2%	1.3%	1.5%	2.5%	2.0%	3.4%	3.1%	0.5%	-4.4%	2.1%	1.7%	-0.5%	0.04%	1.4%	1.9%	2.0%	2.1%
Growth real GDP EA	2.5%	2.4%	1.6%	2.6%	2.9%	2.9%	3.8%	2.1%	0.9%	0.7%	2.2%	1.7%	3.3%	3.1%	0.5%	-4.5%	2.0%	1.6%	-0.8%	-0.4%	0.9%	1.6%	1.8%	1.9%

Source: Commission services, AMECO.

Note: 2015, 2016 and 2017 are forecast values.

Chart 4: Real gross fixed capital formation for the EU, EA and US (index year 2007 = 100)



Source: Commission services, AMECO.

Note: 2015 and 2016 are forecast values

The economic recovery is now in its third year with the 2015-2017 economic outlook showing a continuous though moderate recovery ahead (Table 1). Real annual GDP growth is expected to reach 1.9% in 2015, 2.0% in 2016 and 2.1% in 2017 in the EU (European Economic Forecast, autumn 2015)<sup>(3)</sup>. For the EA, real annual GDP growth is expected to reach 1.6% in 2015, 1.8% in 2016 and 1.9% in 2017. Annual inflation (the rise in consumer prices) is expected to rise from 0% in the EU in 2015 to 1.1% in 2016 and 1.6% in 2017. In the EA, it is expected to increase from 0.1% in 2015, to 1% in 2016 and 1.6% in 2017 (Chart 3).

Three main elements have created a more favourable environment for growth so far: a) decreasing oil prices that should reduce production costs and free up consumer spending for other purchases; b) the depreciation of the euro that should benefit EA exports; and c) an accommodating monetary policy (quantitative easing) that should counteract the very low levels of inflation and the disinflation

trends observed in some countries. As the impact of some of these factors appears to be fading with the slowdown in emerging economies and global trade, and in a context of geopolitical tensions, the gradual recovery in employment, the resulting increase in disposable household income, easier access to credit, progress in financial deleveraging and higher investment may contribute to increasing domestic demand and support economic growth. The implementation of structural reforms in recent years, including in countries hit hardest by the crisis, may also support growth further.

As the EU and EA economy remains on a recovery course, current real GDP growth continues to be weaker than before the crisis and improvements are unevenly spread, with GDP growth rates uneven across EU Member States and unstable or even negative in some (Chart 2). The forecast growth for 2015, 2016 and 2017 remains moderate (Table 1) and in the EA convergence is not happening fast enough. Low levels of investment (see below), combined with persistent and very high levels of private and public debt and moderate economic growth prospects in the EU and EA, may, in turn,

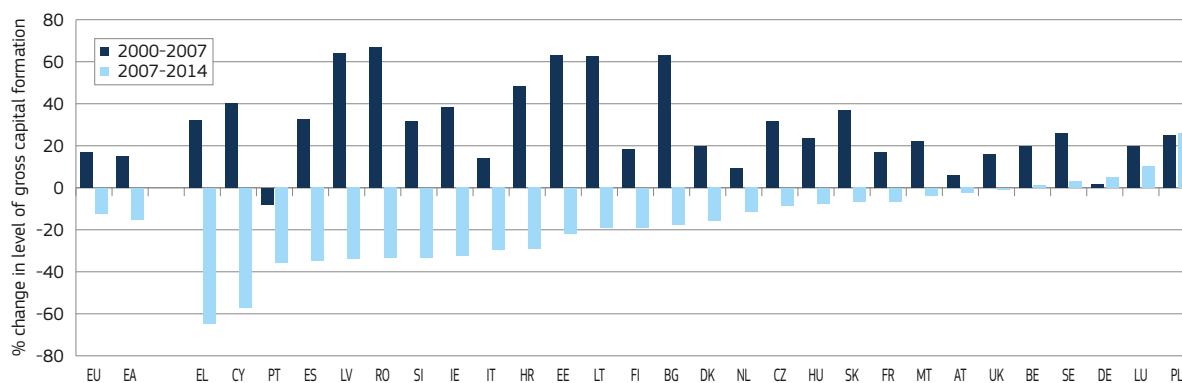
limit the labour market recovery in the near future. In the EU, employment is expected to grow by 1% in 2015, 0.9% in 2016 and 0.9% in 2017 (0.9%, 0.9% and 1% respectively for the EA), while unemployment is due to continue declining slowly and with substantial disparities across Member States. The unemployment rate is expected to fall from 9.5% in 2015 to 9.2% and 8.9% in 2016 and 2017, respectively.

While levels of GDP and private consumption in the EU-28 are roughly back to pre-crisis levels, investment levels in 2014 were more than 12% below their 2007 peak (Chart 4). Following several years of investment growth, real gross fixed capital formation<sup>(4)</sup> dropped by more than EUR 420 billion in real terms (in 2010 prices) between 2007 and 2013. In 2014, investment in the EU

<sup>(4)</sup> Fixed capital is defined as the set of assets such as Property, Plant and Equipment used in the productive process and that a firm holds for over a year. For example, if a firm builds a new factory or invests in new machines, this will be an accumulation of fixed capital. Gross fixed capital formation (net investment) is the net amount of fixed capital accumulation. Gross fixed capital formation is included in the expenditure approach to national income accounting. Real here stands for constant prices.

<sup>(3)</sup> See [http://ec.europa.eu/economy\\_finance/eu\\_forecasts/2015\\_autumn\\_forecast\\_en.htm](http://ec.europa.eu/economy_finance/eu_forecasts/2015_autumn_forecast_en.htm).

Chart 5: Real gross fixed capital formation for EU Member States (% change between 2000 and 2007, and 2007 and 2014)



Source: Commission services, AMECO.

Note: 2015 and 2016 are forecast values.

recovered slightly, by about EUR 62 billion (2010 prices), but remained significantly below the 2007 levels. In the EA, gross fixed capital formation followed a similar path and in 2014 was still 15% below the peak levels of 2007. In comparison, investment in the United States in 2014 was broadly back to its 2006/2007 level due in large part to developments in the energy sector.

In certain Member States, the decline in investment has been dramatic. In 2014, only a few countries (Belgium, Germany, Luxembourg, Poland, Sweden and the United Kingdom) were around or above their 2007 levels, while in others (Ireland, Greece, Spain, Cyprus, Latvia, Portugal, Romania and Slovenia) real gross fixed capital formation had declined by 30% or more compared to 2007 (**Chart 5**).

Such low investment is associated with low investor confidence, low demand, difficulties in accessing credit, and increased aversion to risk by investors<sup>(5)</sup>. Weak investment slows down economic recovery in the short term and, in the longer term, holds back employment levels and job creation as well as productivity and growth.

Since the crisis, investment has evolved differently across countries. According to the Commission 2015 autumn forecast, investment is set to accelerate but the recovery might remain subdued in view of, inter alia, weak demand, corporate deleveraging or policy uncertainty, depending on the countries. Indeed, the factors that

influence investment – including macro-economic ones, and/or the extent to which they do influence investment, are country specific.

For instance, in some countries, investment has been relatively resilient, but there are different patterns in terms of levels and composition of investment. In some other countries that were heavily hit by the crisis, both private and public investments collapsed with the crisis. This generally reflected a rapid downward adjustment of the housing and corporate capital stock that followed the investment boom that occurred before the crisis without a corresponding boost in terms of total factor productivity. Despite a recent recovery in investment, limited fiscal space, debt overhang in the non-financial corporate sector and problems in access to credit (especially for SMEs), amplified by the fragmentation of the banking sector in the EU continue to weigh on investment capacity especially in these countries. As a result, only a modest recovery in investment trends is expected over the coming years.

In addition, regulatory and non-regulatory barriers to investment remain, and vary in terms of their restrictiveness, complexity or unpredictability. These can result in different investment patterns<sup>(6)</sup>.

To help boost investment, the European Fund for Strategic Investments (EFSI) is now operational, together with the European Investment Advisory Hub. The

European Investment Project Portal will be operational early next year. It will also be possible to combine the EFSI with other EU funds under Horizon 2020, the Connecting Europe Facility and the European Structural and Investment Funds. All these EU programmes are increasingly supporting investments on the ground across Europe, not only physical investment (infrastructure) but also investment in innovation and knowledge, social infrastructure, as well as access to finance for smaller businesses.

### 3. LABOUR MARKETS ARE GRADUALLY RECOVERING BUT SUBSTANTIAL DIFFERENCES REMAIN AND A STRONGER ECONOMIC RECOVERY IS NEEDED

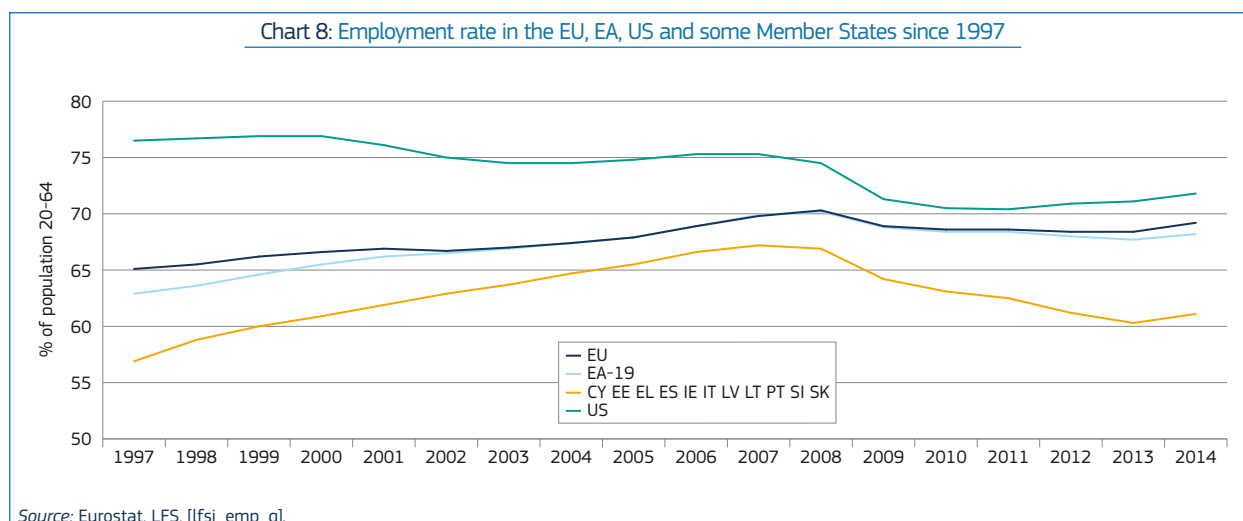
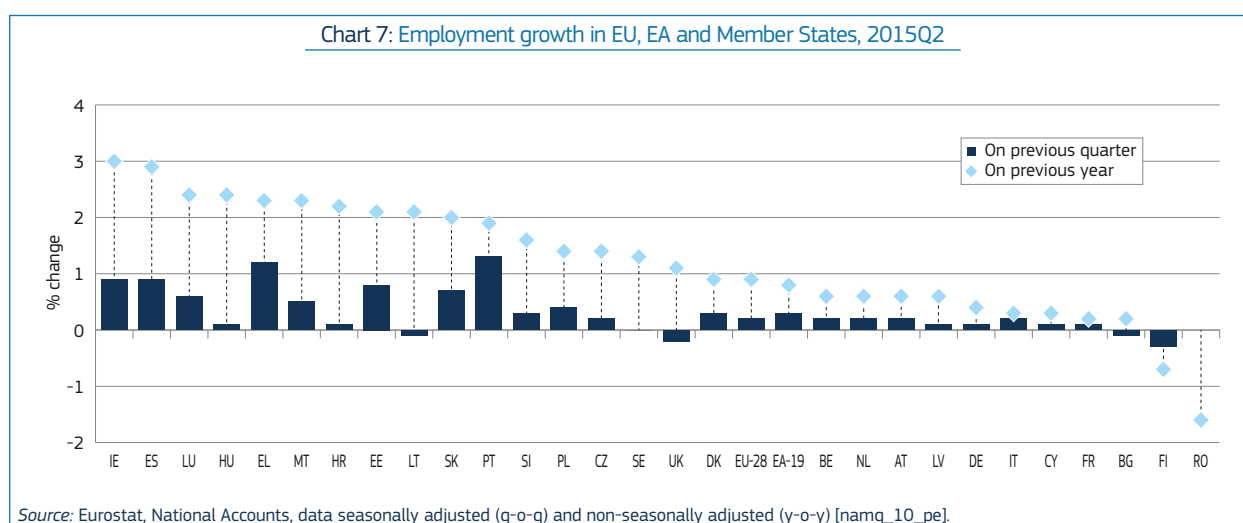
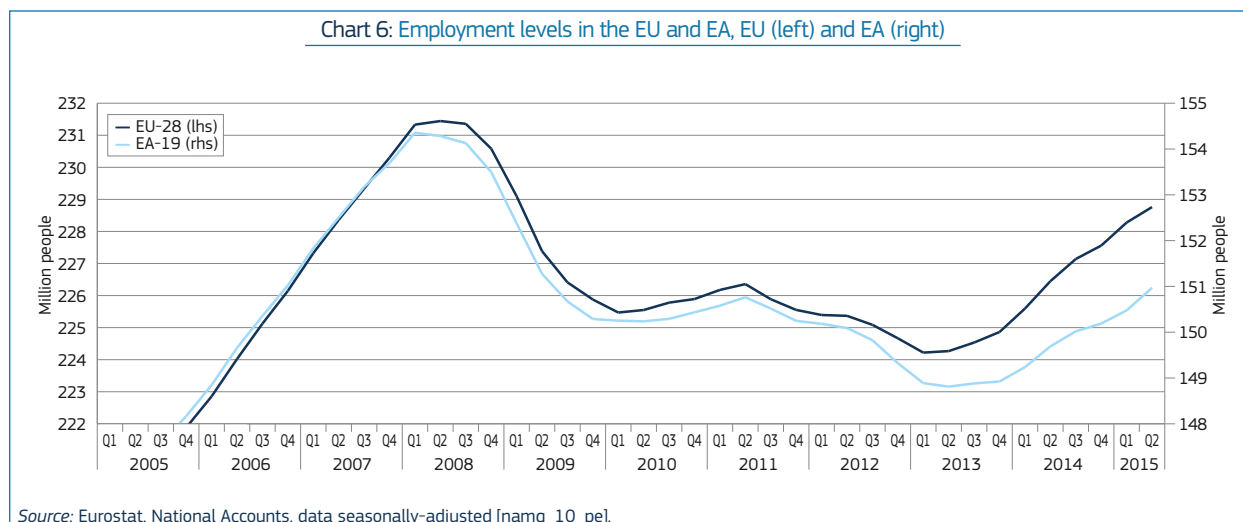
#### 3.1. Employment levels and rates continue to increase following the 2013 recovery but are uneven across Member States and population groups

Following the double-dip recession which brought about a significant decline in employment, EU and EA employment levels started to grow again in mid-2013 (**Chart 6**). In the year to the second quarter of 2015, employment grew by 0.9% in the EU and 0.8% in the EA and in most Member States, including those hit hard by the crisis (**Chart 7**).

Employment levels remain well below those of 2008 (**Chart 6** and statistical annex) despite the increase observed since 2013. In net terms, about 7.3 million fewer people were employed

<sup>(5)</sup> [http://ec.europa.eu/priorities/jobs-growth-investment/plan/docs/factsheet1-why\\_en.pdf](http://ec.europa.eu/priorities/jobs-growth-investment/plan/docs/factsheet1-why_en.pdf).

<sup>(6)</sup> See “Challenges to Member States’ Investment Environments”, Commission Staff Working Document (2015) 400 at [http://ec.europa.eu/europe2020/pdf/2016/ags2016\\_challenges\\_ms\\_investment\\_environments\\_en.pdf](http://ec.europa.eu/europe2020/pdf/2016/ags2016_challenges_ms_investment_environments_en.pdf).



in the first quarter of 2013 (when employment reached its lowest level since 2008) than in the second quarter of 2008 (employment peak). In the second quarter of 2015, employment had recovered by about 4.5 million jobs from its lowest level. This means that there were still about 2.7 million fewer people employed in the EU than in the

second quarter of 2008 (**Chart 6** and statistical annex). In addition, there are substantial differences across the EU, and in a few Member States employment grew in 2014 but declined again in the second quarter of 2015 (**Chart 7**).

Following the decline observed throughout much of the 2009-2012 period,

employment rates for 20 to 64 year-olds in the EU have also risen since 2013 (see statistical annex and **Chart 8**). They have risen in virtually all Member States, including in the countries hit hardest by the crisis, though differences remain.

In the year to the second quarter of 2015, the EU employment rate increased

by 0.8 percentage points (pps) and stood at about 70%. For the EA, the employment rate also increased over the year (0.7 pps) to about 68.9% in the second quarter of 2015. While employment rates in 2014 are higher than those of 2013, they remain below those of 2008 (see statistical annex) and remain some way off and further from the Europe 2020 target rate of 75% (Chart 9).

The improvement in employment has now extended to most sectors, including those most affected by the crisis such as agriculture, construction and industry (Chart 10). Services withstood the second recession dip better and drove the initial employment recovery, although industry is once again contributing to employment creation (Chart 10). Industry, construction and most service sectors all contributed to employment creation during the year to the second quarter of 2015. However, during the same period, employment continued to decline in agriculture.

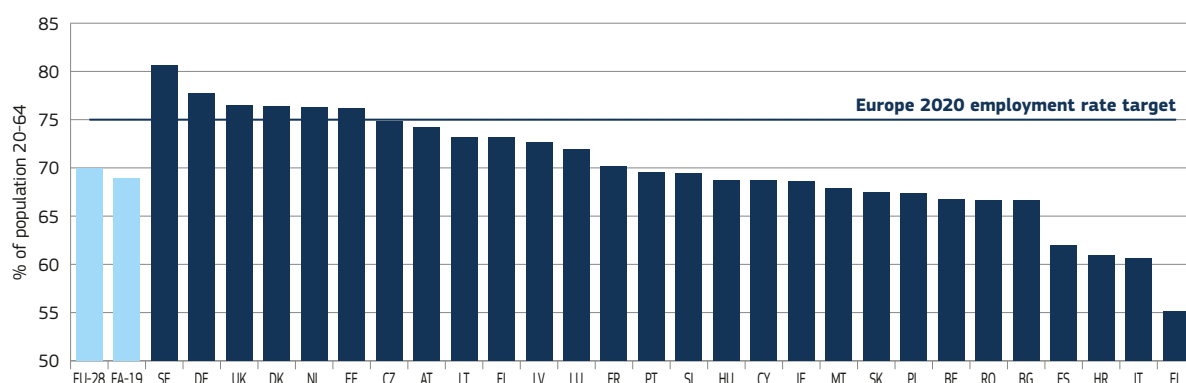
Up to 2008, the employment of women in the EU and EA was growing faster than that of men. It also declined much less during the crisis (see statistical annex). However, in the EU, only 61.7% of mothers (aged 25-49) with children below 6 years are employed, compared to 76.9% of those without children. But there are large cross-country variations. Since 2013 employment has been growing for both men and women, though more rapidly for women. In contrast, the employment of men was more strongly affected by the crisis as they were more often employed in sectors such as construction that were hit particularly hard by the crisis. Nevertheless, with the sustained recovery, employment levels of men continue to increase.

The general 'catching up' of female employment is related to structural factors affecting the labour market participation of women, ranging from changes in role models and social values to policies making it easier to reconcile work and household responsibilities such as child care provision, flexible working hours,

reduction in financial disincentives, etc. Pension reforms may also have increased the labour market participation of older women. Despite these developments, the overall EU employment rate of men (75.7%) remains much higher than that of women (64.4%) with a gender gap of more than 11 pps in the second quarter of 2015 (Chart 11 and statistical annex).

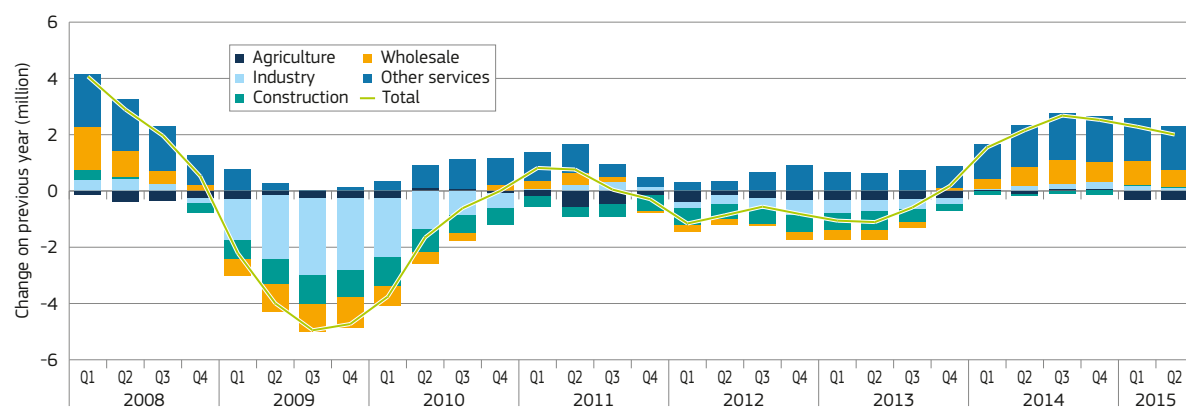
Different age groups fared differently both between 2008 and mid-2013 when employment declined and since mid-2013 when employment started to increase. While the employment of workers aged 45 and over stabilised throughout the 2009-2013 period, with the employment of those aged 55-64 actually increasing, most other age groups saw a reduction in their employment numbers. Since mid-2013, employment has increased for all age groups though again relatively more for the older age groups. The EU employment rate has increased since 2013 following the decline from 2008 to 2013. Again a different evolution can be observed across

Chart 9: Employment rate - EU, EA and Member States, 2015Q2



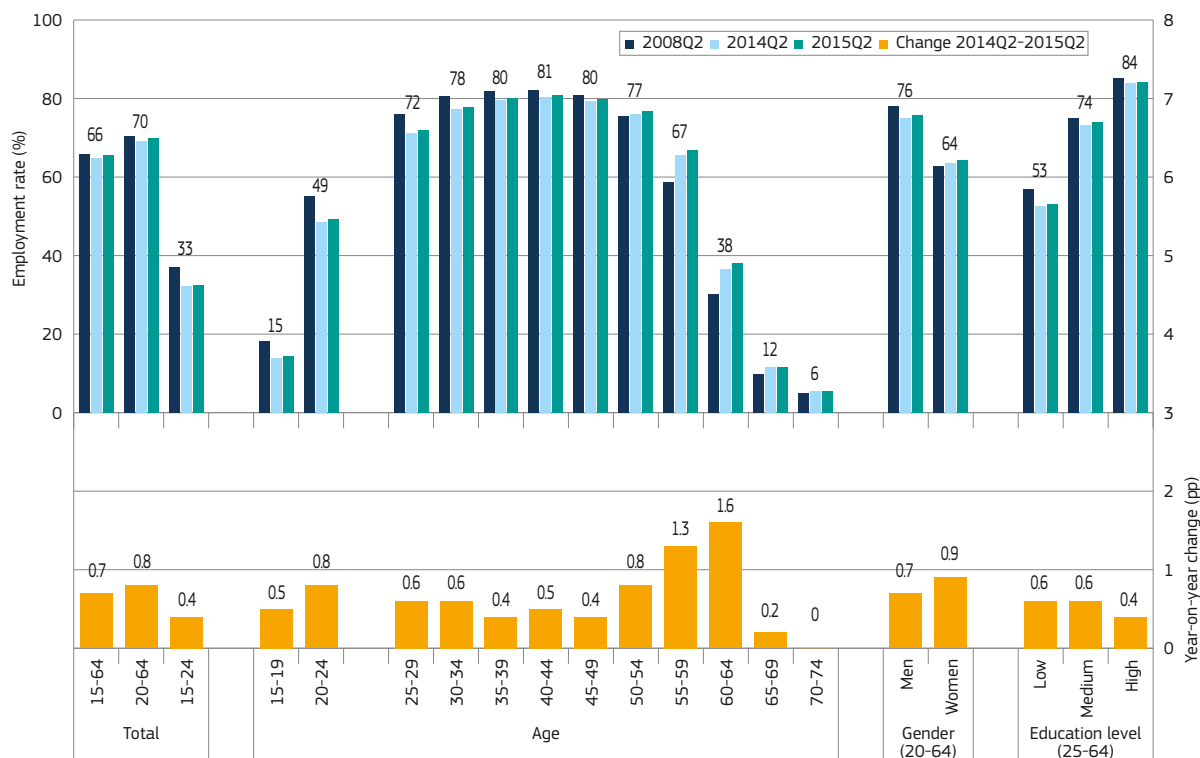
Source: Eurostat, LFS, data non-seasonally adjusted [lfsi\_emp\_q].

Chart 10: Employment level and changes by NACE sectors in the EU-28



Source: Eurostat, National Accounts, data non-seasonally adjusted [namq\_10\_a10\_e].

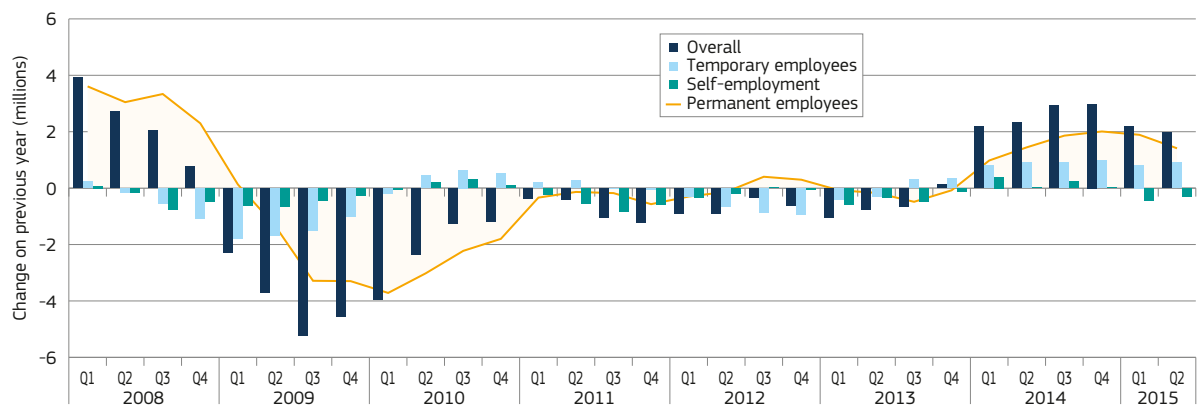
Chart 11: EU employment rate by gender, education and age, 2015Q2



Source: Eurostat, LFS, data non-seasonally adjusted [lfsi\_emp\_q, lfsq\_ergaed].

Top chart: Employment rate (% of respective population). Bottom chart: Change in employment rate 2014Q2-2015Q2 (pp).

Chart 12: Change in permanent and temporary employment and self-employment at EU level



Source: Eurostat, LFS, data non-seasonally adjusted [lfsq\_egaps, lfsq\_etgaed].

age groups. Contrary to the general evolution, the employment rate for the older age (50+) groups has never declined and has actually increased throughout the crisis and continues to do so (Chart 11).

When looking at types of employment contracts, the number of employees with permanent contracts and the number of full-time contracts started to increase in early 2014 (Chart 12 and Chart 13), after the sharp decrease in 2009-2010 and the moderate but continuous decline during the 2010-2013 period. Chart 12 shows that, from mid-2008, temporary contracts

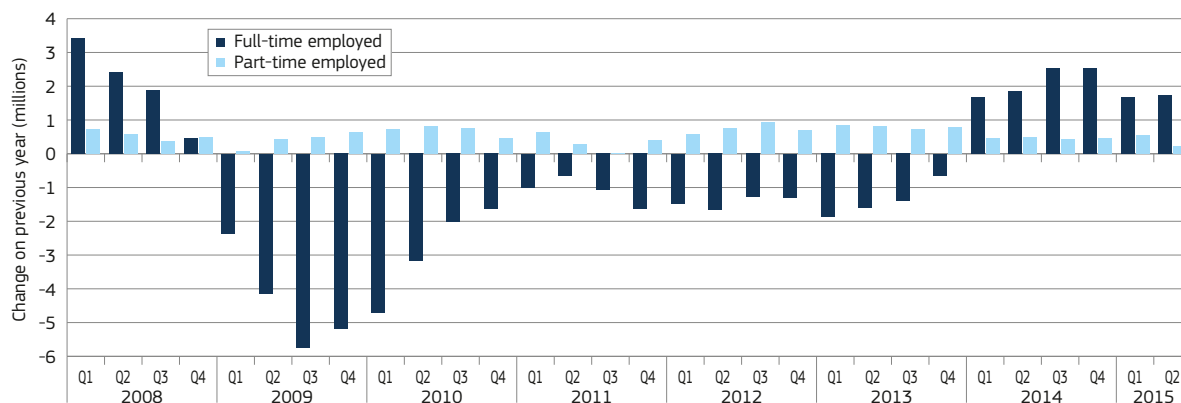
were the first to decline, together with self-employment. As a result of activity contraction, temporary contracts were not renewed. Permanent contracts suffered larger declines in absolute terms in 2009-2010-2011.

The 2013 recovery saw an initial increase in temporary contracts. However, since 2014 and for several quarters now, the number of new permanent contracts has been increasing and, in absolute terms, they are now outnumbering new temporary contracts. At the same time, the number of temporary jobs continues to increase and represent a significant

share of total employment. In contrast, the number of self-employed persons appears to be decreasing. Note that the share of employees on temporary contracts, as a proportion of all employees, has remained rather stable since 2007 at about 14%. Analysis shows that these types of contracts do not always act as a stepping stone to permanent jobs.

While part-time contracts have not declined since 2008 (Chart 13), full-time contracts systematically decreased up to 2014. Since then, the number of full time contracts has been increasing more than part-time contracts. Nevertheless, the

Chart 13: Change in part-time and full-time employment - EU



Source: Eurostat, LFS, data non-seasonally adjusted [lfsq\_empt].

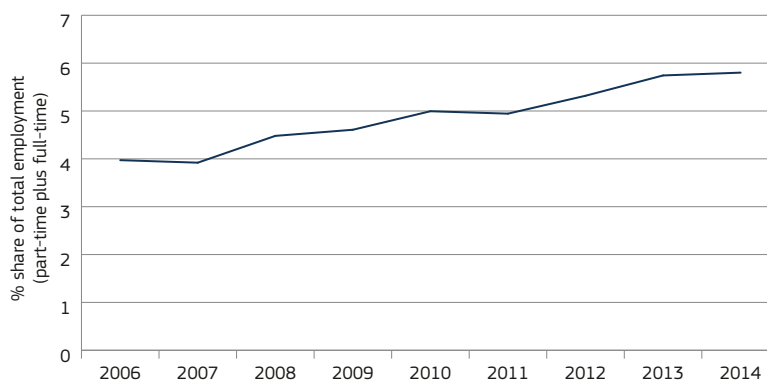
number of people working full-time in the EU in the second quarter of 2015 remains 4.2% lower than it had been in 2008, while part-time employment has increased by 9.8%. Moreover, involuntary part-time accounts for a significant share of part-time work in several Member States, with implications for income and potentially increasing the risk of poverty or social exclusion (see below). The share of part-time employment in total employment has increased from under 18% in 2007 to almost 20% in 2014.

The increase in part-time employment partly reflects a longer-term trend often linked to more flexible working arrangements and diversification of work schedules, including non-standard and variable working hours, which are associated with an increase in the activity rates of women, older workers or those with disabilities or family responsibilities more generally. Nevertheless, a large part of the increase in part-time work is accounted for by an increase in involuntary part-time, almost 2 pps according to LFS data (Chart 14). In the context of the economic contraction, a stronger reliance on part-time work, while not ideal, may have prevented a larger reduction in the number of jobs.

### 3.2. Unemployment continues to decrease, albeit slowly, remaining high and close to historical highs in a number of countries

As a result of the economic crisis, the EU unemployment rate increased from under 7% in spring 2008 to 10.8% in spring 2013 (Chart 15), representing an increase of 9 million in the number of people who were out of work. The unemployment rate reached historical highs in

Chart 14: Share of involuntary part-time in total employment, EU-28



Source: Eurostat, LFS, data non-seasonally adjusted [lfsq\_empt].

a significant number of Member States (Chart 16), with increased country differences observed. The economic recovery and gradual labour market upturn has led to a gradual reduction in unemployment rates since April 2013, which has continued throughout 2014 and the first half of 2015. Some country convergence has been observed since.

From September 2014 to September 2015 the unemployment rate went down from 10.1% to 9.3% in the EU and from 11.6% to 10.8% in the EA. This decline represents 2 million fewer unemployed people in the EU, including 1.3 million in the EA. Although there are around 4 million fewer unemployed people since unemployment peaked in April 2013, unemployment has yet to recede to pre-crisis levels. Despite the decrease in unemployment observed since 2013, unemployment levels remain well above those of 2008. In September 2015, there were about 22.5 million people unemployed in the EU (including 17.3 million in the EA); this means that around

6.5 million more people were unemployed in September 2015 than in March 2008.

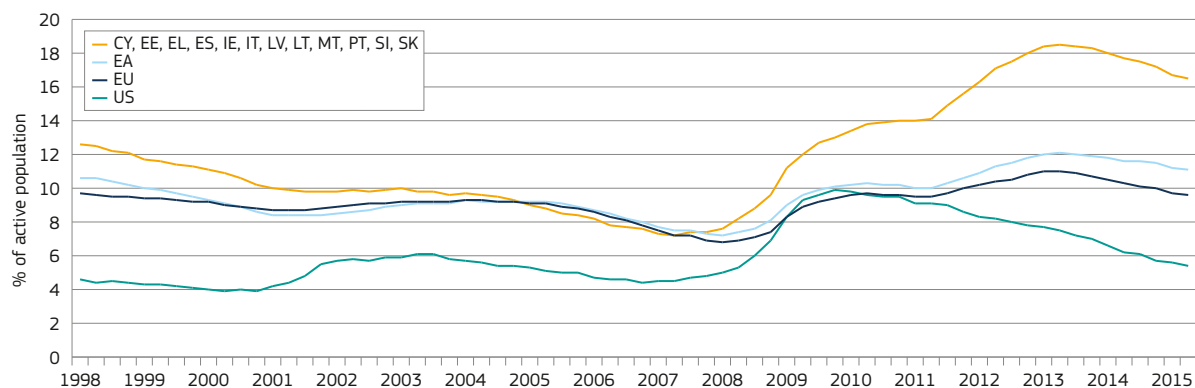
Compared to 2008, the unemployment rate is now higher for both men and women, although the unemployment rate increase observed between 2009 and early 2013 was relatively higher for men than for women.

The crisis affected Member States' unemployment rates in different ways. Despite some significant convergence since 2013, differences in Member State unemployment rates remain considerably higher than they had been in 2008. Several Member States registered historic peaks of unemployment (Chart 16) while others did much better. In September 2015, it ranged from about 5% or less in Germany, the Czech Republic, Malta and the United Kingdom to more than 20% in Spain and Greece.

Overall, employment in the EU has been growing and unemployment has been falling, amidst the modest economic

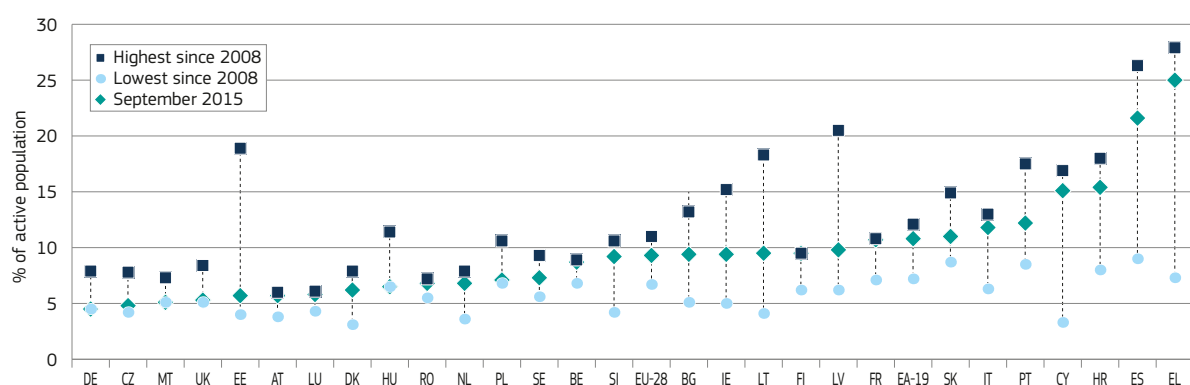


Chart 15: Unemployment rate in the EU, EA, US and some countries since 1998



Source: Eurostat, series on unemployment, data seasonally adjusted [une\_rt\_m].

Chart 16: Unemployment rates in the EU, EA and Member States (September 2015 and highest and lowest rate since 2008)



Source: Eurostat, series on unemployment, data seasonally adjusted [une\_rt\_m].

Note: EL, UK: July 2015.

recovery and subdued capital spending<sup>(7)</sup>. Therefore, some additional caution may be warranted when looking forward as to the potential employment growth and unemployment decline. Stronger economic growth is needed to ensure sustainable labour market recovery.

In addition, structural drivers of change such as technological innovation and globalisation, pose a challenge to job creation. They can bring along opportunities and challenges to the world of employment. They create new goods and services and therefore new markets, with the potential to create new jobs. Technology can mitigate physical barriers and allow for more flexible working arrangements which may support labour market participation of certain groups such as people with disabilities or family responsibilities. Technological innovation changes the way

work is done (changing working hours, working premises...), allowing for more autonomy, responsibility and flexibility. At the same time, it can render many tasks – including non-routine tasks and skills obsolete at a fast rate. Some (e.g. Frey and Osborne, 2013)<sup>(8)</sup> predict that, in the next 20 years, up to 50% of the existing jobs across various levels of skills risk being automated (replaced by technology) in advanced economies.

Technology and globalisation are putting a premium on creative and knowledge occupations. As a result, job polarisation may be a predominant characteristic of future labour markets. On the one hand, skill-biased technological progress will increase the demand for high-skilled workers and induce the replacement of workers carrying out routine tasks by machines and processes. On the other hand, it is to be expected that job

opportunities for non-routine manual workers such as housekeeping, hair dressing, gardening and caring activities will remain strong. These changes may impact on the number and types of jobs that will be created in the near to the longer future<sup>(9)</sup>.

### 3.3. Long-term unemployment and very long-term unemployment now make up a large share of unemployment

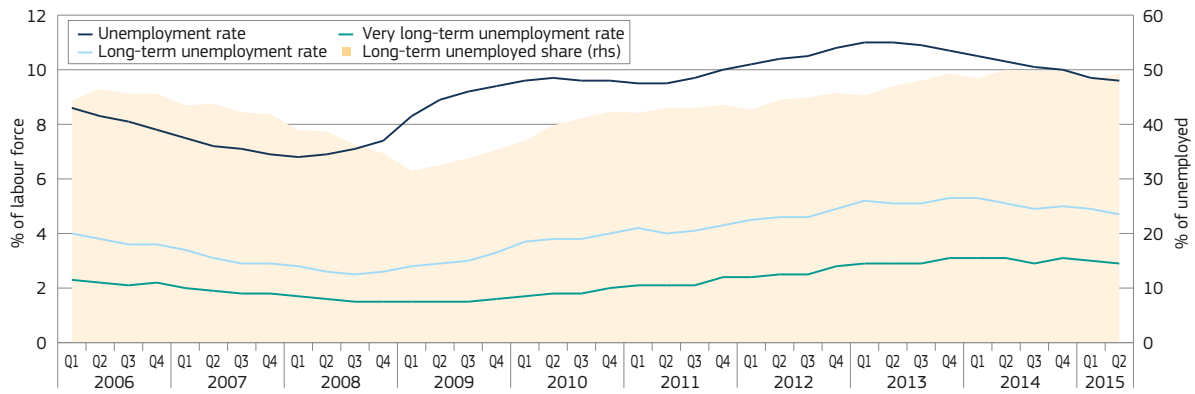
The long, deep crisis and modest recovery has resulted in high levels of long-term unemployment (LTU) and very long-term unemployment (VLTU). In the

<sup>(7)</sup> According to the Okun's Law, which is an empirically observed relationship, to achieve a 1 percentage point decline in the unemployment rate in the course of a year, real GDP must grow approximately 2 percentage points faster than the rate of growth of potential GDP over that period.

<sup>(8)</sup> See Frey, C. B. and Osborne, M. A. "The Future Of Employment: Howsusceptible Are Jobs To Computerisation?", OMS working paper, 2013 At [http://www.oxfordmartin.ox.ac.uk/downloads/academic/The\\_Future\\_of\\_Employment.pdf](http://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf).

<sup>(9)</sup> History shows that it is difficult to project the exact quantitative impact (in terms of jobs and hours worked) of ongoing and future technological innovations. For example, John Maynard Keynes wrote in 1930, reflecting on job opportunities in 2030, that "We are being afflicted with a new disease ... namely, technological unemployment. This means unemployment due to our discovery of means of economising the use of labour outrunning the pace at which we can find new uses for labour."

Chart 17: Unemployment and long-term unemployment rates and share (EU, 2006-2015, quarterly data)



Source: Eurostat, LFS, data seasonally adjusted (unemployment rate) and non-seasonally adjusted (long-term unemployment rates) [une\_rt\_q, une\_ltu\_q].  
Left axis: Unemployment rates (% of labour force). Right axis: unemployment share (% of unemployed).

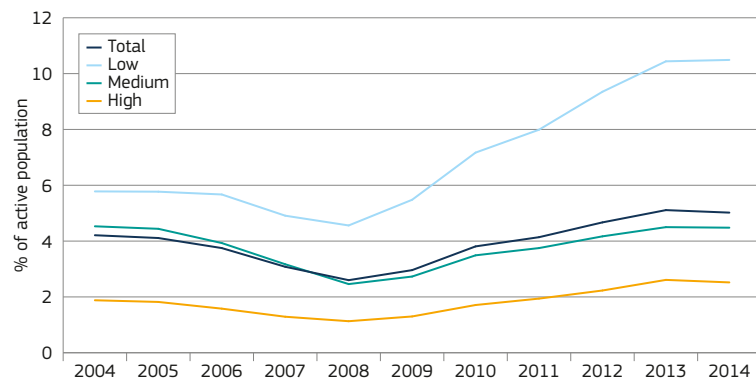
second quarter of 2015, about 11 million people had been unemployed for more than a year, and two thirds of these (about 7 million) had been unemployed for more than 2 years. In total, the long-term unemployed accounted for 4.7% of the EU's total labour force in the second quarter of 2015 and nearly 50% of total unemployment (**Chart 17**).

While a decline can be seen for those unemployed for less than a year and those who have been unemployed for between 12 and 18 months, there is still little movement for those unemployed for more than 18 months. Overall LTU and especially VLTU are declining very slowly.

The economic crisis appears to have hit low-skilled workers hardest, with their long-term unemployment rate doubling between 2008 and 2013 (**Chart 18**).

The high rates of very long-term unemployment pose significant challenges to both the EU's labour markets and its economy. Indeed, the probability of moving from unemployment to inactivity increases with the time spent in unemployment (see chapter on long-term unemployment). An increase in inactivity rates is particularly worrying in view of the projected population ageing and consequent decline in the working-age population which can already be observed in the EU. This can have major negative consequences for overall GDP growth, particularly without significant increases in productivity.

Chart 18: Evolution of long-term unemployment in the EU by skills/education level, 2004-2014



Source: EU-LFS, DG EMPL calculations.

Likewise, long-term unemployment has serious social and financial implications for the individual and society. Depending on the adequacy and resilience of social protection systems, long-term unemployment can result in a reduction in individual and household income, with increased risk of poverty and exclusion and a negative impact on health. It can also reduce the individual's human capital and therefore his/her future employability, productivity and earnings. For society, lower employment and lower productivity due to the loss of human capital have a negative impact on economic growth. Undeclared work and social unrest are other potential negative implications, in addition to the fiscal ones associated with lower revenues and higher spending due to increasing social transfers.

Long-term unemployment is not yet fully entrenched but risks becoming so.

Current high levels of long-term unemployment reflect, to some extent, an incomplete adjustment to recent economic shocks. In other words, it is taking longer than usual for many people to return to employment, even though they are still actively searching for a job. Attachment to the labour market is attested by increasing activity rates in almost all EU countries (**Chart 19**) and across all age groups (**Chart 20**)<sup>(10)</sup>. In addition, reductions in unemployment have not been accompanied by any deterioration in other supplementary indicators such as discouragement and underemployment for most Member States, though this may be the case in some. Moreover, the probability to move from unemployment to inactivity

<sup>(10)</sup> The only exception is perhaps the youth but inactivity rate for young people 15-24 has been accompanied by an increased participation in education and training (see further on).



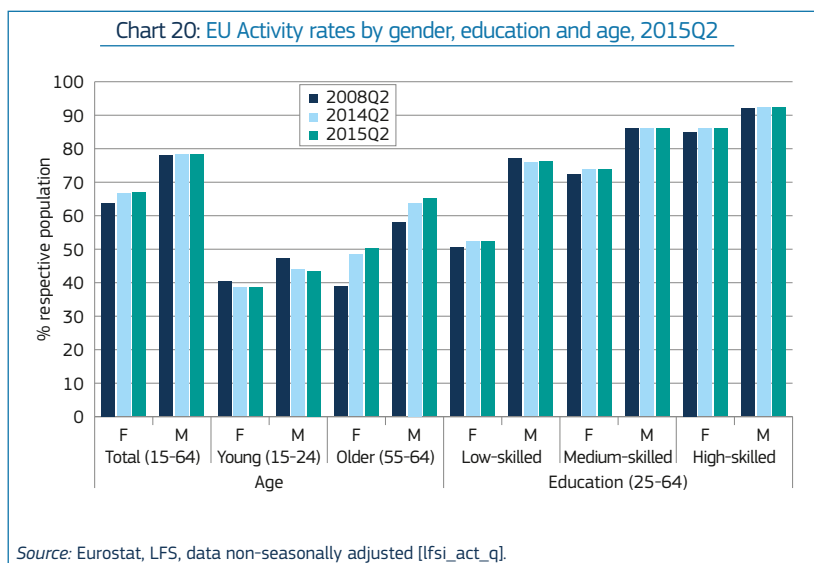
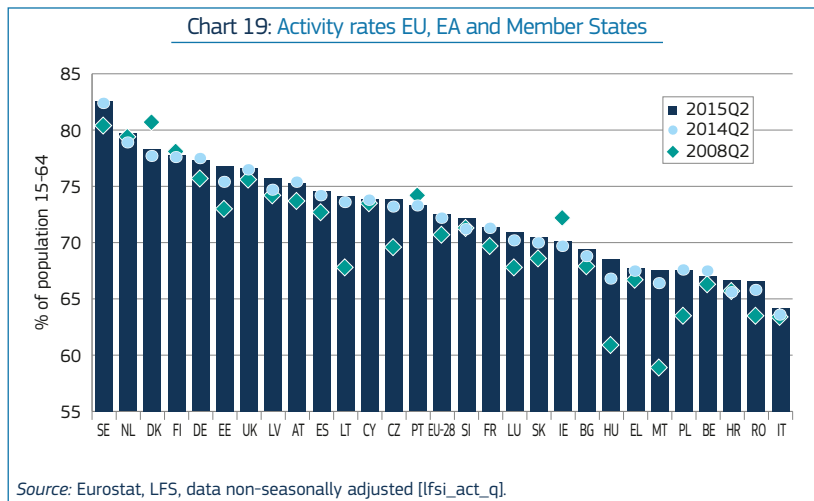
for the long-term unemployed is now lower than in pre-crisis years (see chapter on long-term unemployment).

The increase in activity rates is a welcome development: unlike in previous crises and recessions, activity rates remained stable or increased in the vast majority of Member States. Access to child care and more flexible working arrangements, pension reforms and the need for additional income in the presence of increased uncertainty could explain this development. However, activity and employment rates will need to increase further in view of the ageing challenge<sup>(11)</sup>. Population ageing results in a decrease in the working-age population and an increase in the old-age dependency ratio. A higher share of the old and very old in the population and a reduction in the working-age population place increased pressures on public spending (pensions, health care and long-term care). To tackle the demographic challenge and ensure future growth, it is necessary to increase activity and employment rates and to ensure longer working lives, thereby reducing the dependency ratio.

Analysis<sup>(12)</sup> shows that both supply and demand side policies can play a role in helping the long-term unemployed back to employment. On the supply side for example, countries which combine activation measures with access to training and well-designed income support for the unemployed weathered the crisis better and have higher levels of returns to employment.

<sup>(11)</sup> The 2015 EC/EPC Ageing Report projections suggest that up to 2022 the rising employment rates will offset the decline in working-age population already observed; but from 2023 the ageing effect dominates and the increase in employment rates will be slower due to a lower impact of increasing female participation rates and older workers' participation rates. As more people are living longer, the demographic old-age dependency ratio will nearly double over the long-term: from four working-age people for every person aged over 65 years to about two working-age persons. If productivity does not substantially increase to compensate for the reduction in the working-age population, public spending is projected to increase by 1.4 pps of GDP in the EU and 1.5 pps in the EA up to 2060, or even by about 3.5pps when a higher risk scenario is considered. See [http://ec.europa.eu/economy\\_finance/publications/european\\_economy/ageing\\_report/index\\_en.htm](http://ec.europa.eu/economy_finance/publications/european_economy/ageing_report/index_en.htm).

<sup>(12)</sup> See the chapter on long-term unemployment in this ESDE review and the 2015 Labour Market Developments in Europe Review. See <http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=7811&furtherPubs=yes>.



### 3.4. Youth unemployment remains high but young people are slowly becoming more engaged in either employment or in education and training

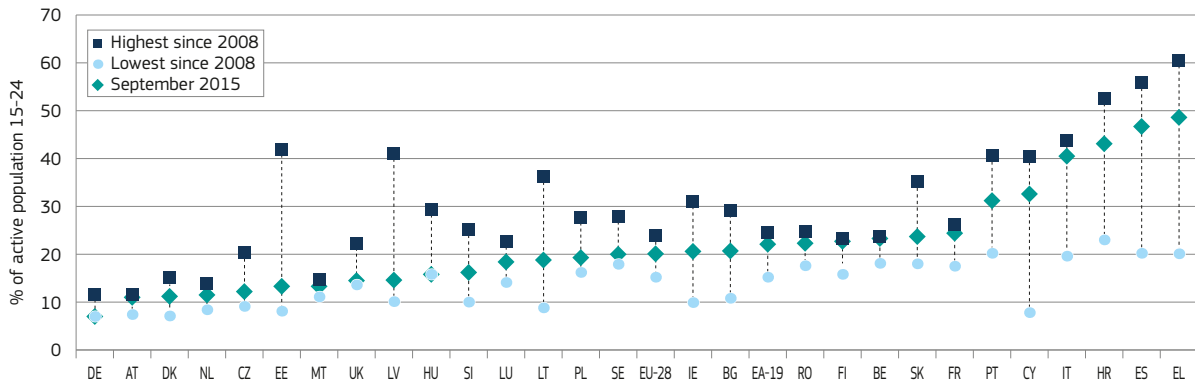
For young people, recent developments are modest but encouraging, with youth unemployment decreasing, youth employment increasing slightly, and a shrinking number of those who are not in employment, education and training (NEET) while the participation in education is increasing.

Following the significant increase observed between 2009 and 2013, youth unemployment started to fall but was still very high in 2014: 22.2% in 2014 compared to 15.9% in 2008 (Chart 22). In the year to September 2015, the youth unemployment rate fell by 2.0 pp in the EU and 1.3 pps in the EA and is now 19.9% and 17.6% respectively (Chart 21). This represents a decline of around

half a million unemployed youths in the EU, including 255000 in the EA. Nevertheless, the EU and EA youth unemployment rates in September 2015 were still higher than the rate (around 15% in both the EU and the EA) seen in March 2008. In September 2015, youth unemployment affected 4.5 million people in the EU and 3.1 million in the EA.

The youth unemployment rate declined in most Member States over the year to September 2015, although it varies considerably across Member States, from 7% in Germany, to almost half of the active population aged 15-24 in Greece and Spain, where it has almost tripled since 2008 (Chart 21). The youth unemployment rate remains particularly high in Spain (46.7%), Greece (48.6%), Croatia (43.1%) and Italy (40.5%). In the vast majority of Member States, it remains close to historical peak levels. The dispersion is currently higher than in 2008 although some convergence has been observed since 2013.

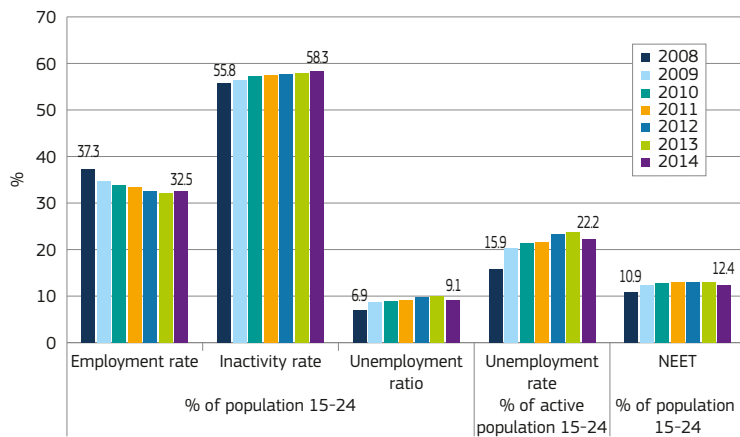
Chart 21: Youth unemployment rates in the EU Member States in September 2015 and the highest and lowest rates since 2008



Source: Eurostat, LFS, data seasonally adjusted [une\_rt\_m].

Note: EL, UK: July 2015; SI, CY and HR: 2015Q3; RO: 2015Q2.

Chart 22: Labour market indicators for youth, 2008-2014



Source: Eurostat, LFS.

Following the decline observed from 2009 to 2013, the youth employment rate increased in 2014 to 32.5% (Chart 22). In the second quarter of 2015, 32.5% of young people aged 15-24 in the EU had a job, up from 31.2% in the second quarter of 2014, but down from 37.1% in the second quarter of 2008.

When looking at unemployment not as a share of the active population (those working plus those looking for a job) but as a share of the population in the age group 15-24 (the unemployment ratio), unemployment affected about 9% of young people aged 15-24 in the EU in 2014, compared to 6.9% in 2008. In the second quarter of 2015, it was 8.3% compared to 9.0% in the second quarter of 2014 and 6.6% in the second quarter of 2008.

The share of young people 15-24 not in employment, education and training

(NEETs), though still high, decreased, and enrolment in education and training increased: 12.4% of young people 15-24 in the EU were NEETs in 2014 compared to 13% in 2013 and 11% in 2008 (Chart 22). Nearly 70% of 15-24 year-olds were in education in 2014.

Despite recent positive developments, getting young people into work is crucial to avoid competence erosion or lack of skill acquisition, since people accumulate skills quickly in the early years of their careers. Analysis has shown that the skills levels of adults from a disadvantaged background can improve over time through on-the-job learning. Therefore, getting young people into work and ensuring life-long learning improves workers' skills and competencies in the work place and increases their productivity and earnings while boosting economic growth.

### 3.5. The average number of hours worked is now increasing but it is still below the pre-crisis levels

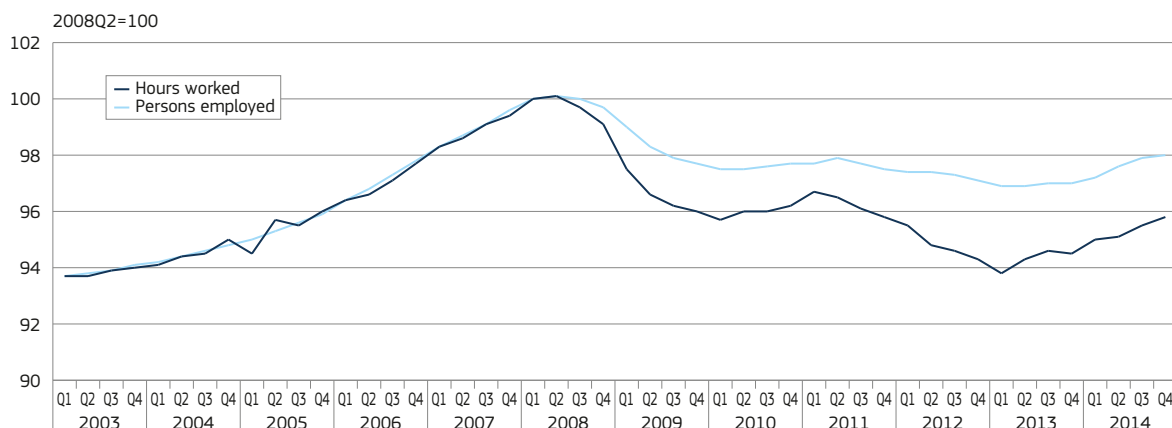
From mid-2008 to the beginning of 2013, the average number of hours worked declined faster than the number of people in employment (Chart 23), but has been increasing since then.

The overall decline in hours worked was associated with an increased reliance on part-time employment (see chapter on labour legislation) alongside a reduction in the average number of hours worked by full-time workers, falling from a weekly average of 41.0 hours in 2008 to 40.6 in 2013. The increase in the average number of hours since 2013 has been accompanied by an increase in full-time employment over the past five quarters (Chart 23 and Chart 13).

An overall reduction in hours worked contributed to the adjustment during the crisis in that the increased reliance on part-time jobs and the reduction of total hours worked in full-time jobs may have avoided a larger loss of jobs. One important question is whether a 'catching-up' effect in hours worked can limit the extent of job creation.

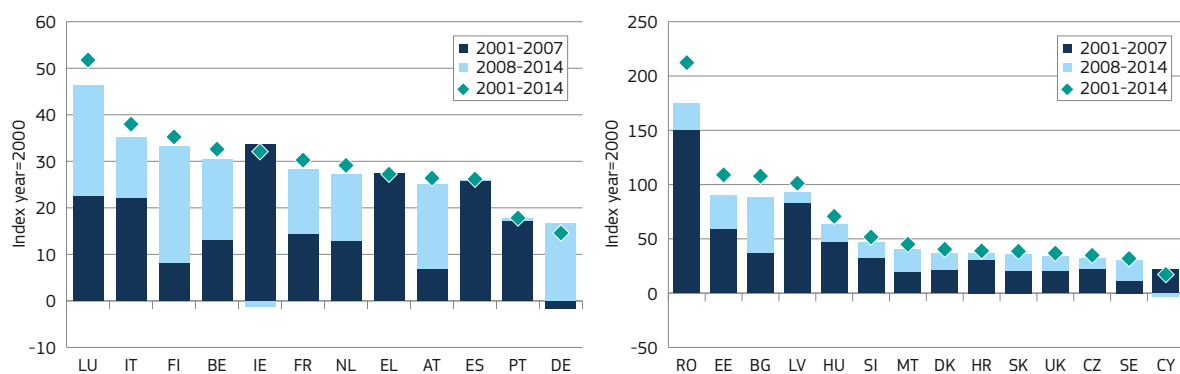
The crisis may have accentuated the long-term trend of an increasing share of part-time employment. This is often linked to more flexible working arrangements, a diversification of work schedules (including non-standard and variable working

Chart 23: Average number of hours worked in the EU



Source: Eurostat, National Accounts.

Chart 24: Cumulative nominal unit labour costs, 2001-2014



Source: DG EMPL calculations based on Eurostat (nama\_10\_lp\_ulc).

Note: provisional data for BG, EL, ES, CY, NL, PT, RO.

hours) and higher activity rates of some population groups, including women and older workers. The reduction in the number of usual weekly hours is also associated with reductions in full-time working hours in several Member States through legislation. If this trend were to continue, it would boost job creation. However, the opposite may occur if there is a large 'catching-up' effect in the number of hours worked by those already in employment.

Job quality is another relevant factor in this context. Fewer working hours may reflect more flexible working arrangements and higher participation rates of women and older workers, many of whom tend to opt for part-time work. However, involuntary part-time work now accounts for a significant share of part-time work

in several Member States (see chapter on labour legislation), especially among low-paid jobs, with a significant share of net job creation since 2011 having been in the form of low-paid part-time jobs, resulting in low yearly earnings (ESDE 2014). This may reduce the potential impact of job creation on poverty reduction.

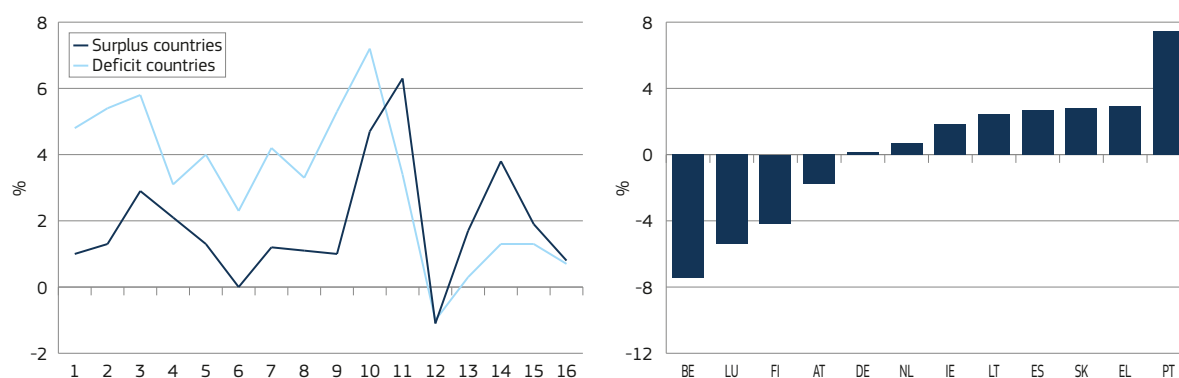
### 3.6. Nominal unit labour costs, which increased in some Member States before the crisis, are now declining

From 2001-2007, several Member States (notably in the EA) experienced a strong cumulative increase in nominal unit labour costs (which measures nominal compensation per employee). The countries affected included Ireland, Greece, Spain, Luxembourg and Italy (Chart 24), while

Germany and, to a lesser extent Austria and Finland, experienced only very low increases. In the presence of fixed nominal exchange rates, some Member States saw an unsustainable distortion of labour costs and cost-competitiveness within the EA in the build-up to the crisis.

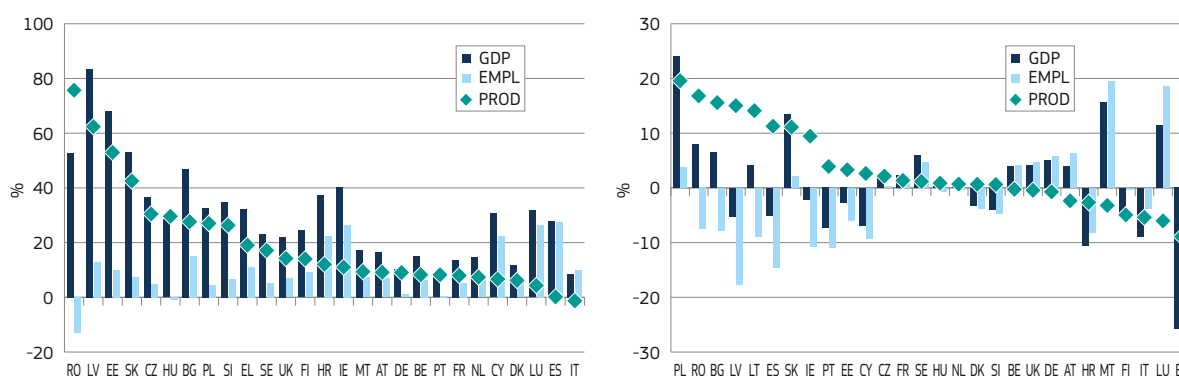
Since 2008, several Member States, including Ireland, Greece, Spain and Portugal (Chart 24), have seen a downward adjustment in nominal unit labour costs. Over the entire 2001-2014 period, Luxembourg had the highest cumulative growth and Germany the lowest. Outside the EA (including the Member States that joined the EA after 2001), Romania, Bulgaria and the Baltic Member States showed strong increases in growth in nominal unit labour costs over the 2001-2007 period, while Cyprus recorded a sizable decrease.

Chart 25: Wage developments: changes in unit labour cost and employment adjustment



Note: Surplus countries: BE, DE, LU, NL, AT and FI.

Chart 26: Cumulative productivity growth and its components (2001-2007 and 2008-2014)



Source: DG EMPL calculations based on Eurostat (nama\_10\_pe and nama\_10\_gdp).

Note: provisional data for BG, EL, ES, CY, NL, PT, RO; breaks in series of LV, RO and PL.

Since 2010, wages in vulnerable countries have been adjusting, accompanying a job shift from non-tradable to tradable sectors and contributing to rebalancing within the EA (**Chart 25**) and, as such, supporting employment rebalancing (Labour Market and Wage Developments, 2015).

### 3.7. Cumulative labour productivity growth varies substantially across the EU and has decreased in recent years

Cumulative labour productivity growth (measured as the % change in output per person) varied substantially across Member States during the 2001-2007 period. It was highest in Romania, followed by the Baltic Member States, while it was negative in Italy and very weak in Spain and Cyprus (**Chart 26**). During this period, cumulative labour productivity was mostly supported by positive output growth as well as positive employment growth (except in Romania).

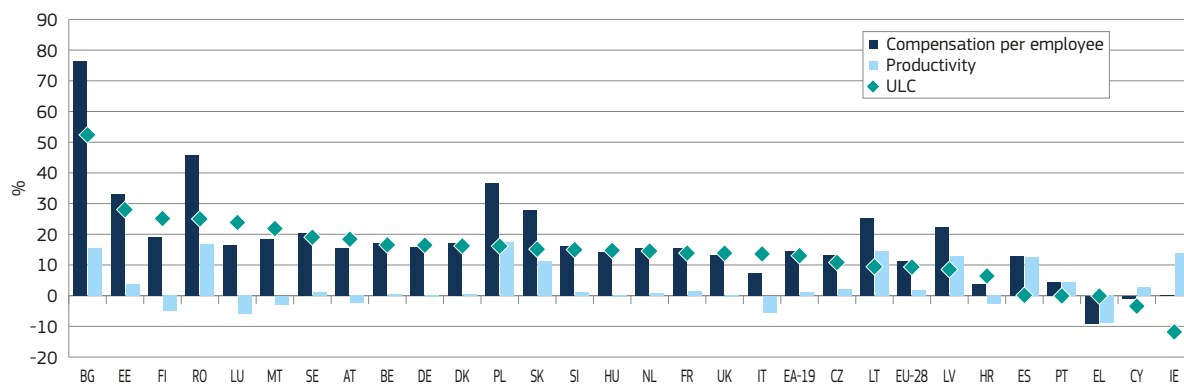
In contrast, during the 2008-2014 period, cumulative labour productivity growth was negative in several Member States, with the greatest contraction occurring in Greece. In Belgium, the United Kingdom, Germany, Austria, Malta and Luxembourg, the cumulative decrease in productivity reflected the fact that the positive cumulative employment growth was stronger than the positive cumulative output growth. By contrast, in Greece, Italy, Finland and Croatia, the decrease in productivity reflected negative cumulative output growth which was stronger than the negative cumulative employment growth (**Chart 26**).

Strong cumulative growth was seen in Poland followed by Romania, Bulgaria, Latvia and Lithuania. However, in Latvia as well as Spain, Ireland, Portugal, Estonia, Cyprus, Denmark and Slovenia, the positive cumulative productivity growth was the result of a stronger cumulative contraction in employment that was greater than the contraction in output (**Chart 26**).

The relative contribution of wages (compensation per employee) and productivity to the evolution of nominal unit labour costs shows whether wages have been evolving in line with productivity. **Chart 27** shows that in some countries – Bulgaria, Romania, Estonia and Poland – strong cumulative growth in unit labour cost was mainly driven by increases in wages, while productivity was weak. In contrast, in Finland, Luxembourg and Italy, it was primarily a contraction in labour productivity that fuelled the nominal unit labour cost growth.

Ireland showed a notable decrease in nominal unit labour cost over the 2008-2014 period, driven by a strong increase in productivity in the face of stagnant nominal compensation per employee. Unit labour costs did not increase in Cyprus, Greece, Portugal and Spain over the 2008-2014 period, although in Spain and Portugal the moderate wage increase was matched by an equally moderate increase in labour productivity. In Greece, both productivity and nominal compensation contracted.

Chart 27: Nominal compensation per employee, productivity, unit labour cost 2008-2014 (cumulative growth)



Source: DG EMPL calculations based on Eurostat (nama\_10\_pe,nama\_10\_gdp,nama\_10\_lp\_ulc).

Notes: PL 2014 observation missing. Nominal unit labour cost measures nominal compensation per employee adjusted for productivity.

In core euro-area Member States, the moderate cumulative increase in unit labour cost was driven by moderate increases in wages in combination with very weak productivity growth. Outside the EA, cumulative labour productivity growth also remained weak, except in Romania and Poland.

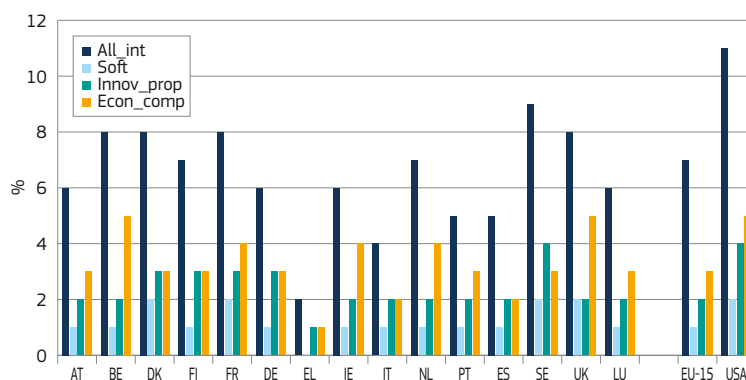
## 4. BOOSTING KNOWLEDGE-BASED CAPITAL AND SKILLS IS KEY TO RESPONDING TO DEMOGRAPHIC AGEING, TECHNOLOGY DEVELOPMENT, GLOBALISATION AND THE GREENING OF THE ECONOMY

### 4.1. EU investment in knowledge-based capital lags behind world competitors

An important part of economic growth stems from investment in knowledge creation or intangible assets. Investment in intangible assets by companies in the United States, Japan and Europe has been shown to have a significant impact on overall productivity (Corrado et al., 2011)<sup>(13)</sup>. Such knowledge-based capital or intangible assets are grouped into three types: computerised information (such as software and databases); innovative property (such as scientific and non-scientific R&D, copyrights, designs, trademarks); and economic competencies (including brand equity, firm-specific

<sup>(13)</sup> See Corrado, C., Haskel, J., Jona-Lasinio, C., Iommi, M. "Intangible Capital and Growth in Advanced Economies: Measurement Methods and Comparative Results", IZA DP No. 6733, 2012. At <http://repec.iza.org/dp6733.pdf>.

Chart 28: Investment in intangible assets as a share of GDP (EU Member States for which data is available for 2010)



Source: Data from INNODRIVE, COINVEST and the Conference Board, Brussels, Belgium, sponsored by FP7, [www.INTAN-Invest.net](http://www.INTAN-Invest.net).

Note: all\_int stands for expenditure on all intangible assets; soft for expenditure on computerised information (software and databases); innov\_prop for expenditure on innovative property assets (scientific and non-scientific R&D, copyrights, designs, trademarks); and econ\_comp for expenditure on economic competencies (brand equity, firm-specific human capital, networks connecting people and institutions, organisational know-how that increases enterprise efficiency, and aspects of advertising and marketing).

human capital, networks connecting people and institutions, organisational know-how that increases enterprise efficiency, and aspects of advertising and marketing).

The measure of investment used in section 2 primarily considers tangible assets and does not look at the evolution of intangible assets. However, the global crisis may have affected the accumulation of intangible assets even more than physical capital. Intangible assets typically entail higher risks than physical or even financial assets and the crisis has increased the risk aversion of many investors<sup>(14)</sup>.

<sup>(14)</sup> See for example the OECD work at <http://www.oecd.org/sti/inno/newsourcesofgrowthknowledge-basedcapital.htm> and <http://www.oecd.org/sti/inno/46349020.pdf>.

The available data show large differences between EU Member States and the US in terms of the intangible assets available in these countries (Chart 28). In this respect, differences in the accumulation of intangible assets could be one of the reasons for the relatively slower rate of productivity growth in EU countries compared to the United States.

### 4.2. Investment in skills is crucial to reducing unemployment and increasing EU competitiveness

Increasing skills levels benefits both individuals and society as a whole, contributing to increases in productivity, competitiveness and growth. While structural drivers of change such as technology,



globalisation and the greening of the economy can create new jobs and career opportunities, they can also increase skill erosion, so that skills anticipation and continuous skills updating will be even more important in an ever changing society and economy. The 2016 AGS stresses that ‘Equipping people with relevant skills drives innovation and competitiveness and is the basis for high productivity. It is the best way to prevent individuals becoming unemployed, as well as to reduce the risk of poverty and social exclusion.’ It stresses the need for a skilled work force notably in view of the fast evolving pattern of work in the digital economy and long-term unemployment.

Previous analysis based on the results of the Survey of Adult Skills (PIAAC) has shown that most EU countries show lower average scores in adult literacy and numeracy than their OECD counterparts and major global competitors (OECD, 2013; European Commission 2014)<sup>(15)</sup>. In these tests, the mean average score of the six largest EU countries (Germany, the United Kingdom, Poland, France, Italy and Spain), accounting for more than two-thirds of the total EU population, falls behind that of the EU’s competitors (Japan, Australia, Canada, South Korea and even the United States). According to PIAAC data, poor computer or general ICT skills are also common in some EU Member States.

Analyses also show that around 40% of EU firms report difficulties in finding the right mix of skills and that there are significant skills shortages in the EU despite unprecedented levels of unemployment<sup>(16)</sup>. However, the share of firms reporting difficulties ranges from more than 60% in Austria and the Baltic States to less than 25% in Croatia, Cyprus, Greece and Spain<sup>(17)</sup>.

The difficulty in finding suitably skilled employees may also be due to firms offering uncompetitive starting salaries or non-permanent contracts, inefficient human resource management, insufficient training programmes or career prospects, changes in organisational

practices, or, to a certain extent, the result of a firm’s success and expansion (see chapter on skills). In general, skills shortages are more prevalent in economies where strong industrial sectors account for a larger share of employment and less prevalent where firms commit to talent management and offer higher quality jobs (better contracts, training, etc.).

Analyses also show that the most competitive countries invest more in skills and life-long training, and that their employers play a crucial role in reducing skills shortages through a mix of human resources policies. Apart from upgrading the skills of their staff (e.g. retraining staff; providing internships and apprenticeship places), they also offer better quality and more stable jobs that are more attractive and base their hiring practices on ‘potential’ rather than solely on experience. In these circumstances, enterprises can strengthen their talent pipeline both from the outside market (e.g. via local employer associations) and by further investment in their existing workforce (via promotions and job rotations) (see chapter on skills).

## 5. INTRA-EU MOBILITY CONTRIBUTED TO LABOUR MARKET ADJUSTMENTS DURING THE CRISIS BUT REMAINS LIMITED

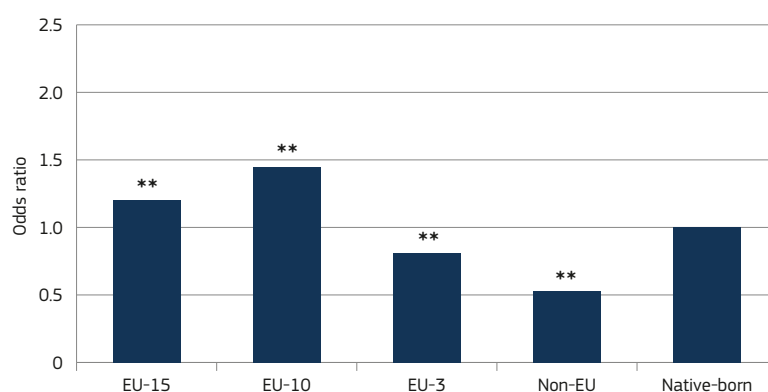
Labour mobility, together with wages, has acted as an important adjustment mechanism both during and following the crisis. During the crisis period, labour mobility may have helped attenuate

disparities in the levels of unemployment between countries (Labour Market and Wage Developments, 2015). The stability and health of labour markets serve as the pull factor encouraging mobile workers to move from more depressed markets to more dynamic ones. While most mobile EU citizens move primarily for work-related reasons, migrants from third countries might also come to the EU for work, to join family members or to study/obtain training.

Analyses suggest that mobile workers contribute positively to labour markets. Labour market outcomes of mobile EU people are on average better than those of natives, and they contribute to growth. Mobile EU citizens are, on average, more likely to be employed than nationals and tend to have higher employment rates (**Chart 29**). They tend to be well-qualified and younger and contribute to labour market adjustments and labour allocation by choosing countries with a relatively more stable labour market. Nevertheless, their qualifications are not always fully used in the jobs they obtain in the countries they move to. And foreign-born people often accept a significant wage penalty when taking up work in the EU.

Evidence (see chapter on mobility and migration) suggests that foreign-born people (mobile people and third-country migrants) do not pose a burden on the overall welfare systems of the host countries, notwithstanding potential pressures on the provision of services at the local level, especially if local budgets are not adjusted accordingly. In general,

Chart 29: Odds ratio of EU-mobile workers, native-born and third-country migrants being employed compared to natives (=1), age group 20-64 years, 2012/13



Source: DG EMPL calculations based on Eurostat EU-LFS 2012 and 2013 micro-data (merged).

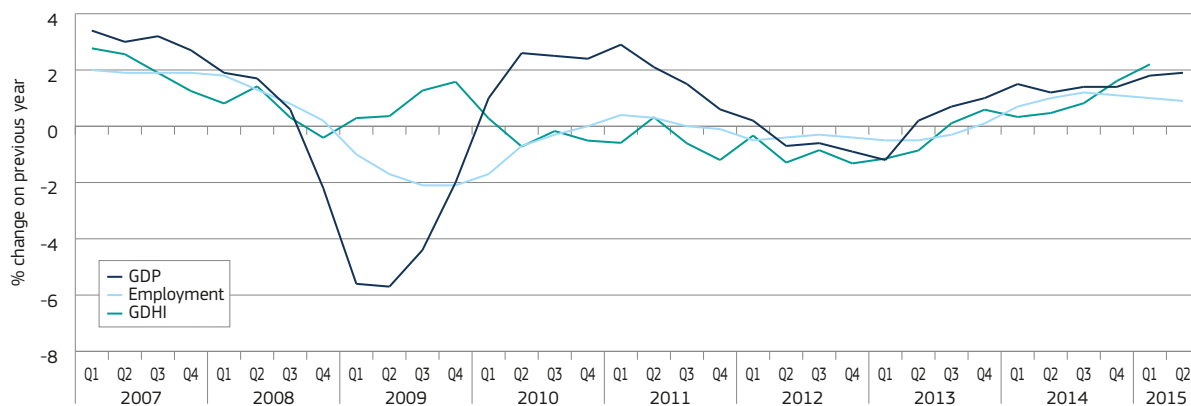
Note: \*\* denotes: coefficient is statistically significant below 1%. Uncontrolled model.

<sup>(15)</sup> See <http://www.oecd.org/site/piaac/>.

<sup>(16)</sup> Skill shortages occur when there are not enough individuals with the required skills within the economy to fill existing vacancies at prevailing market wages and working conditions (and within a reasonable location).

<sup>(17)</sup> Spring 2013 European Company Survey, Eurofound.

Chart 30: Real GDP, employment and household disposable income (EU, year-on-year change)



Source: Eurostat, National Accounts, data non-seasonally adjusted [namq\_10\_gdp, namq\_10\_pe, nasq\_10\_nf\_tr] (DG EMPL calculations for GDHI).

Note: GDHI EU aggregate for Member States for which data are available, GDP for EU-28.

the opposite is true: all groups of foreign-born people are less likely to receive benefits than native-born people when controlling for their labour market status. Moreover, given their good labour market performance, mobile people from the EU15 and the EU10 depend less on unemployment benefits than native-born people. In addition, among the unemployed, foreign-born individuals are less likely to receive unemployment benefits.

Mobility across the EU has been increasing over the past two decades, particularly after the EU enlargement. Yet, EU mobility is low compared to mobility in the United States<sup>(18)</sup>. Four percent of the EU's population aged between 15 and 64 years are living in an EU Member State other than their Member State of birth (mobile EU people). This compares to the situation in the United States where, in the absence of a language barrier, nearly 30% of the working-age population lives in a different state to that of their birth. In 2014, there were less than 15 million mobile people in the EU, up from slightly less than 12 million in 2006.

This is roughly half the number of third-country (non-EU) migrants: there are 28 million third-country migrants aged between 15 and 64 years living in the EU. In other words, only a relatively small share of EU people exercise their right to free movement, while, in the United States nearly 30% of the working-age population lives in a different state to that of their birth.

With a view to improving the EU's long-term growth performance in the light of demographic ageing and workforce decline, mobility and migration have so far been largely "underused". In view of the steady decline of the working-age population in most EU Member States and to limit the rise in its economic dependency ratio, the EU will need to achieve higher employment rates (including through intra-EU mobility) and productivity growth, and draw on migration from third countries (outside the EU). However, relying on increased mobility and migration is likely to require a comprehensive set of policies to ensure the effective integration of foreign-born people.

## 6. HOUSEHOLD DISPOSABLE INCOME IS INCREASING GRADUALLY, BUT POVERTY AND EXCLUSION REMAIN HIGH, FUELLED BY UNEQUAL OPPORTUNITIES AND RISING MARKET INEQUALITY

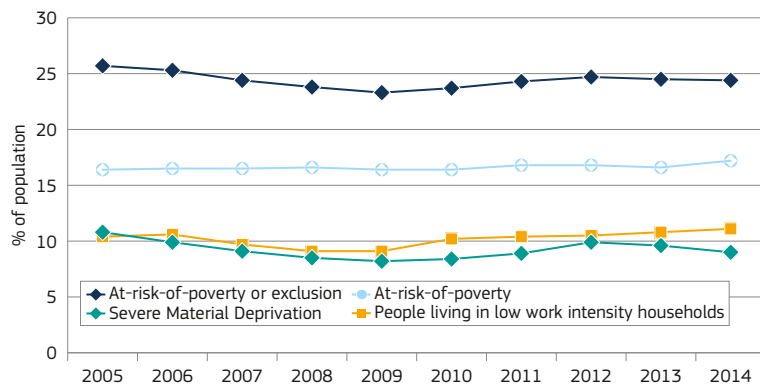
### 6.1. Poverty and exclusion reduction will depend on the quantity and quality of jobs and who benefits

Household incomes in the EU are on the rise again, benefitting from stronger economic activity and improving labour market circumstances. On average in the EU<sup>(19)</sup>, gross disposable household income (GDHI) increased by around 2% in real terms in the year to the first quarter of 2015 (1.9% for the EA) (**Chart 30**). Growth in household income is coming from both work and social benefit support. However, note that the level of GDHI is still below the 2009 peak.

<sup>(18)</sup> Different legal systems, different educational systems, problems associated with the recognition of qualifications and different languages are some of the obstacles that EU mobile persons will have to face compared to their United States counterparts.

<sup>(19)</sup> The real GDHI growth for the EU is a DG EMPL estimation. It includes Member States for which quarterly data are available (18 Member States: AT, BE, CZ, DE, DK, EL, ES, FI, FR, HR, IE, IT, NL, PL, PT, SE, SI and UK, which account for at least 90% of EU GDHI, PL and RO available up till 2012). The nominal GDHI is converted into real GDHI by deflating with the deflator (price index) of household final consumption expenditure. The real GDHI growth is a weighted average of real GDHI growth in Member States.

Chart 31: Trends in poverty and social exclusion in the EU



Source: Eurostat, EU-SILC [ilc\_peps01, ilc\_li02, ilc\_mddd11, ilc\_lvh11].

Note: EU-27 up to 2009; households with zero or low work intensity: % of population aged 0 to 59; AROPE, AROP: previous year income; SMD: current year; households with zero or low work intensity: previous year.

Following a continuous increase since 2009, the share of people at risk of poverty or exclusion (AROPE)<sup>(20)</sup> reached its peak in 2012 (24.7%). Since then it has shown a small decrease but remains very high: in 2014, 24.4% of the EU population – about 122 million people – were at risk of poverty or social exclusion (**Chart 31** and **Chart 32**). Following a similar path, the AROPE rate in the EA went down to 23.5% in 2014; however, it is still 1.7 pps higher than in 2008.

It is however worth noting that the three components of this indicator (relative poverty, joblessness, material deprivation) behaved differently after 2013. Relative poverty<sup>(21)</sup> (at-risk-of-poverty rate, AROP), which went down slightly in 2013, increased again in 2014. According to estimations ('nowcasts') available for 17 countries, the at-risk-of-poverty rates are not expected to improve in

2015 (reference income of 2014). This renewed increase is worrisome as the income thresholds under which people are considered to be at risk of poverty are also declining for some countries, reflecting a continuous deterioration in living standards.

The share of people living in jobless households (zero or very low work intensity) continued to increase to reach 11.1% in 2014, well above the pre-crisis level of 9.1%. Severe material deprivation (SMD)<sup>(22)</sup> is the only component that has been improving. In 2014, severe material deprivation decreased further to reach 9.0% in the EU, notably thanks to the strong declines in Bulgaria, Romania, and Hungary. Nevertheless, it remains above the level (8.2%) recorded in 2009 (**Chart 31**) and continues to increase in a number of countries, including Spain, Greece and the United Kingdom.

The working-age population and their children were the most affected by the crisis, while the elderly were better protected by the relative stability of pensions compared to earnings from employment (**Chart 33**).

The risk of poverty and exclusion of the working-age population increased from 23% in 2008 to 25.3% in 2013 due to job losses and rising in-work poverty. In 2014 and 2015, the risk of poverty of children (relative income poverty) may have increased further in a number of countries, mainly due to a deeper economic crisis in recent years, a poorer performance of their labour market developments (still marked by high unemployment and long-term unemployment), a modest economic recovery and a macro-economic situation (large public debt and deficit), which have limited the fiscal space for public intervention.

Reductions in unemployment contribute to reducing the levels of poverty, but only half of the poor who find a job actually escape poverty<sup>(23)</sup> (**Chart 34**). Indeed, the impact of job creation and employment growth on poverty depends on whether the new jobs offer a living wage (in terms of both hours worked and hourly wage) and on whether they go to job-rich or job-poor households. In this respect, analyses show that support for the unemployed is most effective when geared towards raising their employability and providing skills that are needed in the labour market, so that they are better able to move into more sustainable jobs.

<sup>(20)</sup> The EU poverty and social exclusion (AROPE) indicator and one of the Europe 2020 headline targets refers to the situation of people either at risk of poverty or severely materially deprived or living in a household with a very low work intensity. The AROPE rate which measures the share of the total population which is at risk of poverty or social exclusion is calculated as a weighted average of national results on the basis of three indicators (reflecting monetary and non-monetary aspects): the at-risk-of-poverty rate, the severe material deprivation rate and the share of people living in very low workintensity (quasi-jobless) households. It covers people in any of these categories and, while very broad, reflects the many facets of poverty and social exclusion across Europe. See [http://ec.europa.eu/eurostat/statistics-explained/index.php/People\\_at\\_risk\\_of\\_poverty\\_or\\_social\\_exclusion](http://ec.europa.eu/eurostat/statistics-explained/index.php/People_at_risk_of_poverty_or_social_exclusion).

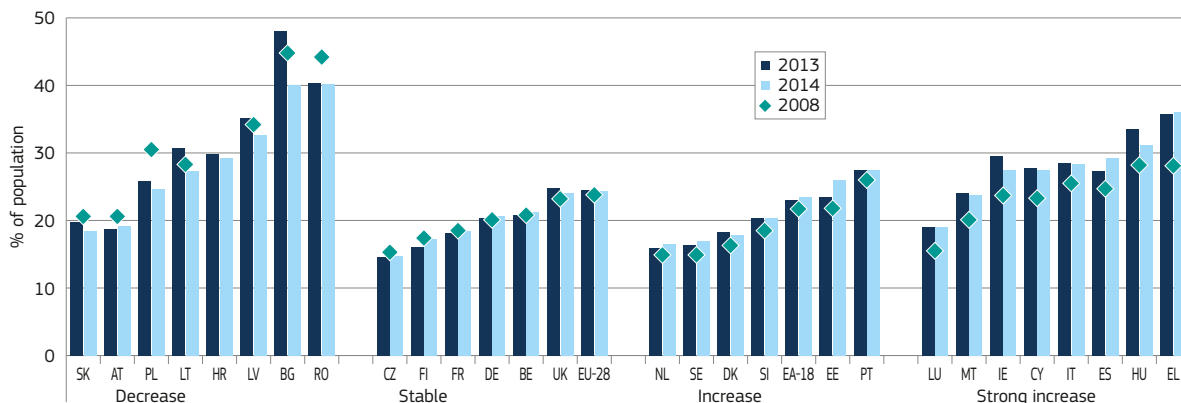
<sup>(21)</sup> The relative component of the AROPE is the risk-of-poverty and is defined as the share of people with a disposable equalised income below 60% of the median income of the country in which they live.

<sup>(22)</sup> The material deprivation indicator expresses the inability to afford some items considered by most people to be desirable or even necessary to lead an adequate life. It refers to a state of economic strain and durables, defined as the inability to afford rather than the choice not to do so. In other words it distinguishes between individuals who cannot afford a certain good or service, and those who do not have this good or service for another reason, e.g. because they do not want or do not need it. The EU indicator adopted by the Social Protection Committee measures the percentage of the population that cannot afford at least three of the following nine items: 1) to pay their rent, mortgage or utility bills; 2) to keep their home adequately warm; 3) to face unexpected expenses; 4) to eat meat or proteins regularly; 5) to go on holiday; 6) a television set; 7) a washing machine; 8) a car; and 9) a telephone. The severe material deprivation rate (SMD) refers to the share of the population who are unable to pay for at least four of the above-mentioned items.

<sup>(23)</sup> Calculations presented in Chart 34 are based on the panel component of EU-SILC, whereby the same households are interviewed over four consecutive years. A quarter of the panel is renewed every year.



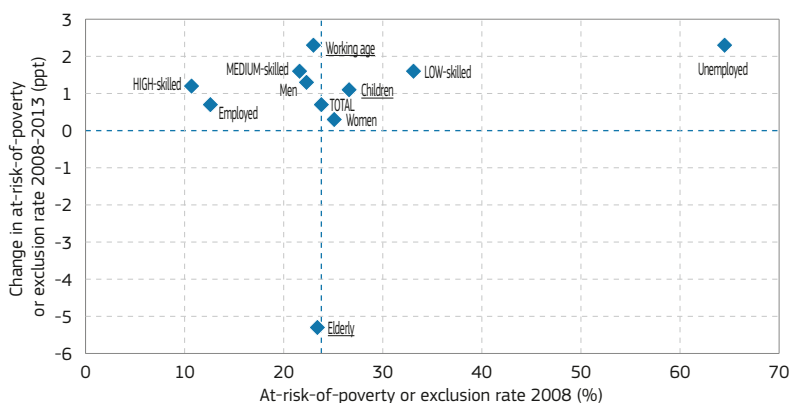
Chart 32: Poverty and social exclusion across EU Member States: 2008, 2013 and 2014



Source: Eurostat, EU-SILC.

Notes: Country groupings are established by change from 2008 to 2014; ES: 2009 instead 2008, classified based on changes 2009-2014; HR: 2010 instead 2008, classified based on change 2010-2014; UK: break in series 2012, classified based on estimated change; BG, DK EE: break in series 2014 classified based on change 2008-2013; grouping is not based on statistical significance of changes; EU-28: EU-27 for 2008.

Chart 33: Risk of poverty and social exclusion by age group, labour market status and skill level (2008 and change 2008-2013)



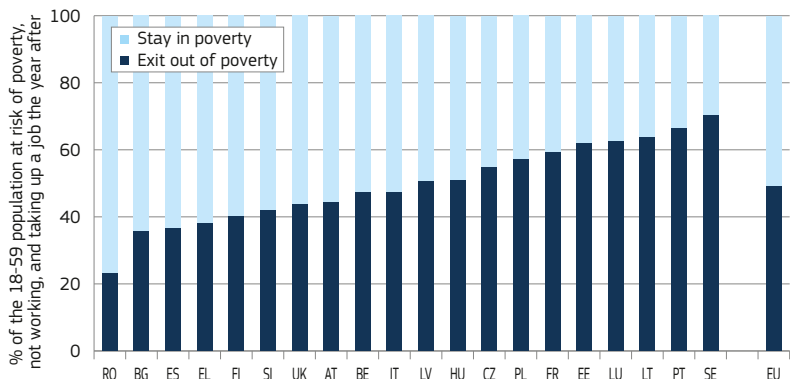
Source: Eurostat - EU-SILC.

## 6.2. Unequal opportunities and rising market inequalities put a strain on welfare systems, especially in the countries hit hardest by the crisis

The previously observed convergence in the levels of income inequality across the EU stopped with the crisis. Before the crisis, EU inequality levels were converging as a consequence of both increasing inequality in low inequality countries (Germany, France and the Nordic Member States) and decreasing inequality in high inequality countries (Spain, Italy, Greece, and the United Kingdom). Inequalities started increasing again in Greece, Italy and Spain, while the rising trend observed in Germany and France was reversed or stopped after 2008. In the United States, inequalities are higher than in most EU countries and continued to increase during both periods (**Chart 35**).

In many countries, the change between 2007 and 2013 in the inequality in disposable incomes was primarily driven by the increase in market income<sup>(24)</sup> inequalities, which is measured before taking account of the redistributive effects of taxes and transfers (**Chart 36**). Between 2007 and 2013, labour market income inequality increased significantly in more than a third of EU countries.

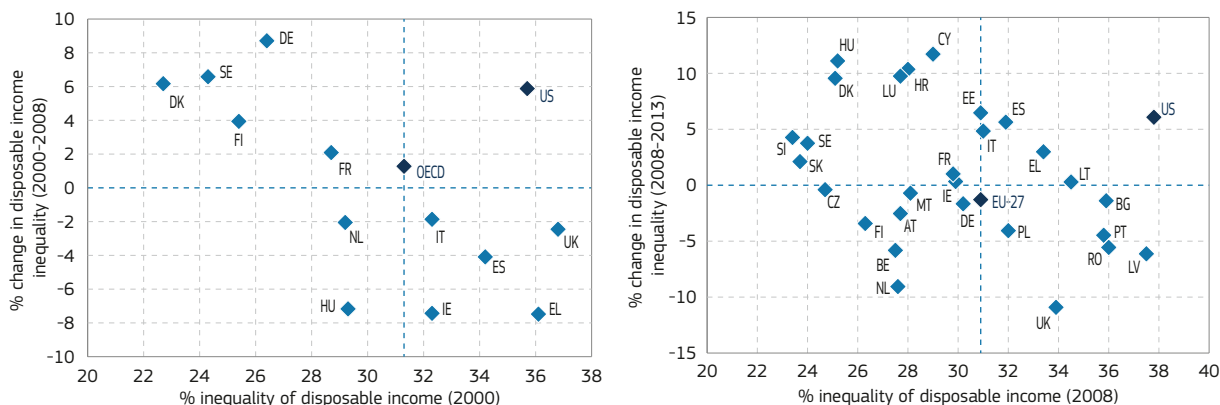
Chart 34: Share of poor people who were not working and found a job, by poverty status (Transitions 2008-2009)



Source: EU-SILC, DG EMPL calculations ESDE 2013.

<sup>(24)</sup> Market incomes refer to labour market income and to property income, before taxes and transfers.

Chart 35: Level and changes in disposable income inequalities before and during the crisis (between 2000 and 2008 and between 2008 and 2013). Gini Index



Sources: OECD for 2000-2008 and Eurostat EU-SILC for 2008-2013.

Chart 36: Change 2007-2013 in market income inequality (before taxes and transfers) vs. disposable income inequality – Gini coefficient



Source: Eurostat – EU-SILC EMPL calculations based on UDB.

The increase in labour market income inequalities reflects both the rise in unemployment (inequalities between those who work and those who do not work) and a polarisation of earnings of those in work (inequalities between those who work). In recent decades, labour markets have been transformed by globalisation, technological changes and regulatory reforms, all of which have had an impact on the distribution of earnings.

The OECD (2015)<sup>(25)</sup> showed that, in almost all countries where labour income inequality increased, this was due to both rising unemployment and an increased dispersion of wages, with the exception of Portugal, Greece, Ireland and Belgium

where the wage dispersion narrowed. In Portugal, Greece and Ireland, this resulted partly from cuts in public sector wages which had tended to be higher than those of the private sector.

The overall imbalance of earnings is largely due to a polarisation between highly-paid full time jobs and low-paid part-time jobs. The effect of the uneven distribution of jobs, in terms of hours worked and wage levels, is compounded at household level by the increase in the number of couples in the same wage category.

Despite the long-term progress made in improving opportunities for all, notably by promoting universal access to education and health care, improvements in living standards (e.g. as measured by median income and material deprivation rates) have stalled, and socio-economic status

remains one of the main determinants of educational and health outcomes. Gender gaps continued to reduce during the crisis but remain significant and hinder the efficient allocation of human capital. Ensuring access for all to quality services and promoting gender equality is essential to enhancing the quality of human capital and social mobility (e.g. the opportunity that individuals have to acquire better education when parents had lower education or to move up the income scale).

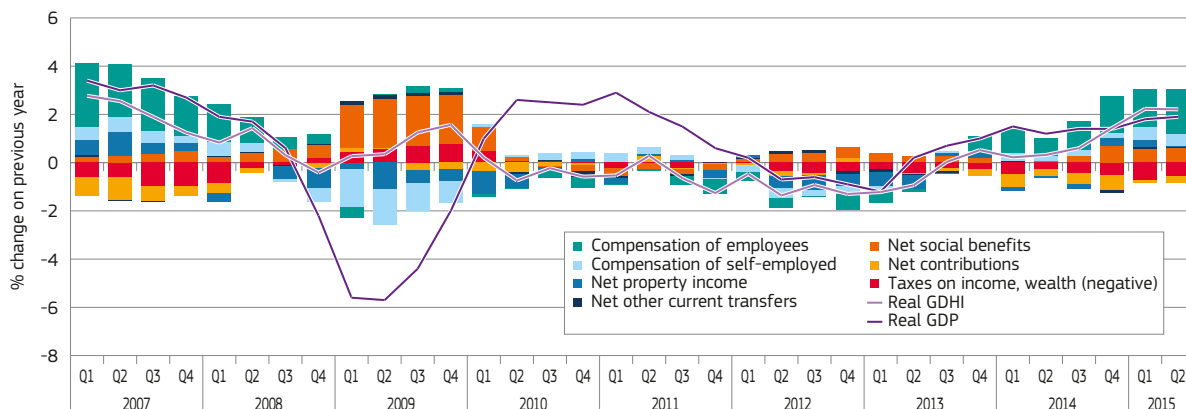
## 7. SOCIAL PROTECTION SYSTEMS IN THE EU

### 7.1. Social protection expenditure grew more strongly in 2014 in most EU countries, after the slow growth in 2013 and the 2010-2012 decline

While social protection expenditure played a major role in stabilising incomes in 2009, the 2012 decline in real terms was pro-cyclical and the subsequent increase in 2013 was relatively weak and provided little support in terms of income stabilisation (Chart 37). In 2009, real expenditure grew for all expenditure categories: not only for unemployment, social exclusion and housing, and family benefits, as perhaps expected in the context of an economic recession, but also pensions and health care which increased at a faster rate than in previous years. The 2012 decline in real expenditure affected all expenditure categories except pensions. Unemployment-related expenditure, for example, continued to decrease following

<sup>(25)</sup> See OECD, *In It Together: Why Less Inequality Benefits All*, 2015. At <http://www.oecd.org/social/in-it-together-why-less-inequality-benefits-all-9789264235120-en.htm>.

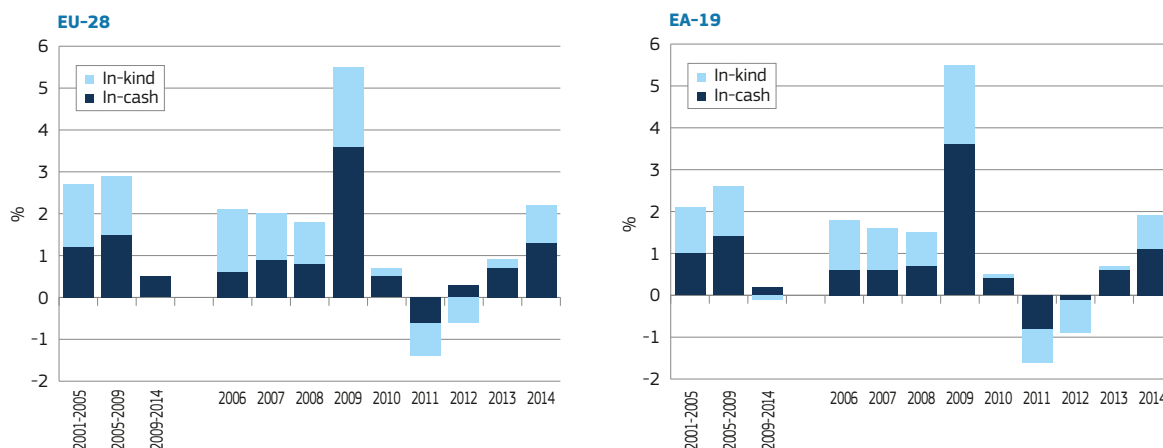
Chart 37: Gross Household Disposable Income (GHDl) developments in the EU (2000-2015)



Sources: ECB and Eurostat.

Notes: Annual percentage change and percentage point contributions. Labour income includes compensation of employees and gross operating surplus and mixed income (compensation of self-employed).

Chart 38: Breakdown of the annual change in real public social expenditure between the contributions from in-cash and in-kind benefits (2001-14) in the EU-28 and EA-19



Source: Eurostat (NA and DG EMPL calculations).

Notes: The values for 2014 are an estimate based on national accounts. When no data are available in the National Accounts (annual), the data were either based on National Accounts (quarterly) or the AMECO database (in the latter case by usually applying calculated growth rates to the data available from National Accounts (annual)).

the strong decline observed in 2011 and despite the increase in unemployment. This evolution contrasts with the strong growth in unemployment expenditure recorded in 2008 and 2009, also following the increase in the number of unemployed persons. In 2014, however, social protection expenditure did start to grow again at a pace closer to its long-term trend (see the chapter on social protection for more detailed information on the developments and reforms of social protection systems).

In 2014, work incomes started to increase, reflecting the improvement of labour

market conditions. Social benefits<sup>(26)</sup> also continued to increase slightly in comparison to 2013. The latter may be related to the use of indexation mechanisms linked to 2013 inflation rates which were higher than in 2014 (**Chart 37**). The first two quarters of 2015 show a continued improvement

<sup>(26)</sup> Social protection expenditure generally helps to stabilise the economy in bad economic times, since social benefits partly compensate for the decline in households' market income. Unemployment benefits typically have a stabilising function, as do means-tested benefits of various sorts (typically social exclusion, family or housing). Health and pensions expenditure play a role too, but generally to a lesser extent (since they do not respond directly to a decline in market incomes).

in Gross Household Disposable Income, also supported by work income and social benefits.

In 2014, while the economic environment improved, both cash and in-kind expenditure increased in the EU and the EA at a faster pace than in 2013 (**Chart 38**). However, the increase of in-kind benefits in 2014 only partially compensated for the declines observed between 2010 and 2012. Most Member States registered similar increases, except for Ireland, Greece, Spain, Cyprus, Croatia and Slovenia where in-kind benefits continued to decline.

Changes in the tax-benefit system over the period 2008-2014 had a strong impact on household incomes across the Member States<sup>(27)</sup>. In some countries, the measures adopted since 2008 have led to a strong reduction in household incomes (-17% in Greece, -4.5% in Latvia, and around -4% in Italy and Estonia), even if the impact was generally greater on high incomes than on low incomes. More recently, in most of the Member States assessed, the measures adopted in 2013-2014 had a positive overall impact on incomes and in most cases were more beneficial to lower income groups. It can be noted that, in countries that experienced a similar average impact on household incomes, the distributional impact of measures over the period 2008-2014 varied between lower and higher income groups, highlighting the importance of the design of measures in terms of policy outcomes.

## 8. THE ECONOMIC CRISIS IMPACTED ON SOCIAL DIALOGUE PRACTICES IN DIFFERENT WAYS ACROSS THE EU

Social dialogue is seen to make labour markets more dynamic and inclusive by enabling workers and employers to better balance their interests in order to identify win-win solutions. Social partners engage in discussions at different levels and promote their joint work through different channels, in line with national practices and traditions. Through collective bargaining, workers and management may negotiate working conditions at company, sector or national

level (including coordination between these levels and units at a given level).

In several Member States (for example Belgium, France, Germany, Italy, the Netherlands and Romania), social partners manage “paritarian” funds to promote skills development or occupational health and safety, or co-manage certain aspects of social security systems. Moreover, social partners can play an important role in the design and implementation of policies and reforms. Governments may consult social partners on policy orientations, drawing on their expertise in employment matters. Public authorities can negotiate with social partners to reach joint decisions. Moreover, the state can also provide institutional and financial support to social partners’ bipartite agreements.

There are several examples where social dialogue contributed directly to job preservation during the recent economic crisis. The initial stages of the crisis mainly affected the private sector where, in some Member States (such as Austria, Germany, the Netherlands and Poland), the social partners, often supported by public authorities, agreed on internal flexibility measures such as short-time working schemes. These discretionary measures, in combination with the effects of automatic economic stabilisers (such as unemployment insurance, including those co-designed or co-managed by social partners) helped to contain many of the negative effects of the economic shock on employment and living standards.

Over the medium term, social dialogue is seen to contribute to employment

growth, with the information and consultation of workers at company level having a positive effect on staff performance and productivity, as well as the competitiveness and reputation of the companies. At macro-level, transparent working conditions and regulations designed and implemented with support from both sides of industry are also seen to create a stable and predictable climate for investment.

Social dialogue contributes to the improvement of working conditions. Joint actions and measures designed, or co-designed, by social partners facilitate the identification of skills needs, job matching and lifelong learning that enhance job quality. Social partner agreements promote occupational health and safety, working time or reconciliation of work and family life. This includes EU-level agreements, implemented by directives or autonomously by social partners in accordance with national practice.

However, maximising the benefits of social dialogue depends crucially on enhancing the capacity of the social partners as well as developing their involvement in the design and implementation of policies and reforms. In countries where social dialogue needs to be reinvigorated (in particular in a number of Central and Eastern European countries) or in those where it has been weakened due to the economic and financial crisis (Greece, Ireland, Portugal, Spain and Cyprus), efforts to build and develop the capacity of social partners to make an essential contribution to the recovery are thus seen to be priority areas of policy action and intervention.

<sup>(27)</sup> De Agostini, P., Paulus, A. and Tasseva, I., *The effect of tax-benefit changes on the income distribution in 2008-2014*, Euromod Working Paper Series, EM 11/15, 2015.

# PART I

## Promoting Job Creation



# Boosting job creation through self-employment and entrepreneurship <sup>(1)</sup>

## 1. INTRODUCTION

Promoting entrepreneurship and self-employment is high on the agenda of European, national and regional policy-makers because it has a strong potential to create jobs, strengthen the EU's innovation capacity and give unemployed and disadvantaged people an opportunity to fully participate in society and the economy.

The Europe 2020 strategy (adopted in 2010) recognises that entrepreneurship and self-employment are crucial in promoting employment growth by addressing opportunities and challenges stemming from ongoing structural changes (including accelerating technology progress, globalisation, ageing of society and greening of the economy)<sup>(2)</sup>. Likewise, the Small Business Act<sup>(3)</sup> (adopted in 2008) anchored the 'Think Small First' principle in policy-making<sup>(4)</sup>.

<sup>(1)</sup> By Eric Meyermans, Giuseppe Piroli, Guy Lejeune, David Arranz, Emmanuel Joseph and Radek Maly, and with a contribution on measuring self-employment, working conditions and social dialogue by Isabella Biletta (Eurofound) and Agnès Parent-Thiron (Eurofound).

<sup>(2)</sup> More particularly, self-employment and entrepreneurship can play an important role in meeting the Europe 2020 targets of employment, social cohesion, and research and innovation, as well as the targets of climate change.

<sup>(3)</sup> See [http://ec.europa.eu/growth/smes/business-friendly-environment/small-business-act/index\\_en.htm](http://ec.europa.eu/growth/smes/business-friendly-environment/small-business-act/index_en.htm)

<sup>(4)</sup> The 'Think Small First' principle requires that legislation takes SMEs' interests into account at the very early stages of policy-making in order to make legislation more SME-friendly. See [http://europa.eu/rapid/press-release\\_IP-08-1003\\_en.htm](http://europa.eu/rapid/press-release_IP-08-1003_en.htm)

In addition, the Employment Package (adopted in 2012) recognised the potential of self-employment and entrepreneurship in contributing to a job-rich recovery, while the Entrepreneurship 2020 Action Plan (adopted in 2013)<sup>(5)</sup> outlined a strategy to reignite the entrepreneurial spirit in Europe and the Green Action Plan for SMEs presented ways for SMEs to turn environmental challenges into business opportunities<sup>(6)</sup>.

This chapter contributes to the policy debate by examining to what extent labour market and social policies can boost job creation through self-employment and (self-employed) entrepreneurship in the face of ongoing structural change, such as the further digitisation, globalisation and greening of the economy.

The chapter is structured as follows. The first section summarises key developments in self-employment and self-employed entrepreneurship and their

<sup>(5)</sup> Promoting investments in changing the public perception of entrepreneurs, in entrepreneurship education and to support groups that are under-represented among entrepreneurs are indispensable if we want to create enduring change. See <http://ec.europa.eu/transparency/regdoc/rep/1/2012/EN/1-2012-795-EN-F1-1.Pdf>

<sup>(6)</sup> By improving the resource efficiency of European SMEs, supporting green entrepreneurship, exploiting the opportunities of greener value chains, and facilitating market access for green SMEs. For more details, see [http://ec.europa.eu/growth/smes/business-friendly-environment/green-action-plan/index\\_en.htm](http://ec.europa.eu/growth/smes/business-friendly-environment/green-action-plan/index_en.htm)

capacity to create jobs in the EU since 2000. The second section highlights the role of a select set of framework conditions in supporting self-employment and nascent entrepreneurship. The third section elaborates on labour market and social policies which have the potential to support sustainable start-ups. The fourth section pays special attention to labour market and social policies that have the potential to help under-represented groups (such as disabled and young people) in their transition to self-employment. The fifth section explores how these policies can strengthen the potential for additional sustainable job creation following a one-person, micro or small enterprise start-up. The last section draws some conclusions.

This chapter complements the ongoing work on 'Job creation in SMEs' by Eurofound and the 'Annual Report on European SMEs'<sup>(7)</sup>; it does not provide an exhaustive list of European Commission policies<sup>(8)</sup>.

<sup>(7)</sup> See, for instance, European Commission (2014).

<sup>(8)</sup> This chapter focusses on developments in the European Union, for a comprehensive overview of self-employment in the US, see, for instance, <http://www.bls.gov/careeroutlook/2014/article/self-employment-what-to-know-to-be-your-own-boss.htm>



## 2. ENTREPRENEURSHIP AND SELF-EMPLOYMENT CREATE JOBS

This section reviews recent developments in self-employment and entrepreneurship as well as their impact on EU job creation since 2000. This chapter focuses primarily on entrepreneurship as the process of starting and subsequently expanding a business – rather than the ability to turn ideas into action, which both the self-employed and employee can display<sup>(9)</sup>.

For the following empirical analysis, a micro-enterprise is an enterprise employing 10 persons or fewer, while a small enterprise employs up to 50 persons<sup>(10)</sup> and self-employed persons are those who work in their own business, farm or professional practice<sup>(11)</sup>. While the self-employed usually perform routine tasks, entrepreneurs attempt to develop something new, hence entrepreneurs are more likely to create additional jobs. People can be pushed into self-employment because no alternative (other than unemployment) is available, ‘the necessity entrepreneur’, or people can be pulled to self-employment through entrepreneurial opportunities, ‘the opportunity entrepreneur’. See, for instance, Bhola et al. (2006).

<sup>(9)</sup> Entrepreneurship comprises creativity, innovation and risk-taking, and the ability to plan and manage projects in order to achieve objectives. See, for instance, European Commission (2006). Along with the ability to communicate in the mother tongue and foreign languages, mathematical competence and basic competences in science and technology, digital competence, learning to learn, social and civic competences, as well as cultural awareness and expression, entrepreneurship is one of the key competences for flexibility, adaptability, satisfaction and motivation in a knowledge-based economy. For more details, see, for instance, <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=URI:RISERV:c11090&from=EN>

<sup>(10)</sup> And having an annual turnover and/or annual balance sheet total not exceeding, respectively, EUR 2 million and EUR 10 million. See the Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (Text with EEA relevance) (notified under document number C(2003) 1422), available at <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32003H0361>

<sup>(11)</sup> A self-employed person is considered to be working if he/she meets one of the following criteria: works for the purpose of earning profit, spends time on the operation of a business or is in the process of setting up his/her business. See, for instance, Eurostat at [http://ec.europa.eu/eurostat/cache/metadata/en/lfsa\\_esms.htm](http://ec.europa.eu/eurostat/cache/metadata/en/lfsa_esms.htm). Not to be confused with business owner who owns a company. A distinction also has to be made between the entrepreneur (who finds new ideas and puts them into effect) and the manager (who oversees the ongoing efficiency of continuing processes). See, for instance, Baumol (1968).

Start-ups cover a heterogeneous group of self-employees, including: those who aim to remain small and local (e.g. the local drycleaner or hairdresser); those who plan to expand their activities beyond (regional or national) boundaries (i.e. Innovation Driven Enterprises<sup>(12)</sup>); and those who are formally self-employed but working under similar conditions to those of dependent employees. Although all three types of start-up have a direct job impact, their potential to create additional jobs differs greatly. The small business owner usually aims for limited growth and job creation, while the entrepreneur starts small with the intention of expanding his/her business and employment by exploiting new ideas (that drive product innovation and process innovation) while coping with unknown risks.

Finally, for the following empirical analysis, it can be noted that since the empirical analysis of entrepreneurship at EU level is often hindered by a lack of harmonised data, self-employment statistics are seen as the best available indicator for comparing entrepreneurial activity<sup>(13)</sup> between EU Member States<sup>(14)</sup>. Moreover, ongoing structural developments such as innovations in ICT and trade patterns are likely to reinforce the need for further refinement of the tools and conceptual frameworks for measuring self-employment accurately. See Box 1.

### 2.1. Recent developments

In 2014, just under 16% of all employed people were self-employed, with the highest shares in Greece (32%) and Romania (30%) and the lowest in Sweden (5%) and Luxembourg (6%)<sup>(15)</sup>. See Chart 1.

Compared with 2000, the share had decreased by almost 2 percentage points (ppt.) in the EU as a whole, with the

<sup>(12)</sup> With the Exponential Entrepreneur at its apex. See, for instance, Diamandis and Kotler (2015).

<sup>(13)</sup> There are no guidelines on the computation of self-employment income.

<sup>(14)</sup> Parker (2009) discusses the advantages and drawbacks of three alternative measures of entrepreneurship, i.e. a new venture creation, small firms and self-employment/business ownership.

<sup>(15)</sup> Statistical definition of self-employment: self-employed persons are the ones who work in their own business, farm or professional practice. A self-employed person is considered to be working if he/she meets one of the following criteria: works for the purpose of earning profit, spends time on the operation of a business or is in the process of setting up his/her business.

largest decreases in Romania (-15 ppt.), Lithuania (-8 ppt.) and Hungary (-7 ppt.), while the strongest increases were in Slovakia (+5 ppt.), the United Kingdom (+3 ppt.) and Slovenia (+2 ppt.).

In Romania (86%), Portugal (57%), Poland (49%), and Croatia (48%)<sup>(16)</sup> a significant share of the self-employed are employed in the agriculture, forestry and fishing sector. See Chart 2.

In 2014, less than one third of the EU's self-employed engaged other workers to work for them – i.e. they were solo self-employed – but with strong variations across Member States. The highest share of employers among the self-employed is found in Hungary (49%), followed by Germany (45%), Austria (42%) and Denmark (42%). The Romanian (6%) share is by far the lowest, followed by the United Kingdom (17%), the Czech Republic (20%) and Greece (20%). See Chart 3.

About 1.5% of the employees had a second self-employed job in 2014, with the highest share in Poland and Sweden and the lowest share in Bulgaria and Slovakia. See Chart 4.

In the EU, about 5% of the inactive persons in 2013 became self-employed without employees in 2014 (about the same change as in 2007), while 4.5% of employees and only 2.7% of the unemployed made a similar transition (compared to respectively 4.8% and 2.7% in 2007). See Chart 5. At the same time, 3% of the employees in 2013 became self-employed with employees in 2014 (compared to about 4% in 2007), while 1.2% of inactive persons and only 0.7% of the unemployed moved to self-employment with employees (about the same as in 2007). See Chart 6.

In the United Kingdom more than 5% of men who had been unemployed in 2013 became self-employed in 2014, while in Hungary this was only the case for about 1% of the unemployed. See Chart 7. At the same time, almost 5% of women in Cyprus who were unemployed in 2013 became self-employed in 2014, while in Hungary, Croatia, Greece, Bulgaria and Germany this was the case for less than 1% of women. See Chart 8.

<sup>(16)</sup> Last year for which data is available.



### Box 1: Defining and measuring self-employment in a changing world

#### *Differences between the self-employed and employees are cloudy ...*

Defining, measuring and describing self-employment is an increasingly difficult exercise, since the boundaries between self- and dependent-employment as well as paid and unpaid work are blurring. Hence it becomes more difficult to accurately measure employment status. Statistical and legal approaches can be difficult to reconcile and an increasing variety of situations are regarded as self-employment. A better understanding of these changes is important for policy-makers, which calls for further work to adapt analytical and statistical tools to provide high-quality information and data.

Hybrid forms of employment are emerging, sharing features of both dependent- and self-employment (see, for instance, Eurofound (2015)), while other forms include 'volunteering' or unremunerated work. There are a number of explanatory factors, such as:

- increasing use of subcontracting, including to micro-enterprises and self-employed workers;
- self-employment offering a viable alternative to unemployment, especially for disadvantaged groups of jobseekers trying to develop and market their services;
- ICT development creating new forms of 'digital'/'virtual' user generated work, both paid and unpaid, shifting the borders between 'play' and 'work' and offering the possibility of 'trying out' self-employment, either alongside another activity or in a more sheltered, less risky way<sup>(1)</sup>;
- creation of new forms of 'labour'/'activity'.

The size of this hybrid group is likely to increase in the future.

#### *... calling for innovative data collection methods*

Being able to measure employment status in an accurate and policy-relevant way, while understanding the heterogeneity of situations, requires in-depth research. Similarly, more research is needed to identify the most problematic situations and best tools (business support services, training provision, protection, collective representation, revised competition rules, etc.) to address them.

A number of such initiatives are under way. The Labour Force Survey (LFS) is developing an ad hoc module on self-employment. New questions have been added to the 6<sup>th</sup> European Working Conditions Survey (EWCS)<sup>(2)</sup>, specifically on self-employment and blurring situations, enabling documentation of job quality and working conditions for various sub-groups of the self-employed, as well as identifying those workers who are unable to classify themselves as dependent- or self-employed. Eurofound's network will contribute an update on legislation and political discussion in all Member States. Very importantly, the revision of the ISCE 93 classification is underway<sup>(3)</sup>.

Current developments are challenging many aspects of standard employment relationships, such as: identification of the 'employer'; determination of the place of work; responsibility for health and safety, etc. Moreover, apart from affecting private lives, the development of mixed, ambiguous, in-between situations will transform the nature of work and the employment relationship.

The technical issues may have to be addressed, since they affect the quality and relevance of information provided to policy-makers and may fail to highlight vulnerable groups of workers.

<sup>(1)</sup> See, for instance, Eurofound (2015).

<sup>(2)</sup> The 6<sup>th</sup> European Working Conditions Survey managed by Eurofound is planned for 2015.

<sup>(3)</sup> The international classification on status of employment (ISCE 93) adopted through a resolution of the 15<sup>th</sup> International Conference of Labour Statisticians in January 1993, classifies jobs with respect to the type of explicit or implicit contract of employment between the job holder and the economic unit in which he/she is employed. The following five substantive categories are specified: Employees, Employers, Own-account workers, Members of producers' cooperatives and Contributing family workers. The last four of these categories can be aggregated to form the self-employed. These categories no longer provide sufficient information to adequately monitor changes in employment arrangements that are taking place in many countries.

Micro-enterprises accounted for almost one third of all EU employment in 2011<sup>(17)</sup>. See Chart 9. Almost one third of these were in the wholesale/retail and motor vehicle and motorcycle repair sectors. See Chart 10.

In 2012, net job creation by new firms primarily originated from businesses with up to nine employees. See Chart 11. At the same time, among the firms going out of business, those with

up to nine employees shed the most jobs. See Chart 12.

There is a major gender imbalance with regard to self-employment in the EU, with women accounting for only about one third of the total. In all Member States, women were the minority among the self-employed in 2013, with the highest shares in Lithuania (41.6%), Latvia (38%) and Luxembourg (40.3%) and the lowest in Malta (19.6%) and Ireland (20.8%). See Chart 13. Self-employed women also have a lower propensity to

hire employees than men, especially in Cyprus and Malta. See Chart 14. In all Member States, the share in total self-employment of young people is very low, ranging from 1% in Slovenia to 6% in Malta in 2013. See Chart 15.

In the EU, about one third of the self-employed have a tertiary education, 45% have upper secondary and post-secondary non-tertiary education, while about 20% have less than primary and lower secondary education. Nevertheless, there are some notable differences across Member

<sup>(17)</sup> Last year for which data is available.

States. Portugal (65%), Malta (60%), Romania (47%) and Spain (41%) have a large share of self-employed with low education levels, while Slovakia (75%), the Czech Republic (73%) and Poland (67%) have a high share with upper secondary and post-secondary non-tertiary education. Luxembourg (61%) followed by Estonia (49%), Belgium (48%) and Germany (47%) have the highest share of self-employed with a tertiary education. See Chart 16. Among the self-employed who employ employees, 44% have a medium level of education and 38% tertiary. See Chart 17.

Harmonised data on self-employed earnings across EU Member States is not readily available. Estimates based on EU-SILC data suggest that the reported gross earnings of a significant share of the self-employed are below median gross earnings of employees – with the highest share being found in Estonia, Slovenia and Romania and the lowest share in Bulgaria, Slovakia and Hungary. See Chart 18.

The limited available evidence indicates that, in the Member States for which the data is available, the share of the number of gazelles<sup>(18)</sup> in the total number of enterprises, measured in employment, accounted for less than 2% in the EU in 2012 (or earlier) – highest in Bulgaria, followed by Slovakia and the Netherlands, while lowest in Cyprus, followed by Sweden and Lithuania. See Chart 19. The share of the number of gazelles in the total number of enterprises, measured in employment, was almost the same in manufacturing as in services across Member States (for which the data is available). See Chart 20.

An ECB Survey<sup>(19)</sup> shows that the most pressing problems facing the self-employed and entrepreneurs in 2014 were finding customers, access to finance, regulation, availability of skilled workers and labour cost. See Charts 21 and 22.

<sup>(18)</sup> Eurostat-OECD manual on Business demography statistics defines gazelles as enterprises up to 5 years old with annualised growth (in turnover or employment) greater than 20% per annum, over a 3-year period. The cut-off point in terms of growth base varies, but usually varies between 5 and 10 employed persons in the first year. Companies with for example only two persons employed one hiring would already show a 50% growth rate are not included. See Eurostat – OECD Manual on Business Demography Statistics at <http://ec.europa.eu/eurostat/ramon/statmanuals/files/KS-RA-07-010-EN.pdf>

<sup>(19)</sup> See ECB Survey on the access to finance of enterprises (SAFE) at <https://www.ecb.europa.eu/stats/money/surveys/sme/html/index.en.html>

### Box 2: Job creation potential – key empirical findings

A literature review suggests that some broad hypotheses regarding the job creation potential of self-employment and entrepreneurship can be formulated, including the following<sup>(1)</sup>.

- Most small start-ups remain small, with limited job growth. See, for instance, Chart 3.
- Innovative companies create more jobs (and lay off fewer employees during a crisis). See, for instance, Kok et al. (2011).
- The younger companies are, the more jobs they create (regardless of size). However, young firms have a much higher likelihood of exit, so job destruction from exit is disproportionately high among them. See, for instance, Criscuolo et al. (2014).
- Net employment growth is mainly generated by a small number of young, high-growth firms, the so-called gazelles. Gazelles are found in all industries. See, for instance, Henrekson and Johansson (2010).
- Among micro-firms, those with strong growth have the highest survival rates. By contrast, among larger businesses the slow-growing firms have the highest survival rates. See, for example, Halabisky (2006).
- Enterprises owned by women are more likely to be small and use less finance. See, for instance, Parker (2009).
- Enterprises of older entrepreneurs tend to be less growth-oriented than those of younger entrepreneurs. See, for example, European Commission and OECD (2012).
- Ethnic minorities are more likely to be self-employed than the overall adult population. See, for instance, OECD (2014).
- Family businesses tend to be less dynamic in job creation. See, for instance, KMU Forschung Austria (2008).
- Business survival is strongly linked to the ability to combine professional life with household responsibilities. See, for instance, Williams (2004).
- Unemployed people who become self-employed are more likely to exit self-employment than those entering from employment. See, for instance, Carrasco (1999) and Pfeiffer and Reize (2000).
- Team-based start-ups are more likely to grow than those of a single entrepreneur – up to an optimal level when coordination problems between team members emerge. See, for instance, Shrivastava and Tamvada (2011).
- Few dependent self-employed create jobs for others. See, for instance, Böheim and Mühlberger (2009) for the United Kingdom.
- ‘Born globals’<sup>(2)</sup> trigger job creation in businesses that supply intermediary goods and services (but not necessarily in the same country). See, for instance, Eurofound (2012b).
- Social enterprises mainly provide job opportunities for people who have difficulty finding work in private, profit-maximising enterprises.
- Geographical location is important, with some areas generating more high-growth firms than others. See, for instance, Mason and Brown (2010).

<sup>(1)</sup> It should be remembered that although these hypotheses have been tested for particular datasets, they are not necessarily applicable to the whole population of self-employed and entrepreneurs.

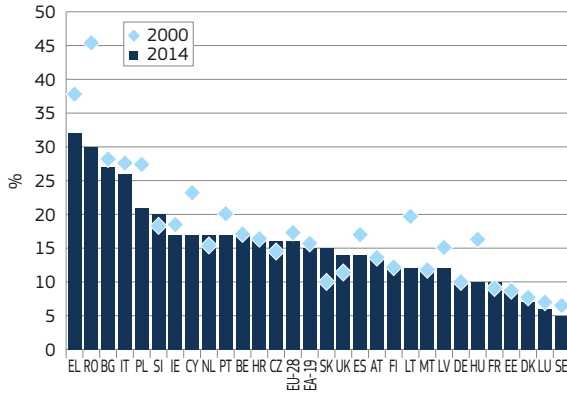
<sup>(2)</sup> ‘Born global’ is a company that conducts international business at or near the founding of the firm. See, for instance, Knight (2010).

Finally, Box 2 briefly summarises some key findings concerning job creation

through self-employment and entrepreneurship reported in the literature<sup>(20)</sup>.

<sup>(20)</sup> Forthcoming publications will deal with this in more detail, including Eurofound’s forthcoming Annual report of the European Restructuring Monitor and also DG GROW’s forthcoming annual SME report.

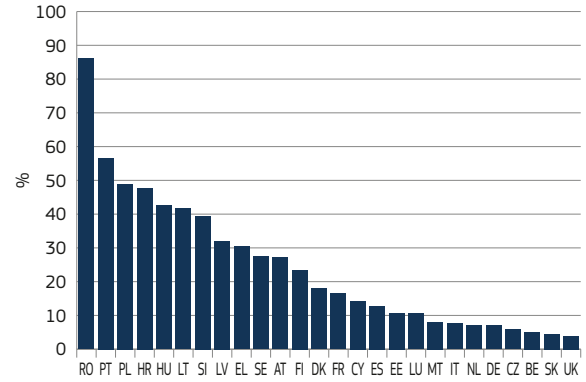
Chart 1: Share of self-employed in total employment



Source: DG EMPL calculations based on Eurostat, national accounts (nama\_10\_a10\_e).

Note: FR and LU 2013 observation, persons aged 15 and over.

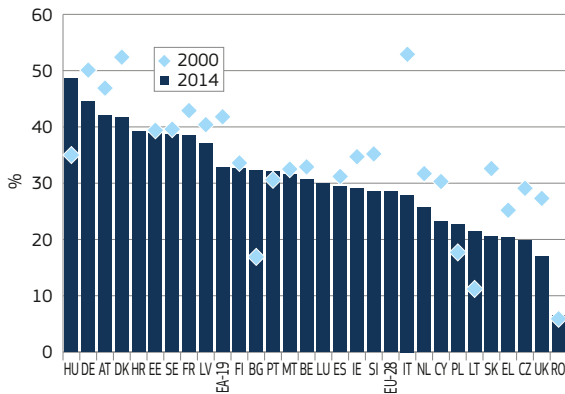
Chart 2: Share of self-employed in agriculture, forestry and fishing – 2014



Source: DG EMPL calculations based on Eurostat, national accounts (nama\_10\_a10\_e).

Note: Persons aged 15 and over.

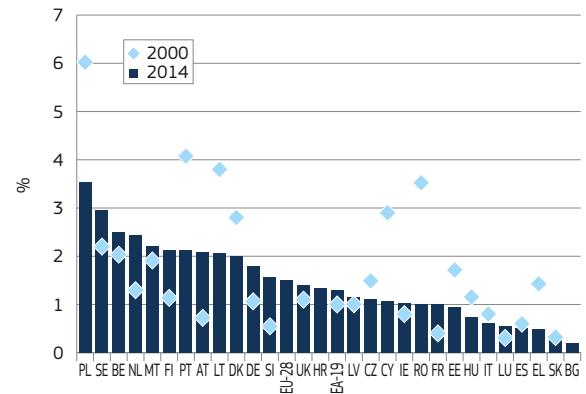
Chart 3: Share of self-employed who engage employees



Source: DG EMPL calculations based on Eurostat, EU-LFS (lfsa\_espais).

Note: From 15 to 64 years.

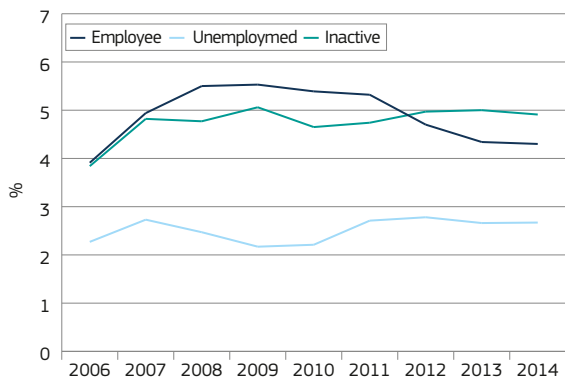
Chart 4: Share of employees with second job as self-employed



Source: DG EMPL calculations based on Eurostat, EU-LFS (lfsa\_e2gps and lfsa\_eeais).

Notes: Persons aged 15 and over, BG and HR 2000 observation missing.

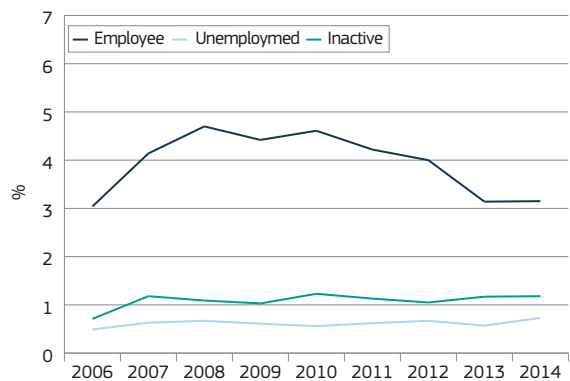
Chart 5: Proportion of unemployed in previous year who were self-employed without employees at time of survey – EU



Source: DG EMPL calculations based on EU-LFS.

Notes: Persons aged 15 and over. FR not included in EU aggregate.

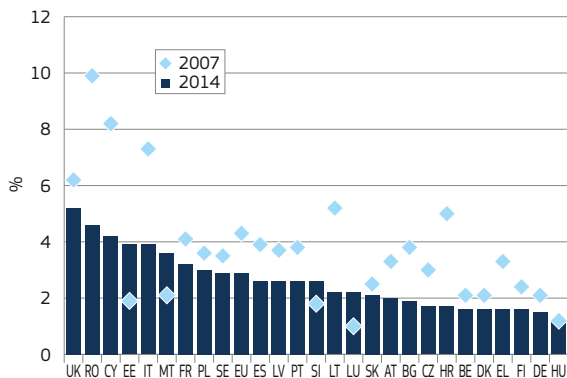
Chart 6: Proportion of unemployed in previous year who were self-employed with employees at time of survey – EU



Source: DG EMPL calculations based on EU-LFS.

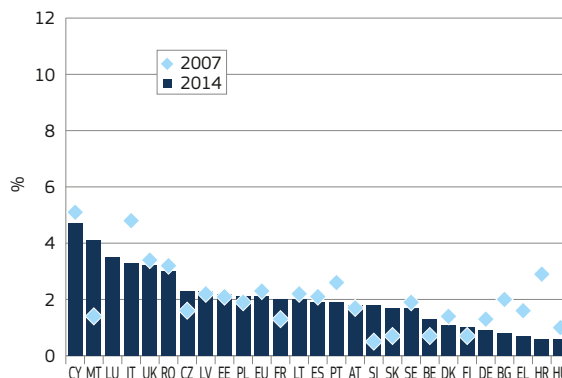
Notes: Persons aged 15 and over. FR not included in EU aggregate.

Chart 7: Proportion of unemployed in previous year who were self-employed at time of survey – Men



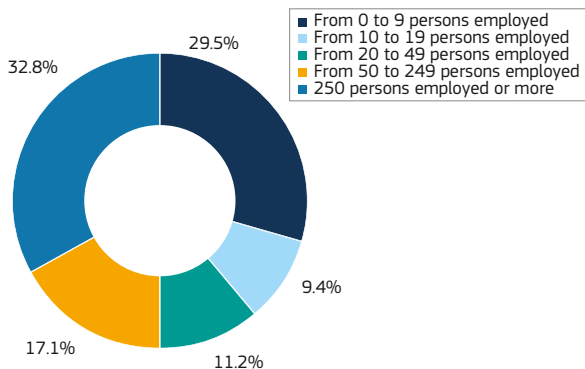
Source: Applica (2015, Table 6) calculations based on EU-LFS.

Chart 8: Proportion of unemployed in previous year who were self-employed at time of survey – Women



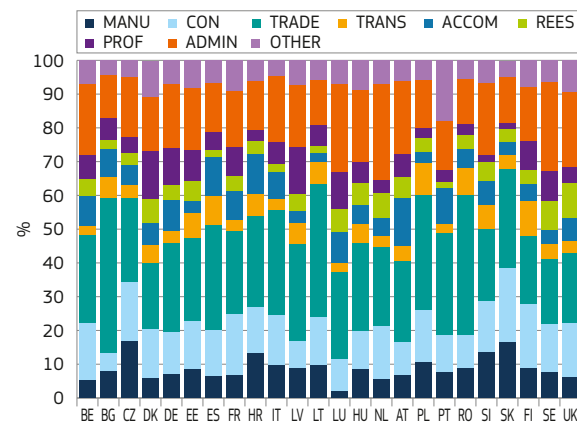
Source: Applica (2015, Table 7) calculations based on EU-LFS.

Chart 9: Share in total employment by enterprise size – EU-28 in 2011



Source: DG EMPL calculations based on Eurostat, Structural business statistics (sbs\_sc\_sca\_r2).

Chart 10: Sectoral employment shares of enterprises of up to 9 employed persons – 2012

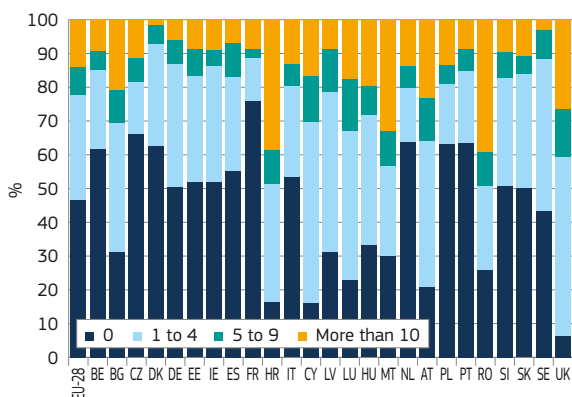


Source: DG EMPL calculations based on Eurostat, Structural business statistics (sbs\_sc\_sca\_r2).

Notes: Total business economy; repair of computers, personal and household goods; except financial and insurance activities. MINE: Mining and quarrying, MANU: Manufacturing, ELEC: Electricity, gas, steam and air conditioning supply, WATER: Water supply; sewerage, waste management and remediation activities, CON: Construction, TRADE: Wholesale and retail trade; repair of motor vehicles and motorcycles, TRANS: Transportation and storage, ACCOM: Accommodation and food service activities, INFO: Information and communication, REES: Real estate activities, PROF: Professional, scientific and technical activities, ADMIN: Administrative and support service activities, COMP: Repair of computers and personal and household goods.

Chart 11: Share in total new job creation by new firms – 2012

(based on enterprise size)

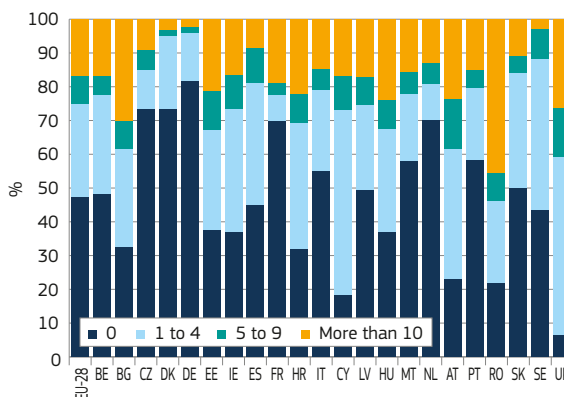


Source: DG EMPL calculations based on Eurostat, SBS Business Demography Statistics (bd\_9bd\_sz\_cl\_r2).

Note: Number of employees.

Chart 12: Share in total job loss by firms going out of business – 2012

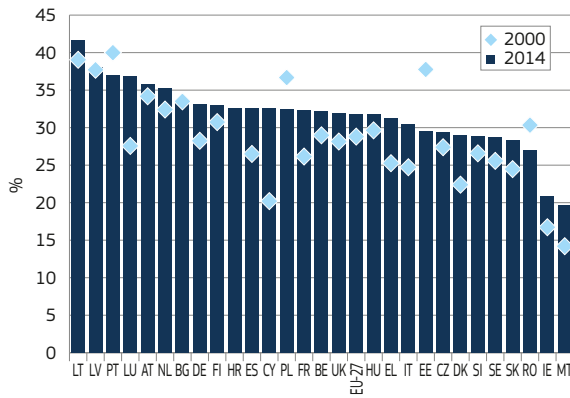
(based on enterprise size)



Source: DG EMPL calculations based on Eurostat, SBS Business Demography Statistics (bd\_9bd\_sz\_cl\_r2).

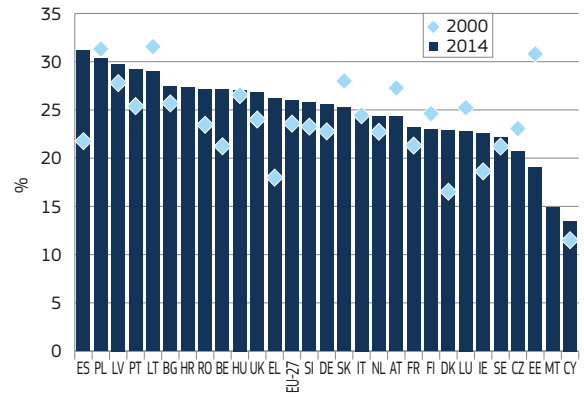
Note: Number of employees.

Chart 13: Share of women among self-employed



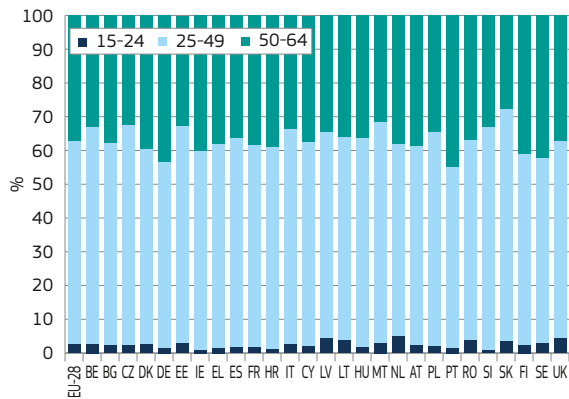
Source: DG EMPL calculations based on Eurostat, EU-LFS (lfsa\_essais).  
 Note: Self-employed with and without employees.

Chart 14: Share of female self-employed engaging employees



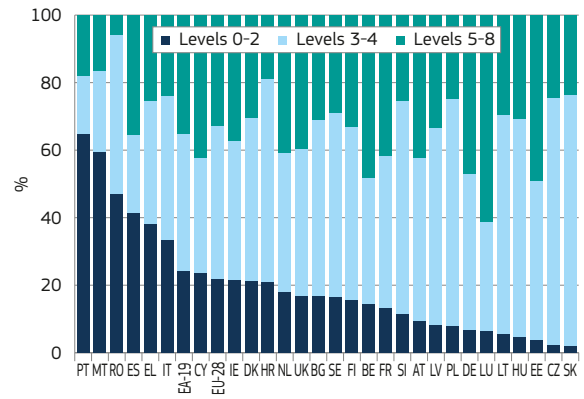
Source: DG EMPL calculations based on Eurostat, EU-LFS (lfsa\_essais).

Chart 15: Self-employed persons: age shares – 2014



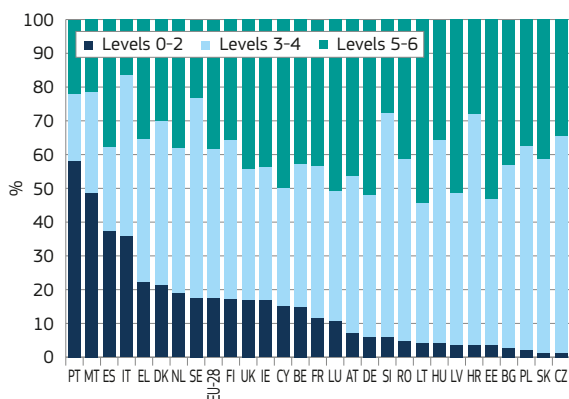
Source: DG EMPL calculations based on Eurostat, EU-LFS (lfsa\_essais).  
 Notes: DG EMPL interpolation for missing data for age group 15-24 of LT and LU. EE 2013 observation.

Chart 16: Education level of self-employed – 2014



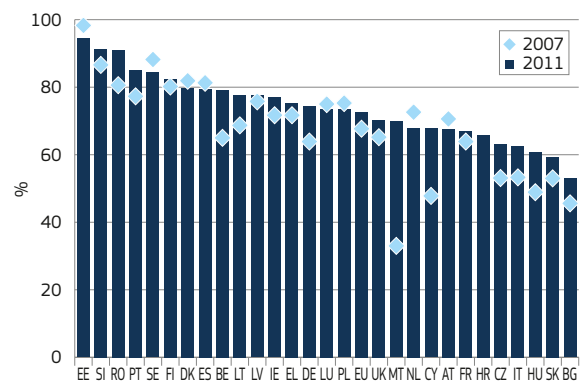
Source: DG EMPL calculations based on Eurostat.  
 Notes: Less than primary, primary and lower secondary education (levels 0-2); Upper secondary and post-secondary non-tertiary education (levels 3 and 4); Tertiary education (levels 5-8). 'No response' not included.

Chart 17: Self-employed with employees – skill level – 2014



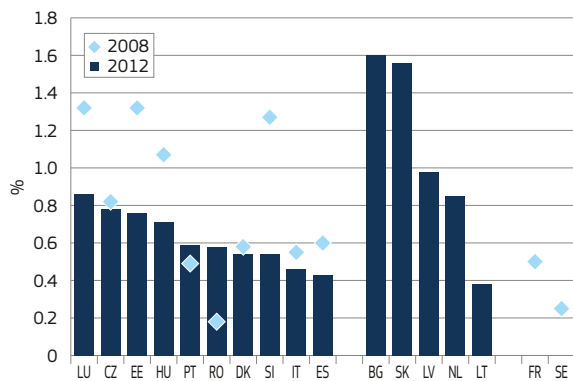
Source: DG EMPL calculations based on Eurostat, EU-LFS (lfsa\_essais).  
 Note: DG EMPL interpolation for missing data for levels 0-2 in BG, EE, LV, LT, LU, RO and SK.

Chart 18: Share of self-employed without employees with gross earnings below employee median earnings



Source: Applica (2015) using EU-SILC micro-data, version August 2014.

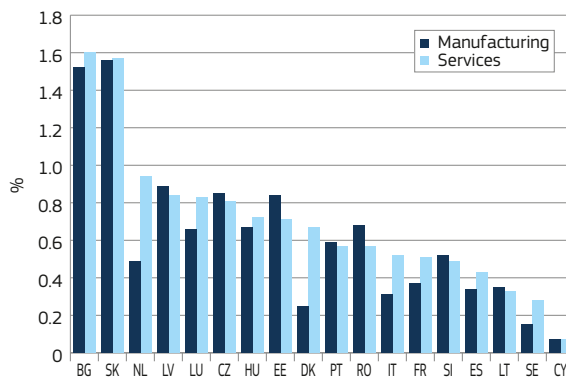
Chart 19: Share of gazelles measured in employment – 2008 and 2012 (or earlier)



Source: Eurostat, EIP (bd\_9n\_r2).

Notes: Gazelles are enterprises up to 5 years old with average annualised growth greater than 20% per annum, over a 3-year period. In this chart, growth is measured by the number of employees (an alternative measure could have been turnover). The share of gazelles measures the number of gazelles as a percentage of the population of enterprises with 10 or more employees. Business economy except activities of holding companies. Earlier years DK: 2011; FR: 2009; LU: 2011; SI: 2011; SE: 2008.

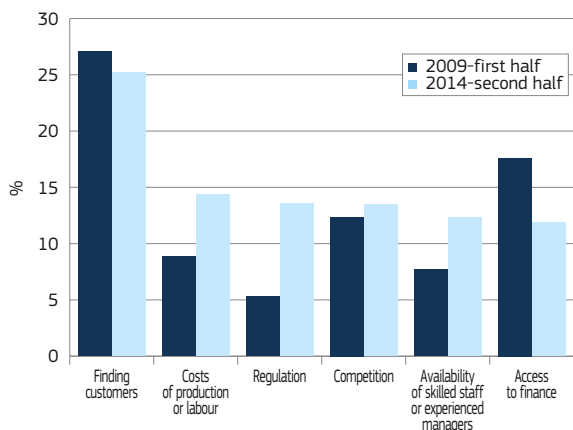
Chart 20: Share of gazelles measured in employment by sector – 2012 (or earlier)



Source: Eurostat, EIP (bd\_9n\_r2).

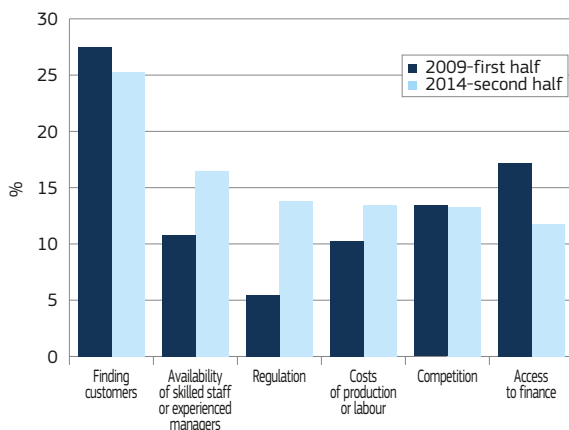
Notes: see note Chart 19.

Chart 21: Pressing problems faced by micro-enterprises



Source: ECB Survey on the access to finance of enterprises (SAFE).

Chart 22: Pressing problems faced by meso-enterprises



Source: ECB Survey on the access to finance of enterprises (SAFE).

### 3. ENSURING THE RIGHT FRAMEWORK CONDITIONS

Major long-term challenges and opportunities for the self-employed and (self-employed) entrepreneur stem from ongoing structural changes such as technological progress (including new developments in ICT and key enabling technologies (KETs)<sup>(21)</sup>), further globalisation (including expanding global value chains and free trade agreements), demographic change (including ageing and changing family structures) and greening of the economy (including the strengthening of the circular economy).

<sup>(21)</sup> KETs cover micro-/nano-electronics, nanotechnology, photonics, advanced materials, industrial biotechnology and advanced manufacturing technologies. See, for instance, European Commission (2012).

The right framework conditions can potentially strengthen the incentives and means for individuals (or teams) to start a new business, while ensuring that they can expand their activities in a sustainable (job-rich) way. Specifically, the development of self-employment and entrepreneurship might call for the development of a more entrepreneurial culture, well-designed taxes and social protection, access to finance, business support as well as product markets, few bureaucratic burdens and a stable macro-economic environment.

Providing greater regulatory predictability, removing barriers and reinforcing the Single Market are important in unlocking the full potential of entrepreneurship and self-employment in the EU. This can only be achieved through complementary actions at EU and at country

level. The implementation of reforms in the Member States has to accompany the actions at EU level to reinforce the Single Market.

At EU level, further deepening the Single Market remains high on the agenda, notably with initiatives to develop the Capital Markets Union<sup>(22)</sup>, to further deepen the Single Market<sup>(23)</sup> in goods and services, to create a Digital Single Market<sup>(24)</sup> and to develop an Energy Union. These initiatives to deepen the Single Market would themselves provide a boost to entrepreneurship. In parallel,

<sup>(22)</sup> For more details, see <http://ec.europa.eu/finance/capital-markets-union/>

<sup>(23)</sup> For more details, see [http://ec.europa.eu/growth/single-market/index\\_en.htm](http://ec.europa.eu/growth/single-market/index_en.htm)

<sup>(24)</sup> For more details, see <http://ec.europa.eu/priorities/digital-single-market/>



with its Better Regulation<sup>(25)</sup> agenda, the Commission seeks to simplify the legal framework, to reduce regulatory burdens across the Single Market and to achieve better regulatory predictability.

At national level, a key priority is for Member States to remove country-specific barriers to entrepreneurship. Relevant reforms cover a wide set of measures that aim to improve the functioning of labour and product markets and the framework conditions in which economic actors operate. However, there is a large diversity across countries. Barriers to entrepreneurship are both regulatory and non-regulatory, vary in terms of their restrictiveness, complexity or unpredictability, and have to be put in perspective with investment patterns. There is therefore no one-size-fits-all solution, and action by Member States will be crucial.

### 3.1. Towards a more entrepreneurial culture

Looking beyond monetary incentives, people's decision to become self-employed or entrepreneurs is also driven by psychological (such as a desire for more autonomy and self-control<sup>(26)</sup>) as well as socio-cultural factors (such as education). For example, Giannetti and Simonov (2004)<sup>(27)</sup> suggest that where the culture makes entrepreneurial activity attractive, more individuals become entrepreneurs even though profits are lower.

In the European Union, several socio-cultural bottlenecks are seen to constrain the development of entrepreneurship and self-employment, as the following examples illustrate<sup>(28)</sup>.

The lack of entrepreneurship education (from a young age in school through to universities and vocational education and training) remains a significant bottleneck to stimulating self-employment and entrepreneurship in the EU. On average, less than 50% of 18 to 64 years old in the EU believe that they have the skills and knowledge to start a business, ranging from about 30% in Belgium and Italy to 54% in Slovakia and Poland – which compares to 53% in

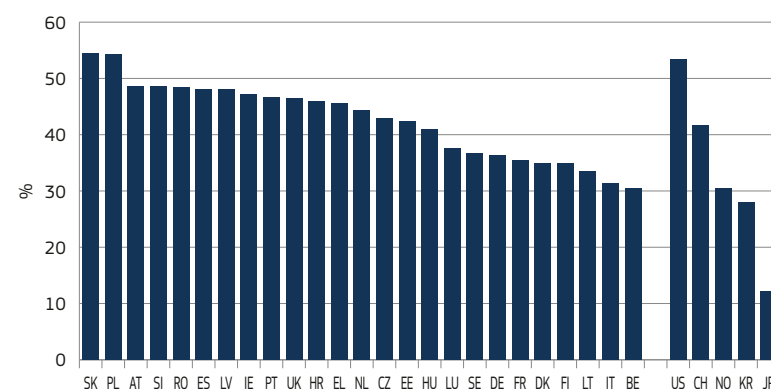
<sup>(25)</sup> For more details, see [http://ec.europa.eu/smart-regulation/index\\_en.htm](http://ec.europa.eu/smart-regulation/index_en.htm)

<sup>(26)</sup> See, for instance, Eurofound (2015a).

<sup>(27)</sup> Using a large sample of the Swedish population between 1995 and 2000.

<sup>(28)</sup> Social obstacles will be discussed in more detail in Section 4.

Chart 23: Percentage of 18-64 population who are believed to have the required skills and knowledge to start a business – 2014



Source: Global Entrepreneurship Monitor database.

Note: HR, LV and KR 2013 observation.

the United States, 42% in Switzerland and 12% in Japan. See Chart 23.

The stigmatisation of business failure has an adverse impact on EU entrepreneurship. For example, Bonnet and Cussy (2010) report that in France only a very limited number of graduates of the prestigious 'Grandes Ecoles' envisage an entrepreneurial career because of the stigma attached to (honest) business failure. Strengthening public views of entrepreneurs' contribution to Europe's welfare, jobs, innovation and competitiveness may help to create a more positive public perception of entrepreneurship and self-employment. See, for instance, the European SME Week<sup>(29)</sup>.

Older generations from the new EU Member States – with their background of a centrally-planned economy with a strong emphasis on dependence and conformity – show a strong reluctance to display the key characteristics of self-employment and entrepreneurship (such as self-reliance and individualism). See, for instance, Estrin and Mickiewicz (2010) and Sztompka (1996).

Furthermore, as the world economy further integrates and new business opportunities emerge (propelled by drivers such as 3D printing and crowd-funding which have a strong potential to reduce costs), entrepreneurs will have to start to think on a much broader scale and explore the potential to address the needs of the hyper-connected crowd – which will also require a stronger awareness of cultural differences. See, for example, Diamandis and Kotler (2015).

<sup>(29)</sup> For more details, see <http://ec.europa.eu/growth/smes/support/sme-week/>

All in all, developing a more entrepreneurial mind-set across all groups of society (especially among under-represented groups such as the young, women and older people) and promoting a favourable public perception of entrepreneurship will continue to be important challenges. Labour market policies can strengthen entrepreneurship by supporting relationships between businesses and educational systems<sup>(30)</sup>, fostering a common understanding of what entrepreneurial skills are<sup>(31)</sup>, developing accreditation systems to validate non-formal learning and practical activities favouring entrepreneurial development, as well as promoting networking and mobility of young entrepreneurs. See European Commission (2015), (2014g) and (2008).

### 3.2. Improving access to finance and capital

Financing needs vary according to the stage of the business's development (such as start-up phase, early development phase, growth and maturity phase) and future objectives (such as remaining local and small or being innovative and going international). However, entrepreneurs do not always have access to traditional finance (such as banks) due to, inter alia: a lack of collateral<sup>(32)</sup>; high

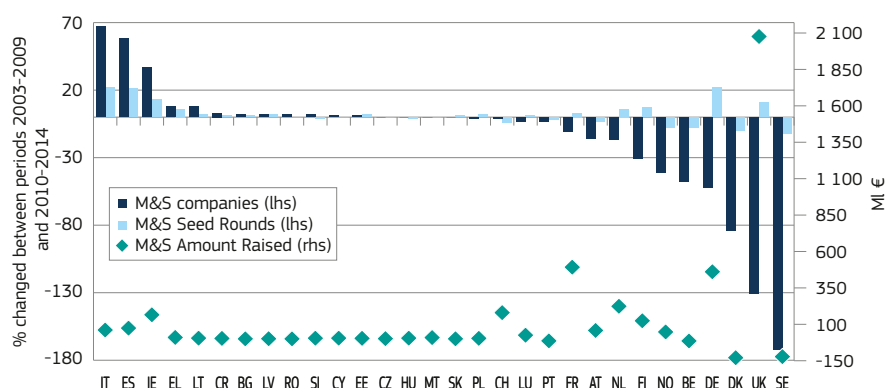
<sup>(30)</sup> On entrepreneurship education in Europe, see, for instance, ICF Consulting Services (2015), 'Entrepreneurship Education: A road to success', DG Growth, Final Report, available at [http://ec.europa.eu/growth/tools-databases/newsroom/cf/itemdetail.cfm?item\\_id=8056&lang=en](http://ec.europa.eu/growth/tools-databases/newsroom/cf/itemdetail.cfm?item_id=8056&lang=en)

<sup>(31)</sup> The European Commission is defining a common reference framework for key entrepreneurship competences. For more details, see 'Sense of initiative and Entrepreneurship' at <https://ec.europa.eu/jrc/en/entrecomp>

<sup>(32)</sup> See, for instance, Johansson (2000).



Chart 24: Changes between 2003-2009 and 2010-2014 in the number of companies, seed rounds and change in amount raised by country – Micro and Small companies



Source: DG EMPL calculations based on Dow Jones online database VentureSource.

fixed costs for a loan<sup>(33)</sup>; gender, age or ethnicity discrimination<sup>(34)</sup>; insufficient information on behalf of the lender<sup>(35)</sup>; or the companies' fault, e.g. not preparing applications properly or not providing the financial information requested<sup>(36)</sup>.

Apart from strengthening competition between financial intermediaries (see, for instance, Kerr and Nanda (2009)), policy initiatives to address these market failures include the promotion of new, alternative forms of financing for start-ups and SMEs (such as crowd-funding), as well as simplification of tax legislation and better design of tax systems to stimulate further development of alternative financial markets (such as business angel investments), while at the same time making use of public funds to set up micro-finance support schemes, initiatives to provide entrepreneurs and businesses with finance through local financial institutions including loans, guarantees and equity funding as well as supporting networking of entrepreneurs and investors. See, for example, European Commission<sup>(37)</sup> and OECD (2014).

At the European level, this involves strengthening the risk-bearing capacity

<sup>(33)</sup> See, for instance, Duell (2011).

<sup>(34)</sup> See, for instance, Eurostat (2012).

<sup>(35)</sup> See, for instance, Evans and Jovanovic (1989) and Henley (2005).

<sup>(36)</sup> See, for instance, Mazzucato et al. (2012) for financial system reforms aimed at aligning the financial system and its practices with the real, productive economy of value-creation.

<sup>(37)</sup> Including the COSME Programme, InnovFin Programme (including Horizon's 2020 SME Instrument), Creative Europe (cultural and creative sectors), Programme for Employment and Social Innovation (EaSI) and European Structural and Investment Funds (ESI funds). More details at <http://europa.eu/youreurope/business/funding-grants/access-to-finance/>

through public money to encourage project promoters and attract private finance to viable investment projects which would not have otherwise happened. In this respect the new European Fund for Strategic Investments provides risk support for long-term investments and ensures increased access to risk-financing for SMEs and mid-size companies<sup>(38)</sup>.

Several alternative forms of finance are available – depending on the characteristics of the firm – as the following examples illustrate. Innovative small and medium-sized start-up firms can be supported by business angels who provide equity at an early stage of development, long before they become attractive to venture capital funds<sup>(39)</sup>. When access to finance is limited, their investment capacity can be strengthened by co-investment from public funds, such as the European Angels Fund<sup>(40)</sup> under the European Investment Fund<sup>(41)</sup>.

High potential growth start-up enterprises can benefit from venture capital (VC). See, for instance, Croce et al. (2013). The effectiveness of venture capital is driven by the venture capitalist's capacity to select firms and business projects with superior potential, as well as the financial and managerial resources they provide to the firm. See,

<sup>(38)</sup> See, for instance, European Commission (2014f and 2015).

<sup>(39)</sup> Examples include AWS i2 Business Angels Austria (AT) (<http://www.aws.at/Content.Node/risikokapital/i2-business-angels/46841.php>) and Business Angels Netzwerk Deutschland (DE) (<http://www.business-angels.de/>).

<sup>(40)</sup> See [http://www.eif.org/what\\_we\\_do/equity/eaf/index.htm](http://www.eif.org/what_we_do/equity/eaf/index.htm)

<sup>(41)</sup> See <http://www.eif.org/index.htm>

for instance, VICO (2011)<sup>(42)</sup>. According to the European Private Equity and Venture Capital Association EVCA (2005), European VC-backed companies created 630 000 new jobs between 2000 and 2004<sup>(43)</sup> and employed 17% of those in portfolio companies<sup>(44)</sup>, accounting for almost 1 million jobs.

The available evidence seems to suggest that between 2010 and 2014<sup>(45)</sup> more Member States are beginning to explore venture capital as an alternative source of funding for micro and small companies<sup>(46)</sup>. For example, Chart 24 compares, in absolute values, the number of companies and amount of investment at an early stage (i.e. seed rounds) for micro and small enterprises (MSC) in 2010-2014 with 2005-2009. This chart suggests that

<sup>(42)</sup> See also DG RTD FP7 Project 'VICO Results in Brief', available at [http://cordis.europa.eu/result/rcn/90684\\_en.html](http://cordis.europa.eu/result/rcn/90684_en.html)

<sup>(43)</sup> The number of new jobs rises to 1 million if accounting for both private equity and venture capital financed companies.

<sup>(44)</sup> In this case, the portfolio companies are the companies invested in by European private equity and venture capital funds.

<sup>(45)</sup> The source of data is the online database VentureSource by Dow Jones, which is the most accurate global database on venture capital industry providing information, at financing round level, on VC-backed companies and investors in every region, industry and stage of development. Because the data was downloaded for the last time in April 2015, the figures for the year 2014 may be slightly underestimated.

<sup>(46)</sup> In this exercise it is assumed that a micro-company is a company which employs fewer than 10 persons, while a small company is a company which employs fewer than 50 persons, but, at least, 10 persons. The analysis is restricted to the typical VC rounds: seed, first stage, second stage, later stage and restart. Seed rounds are investments at very early stages of a company, while the successive rounds follow an ordinal nomenclature. Restart rounds are very rare and involve firms in severe difficulties that survive in a new form, often changing their business significantly.

the best performing Member States are among those most affected by the last economic crisis: Italy, Spain, Ireland, Greece and Lithuania. By contrast, Member States with more developed venture capital markets such as the United Kingdom, France and Germany, show negative values, but they still increased the value of funds raised through such deals, in particular the United Kingdom.

Vulnerable groups, micro-enterprises and social entrepreneurs that lack access to traditional capital and finance channels can be served by micro-credit providers. In turn, such organisations could be supported by funding from public sources<sup>(47)</sup>, such as the Microfinance and Social Entrepreneurship axis of the EU Programme for Employment and Social Innovation (EaSI)<sup>(48)</sup> and the European Social Fund<sup>(49)</sup>.

Another alternative form of finance for small and medium-sized companies is crowd-funding whereby capital is raised from a large number of people, typically via the internet. Although this may help entrepreneurs gather knowledge of customers and media exposure, several barriers may hinder the full exploitation of their potential such as a lack of awareness and understanding, challenges of protecting intellectual property, fraud and consumer protection concerns. See European Commission (2014e).

All in all, reducing fragmentation in the EU's financial markets (as would happen with full implementation of a Capital Markets Union) and strengthening the risk-bearing capacity of financial markets for micro and small enterprises, while at the same time improving the financial literacy of the population, could be factors that help develop a more diverse supply of finance to SMEs.

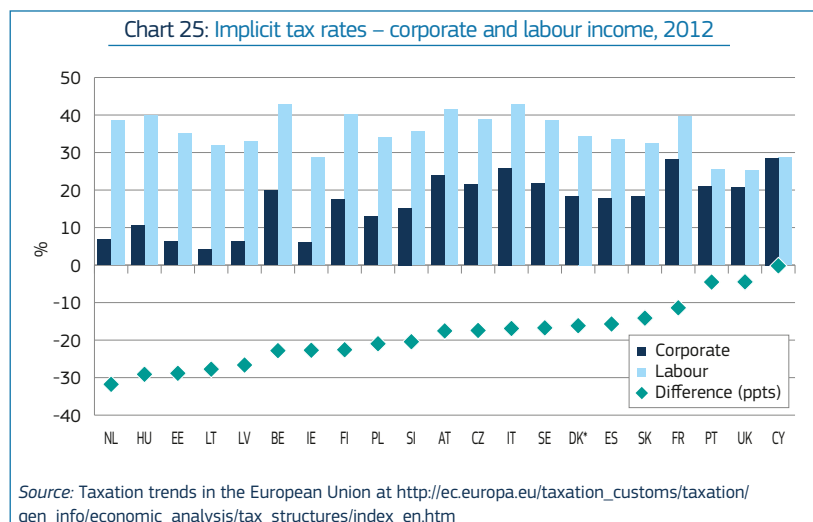
### 3.3. Well-designed taxation

The level and composition of taxes are also important drivers for the start-ups

<sup>(47)</sup> While giving due regard to the complementarity with other EU policies and programmes, as well as national activities, and the fine-tuning of the financial instruments. See 'Interim Evaluation of the European Progress Microfinance Facility' at <http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=7760>

<sup>(48)</sup> See, for instance, <http://ec.europa.eu/social/main.jsp?catId=1084>

<sup>(49)</sup> See <http://ec.europa.eu/social/main.jsp?catId=952&intPageId=3510&langId=en>



of one-person, micro and small enterprises as well as their growth since they have a direct impact on incentives and on tax compliance costs<sup>(50)</sup>. The following analysis highlights some of the transmission channels via which tax conditions affect start-ups. It would be beyond the scope of this chapter to focus on a broader set of tax issues such as tackling tax avoidance, securing sustainable revenues and supporting a better business environment in the Single Market, and their impact on job creation<sup>(51)</sup>.

#### 3.3.1. Tax incentives

Taxes relevant to one-person, micro and small enterprises include income, payroll, corporate, capital gains and inheritance taxes. See, for instance, Parker (2009). From a labour market perspective, income tax can be an important factor in influencing whether a person becomes self-employed (unincorporated or incorporated)<sup>(52)</sup>,

<sup>(50)</sup> Such as keeping records, preparing tax returns and dealing with tax auditors. See, for instance, Turner et al. (1998).

<sup>(51)</sup> For a comprehensive overview of the relative position of SMEs vis-à-vis larger enterprises with respect to corporate income taxation, see VVA and ZEW (2015). See also the Action Plan for Fair and Efficient Corporate Taxation in the EU (at [http://ec.europa.eu/taxation\\_customs/taxation/company\\_tax/fairer\\_corporate\\_taxation/index\\_en.htm](http://ec.europa.eu/taxation_customs/taxation/company_tax/fairer_corporate_taxation/index_en.htm)) which identifies five key areas for action to reform the corporate tax framework at EU level, i.e. re-launching the common consolidated corporate tax base, ensuring fair taxation where profits are generated, creating a better business environment, increasing transparency and improving EU coordination.

<sup>(52)</sup> Unincorporated (personal) business income is subject to personal income tax rates, while incorporated business income is subject to corporate and personal shareholder-level taxation. See, for instance, OECD (2009). It would be beyond the scope of this chapter to cover all these taxes, so the analysis in this chapter will be limited to a select set that has a direct impact on incentives and labour market costs.

continues to work as an employee, disappears into the undeclared economy or becomes inactive.

Chart 25 shows strong variances in taxation between labour and corporate income across the EU Member States for which data is available, with the implicit tax rate on labour income being higher than on corporate income in all Member States: the largest differences being found in the Netherlands and Hungary, while the smallest differences are found in Cyprus and the United Kingdom.

Nevertheless, when labour and corporate income are taxed at different rates there may be an incentive to choose the form of employment that involves the lowest tax rate, as the following examples illustrate. First, if it is easier to under-report taxable income when self-employed (through an incorporated business) than as a wage earner, then people may be incentivised to become self-employed – particularly in cases of weak tax law enforcement. See, for instance, Torrini (2005). Moreover, where tax-deductible business expenses are suitable for both business and private use (such as a car) there may be an additional incentive to become self-employed.

Finally, as small enterprises and especially start-up companies often face difficulties in attracting finance that is needed to invest in R&D activities in the face of capital market imperfections (such as asymmetric information), offering a preferential tax treatment to SMEs and/or young start-up companies may be an efficient way to boost employment, access to finance and innovation for young and very small businesses. See, for instance, CPB (2014).

### 3.3.2. Tax compliance costs

Tax compliance costs also affect people's decision to become (incorporated) self-employed – even when tax rates are themselves favourable for self-employment. See, for instance, Schuetze and Bruce (2004). Tax compliance costs stem from a variety of sources, including: complexity of tax systems, different tax administrations, incomprehensible tax laws and forms, frequent changes of tax laws and short and inflexible deadlines for tax payments (resulting in cash flow problems). See, for instance, Expert Group on Taxes (2007).

These costs can be very high, for example, the European Commission (2004) reports that for European SMEs the ratio between total tax-related compliance costs and paid taxes is about 31%, while for large companies this ratio is around 2% because larger companies have the capacity to use additional resources to increase efficiency<sup>(53)</sup>. In other words, the burden decreases as the business size increases<sup>(54)</sup>. However, the business may be caught in a vicious circle as a high tax burden reduces the opportunities for internal finance, which in turn limits business expansion – when access to external financing is limited. See, for instance, Brown et al. (2004).

Moreover, for new enterprises, tax compliance costs will be higher than older enterprises because they lack the necessary experience. See, for instance, Eichfelder and Schorn (2008). Finally, micro and small enterprises that operate across borders need to cope with the separate tax systems in EU Member States.

Important steps towards reducing the compliance cost for small enterprises could include: electronic tax filing adapted to the needs of small enterprises, timely information on tax changes, certain filing exemptions, special departments in

<sup>(53)</sup> Not clear-cut to assess possible selection bias in these estimates. Indeed, European Commission (2004) notes that some companies that have high total compliance costs are more eager to participate in surveys on compliance costs, but on the other hand, that some companies may be less likely to participate in surveys as they already have to meet many compliance requirements.

<sup>(54)</sup> PWC (2015) estimates that on average a company spent 176 hours complying with taxes in the EU and EFTA region in 2013, compared to 213 hours in North America. In the previous decade, hours to comply with the tax codes had reduced by 62 hours in the EU and EFTA region.

tax administrations to deal with young enterprises and one-stop shops for business registration that also deal with tax registration. See, for example, Expert Group (2009).

All in all, while the case for lower compliance costs for SMEs is fairly clear-cut, efforts also seem necessary to move to a modern and simple tax environment by, inter alia, removing tax barriers to financing, as well as designing well-targeted tax incentives such as tax incentives for R&D and for young and innovative companies.

## 3.4. Stronger social protection arrangements

### 3.4.1. Ensuring adequate social protection

In general, there are notable differences across EU Member States in terms of social security systems for the self-employed people. See, for example, MISSOC (2014). For example, in the Netherlands self-employed workers do not have any benefit in case of sickness and incapacity for work nor do they have access to unemployment benefits. In Belgium and France there is no unemployment insurance scheme for the self-employed. In Spain they are entitled to out-of-work benefit, in case of unemployment, but only if they opted for insurance coverage<sup>(55)</sup>.

Self-employment and entrepreneurship carry several risks for which private market insurance is not always readily available (e.g. unemployment following a fall in demand due to a severe economic downturn). Where social and labour market policies can temper these adverse externalities, self-employment and entrepreneurship could become more attractive. Nevertheless, stronger insurance against, for example, income loss may also trigger moral hazard risks – leading to a reduced effort to be successful resulting in an increased probability of becoming unemployed. See, for instance, Ejrnæs and Hochguertel (2008).

### 3.4.2. Designing adequate labour market institutions

Social protection of the self-employed may also be affected by labour market institutions creating adverse incentives in terms of labour demand. For example,

<sup>(55)</sup> See Applica (2015).

overly-rigid labour markets and high levels of taxation may create a strong incentive for employers to outsource work to their own employees in a formula of dependent self-employment. Employees may take up such positions either because they have weak bargaining power, or because they want to benefit from lower taxes as well as subsidies or tax allowances designed to promote self-employment – despite such employment carrying adverse risks, especially, in terms of social security coverage. See, for instance, Roman et al. (2011)<sup>(56)</sup> and Werner et al. (2013).

Nevertheless, this type of employment may create opportunities for people at the margin who would otherwise be excluded, such as the low skilled whose productivity is below the minimum wage. See, for instance, van Es and van Vuuren (2010). Moreover, the ongoing structural changes place a stronger emphasis on flexibility, which provides opportunities for self-employment in non-standard forms, such as iPros – as discussed in Section 4.1.

Harmonised data on the economically dependent self-employed is not readily available<sup>(57)</sup>. See Box 3. Available evidence indicates that dependent self-employment mainly occurs in construction, transport, insurance and accounting. See, for instance, Werner et al. (2013). Moreover, few dependent self-employed create jobs for others. See, for instance, Böheim and Mühlberger (2009) for the United Kingdom.

## 3.5. Strengthening business development services

The availability of adequate business development services is a necessary condition to promote start-ups, assess the feasibility of projects, boost innovation capacity, strengthen expansion opportunities (and create jobs) and facilitate

<sup>(56)</sup> Using micro-data from the European Community Household Panel from 1994 to 2001, Roman et al. (2011) report empirical evidence supporting the hypothesis on strictness of employment protection legislation and the potential severance payment on transitions to dependent self-employment.

<sup>(57)</sup> Estimates reported in the literature suggest that dependent self-employment amounts to 69% in Bulgaria (see Javier Orche Galindo (2014)), 20% in Finland (see Statistics Finland (2014)), 26% in France, >30% in Slovakia (see Dáša Rachelová (2013)), 3.6% in Slovenia (see Statistical Office of the Republic of Slovenia, Labour Force Survey (2013)), and 28% in Spain (see Javier Orche Galindo (2014)).

their day-to-day operation. Such services cover a broad range of activities including accounting and legal services, financial services, standardisation and certification, advisory and consultancy services, business and management training, support for feasibility assessment purposes and demonstration purposes<sup>(58)</sup> as well as recruitment, payroll and social security. Integrated packages that combine counselling, coaching and mentoring (preferably from within the appropriate target group) with financial support, should be designed to support entrepreneurs through the pre-start-up, start-up and post-start-up phases. See, for instance, OECD/EC (2014a) and Altenburg and Stam (2004).

Business development services are of special interest to small start-ups with few buffers to absorb set-backs, and their cost-effectiveness can be strengthened by fostering the development of one-stop shops that provide all business support services. See, for instance, OECD/EC (2014a).

Business development services can be provided by private as well as public providers. Public business development services may address social issues such as the inclusion of under-represented groups of workers. See, for instance, Foundation for SME Development (2002).

### 3.6. Cost-effective access to product markets

Starting and expanding a business can only be successful if domestic as well as foreign product markets can be easily accessed. For example, Scarpetta et al. (2002) (using a firm-level database for 10 OECD countries) and Cincera and Galgua (2005) (covering nine EU Member States) show that, in the past, product market regulations have had an important impact on decisions to start businesses. Nevertheless, it should also be recognised that further opening of markets implies that competition in the local market is likely to intensify competition as well as opportunities for both start-ups and existing businesses.

Several factors that affect the access to product markets are relevant to labour market and social policies, including the following. Firstly, further deepening of

<sup>(58)</sup> See, for instance, <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/sme-instrument>

#### Box 3: Measuring dependent self-employment

At the national level, some Member States attempt to clarify the definitions of dependent- and self-employment, to reduce the possibility of 'disguising' dependent employment as self-employment. A variety of approaches are implemented through changes in legislation, court cases and codes of good practice. See Eurofound (2010) for a comparative overview.

Data on employment status comes from three different sources: self-reporting by workers, coding by an interviewer on the basis of answers to a limited list of categories and administrative records. Some workers find it hard to answer such questions. Ensuring the validity of answers requires an alternative query process to be in place and research into the development of quality practice and statistical norms.

In 2010, Eurofound's 5<sup>th</sup> edition of the European Working Conditions Survey implemented a new exploratory approach to analyse the boundaries between self- and dependent-employment. Their approach built on a comparative analysis of self-employed and economically dependent workers, and aimed to identify the self-employed with employees and distinguish 'real' self-employed – own-account workers – from 'Economically dependent workers'.

To this end, the specific group of self-employed without employees were interviewed on economic risks ('generally, my firm has more than one client') and authority/autonomy ('if my workload requires it, I could hire employees who work for me'; 'I make the most important decisions on how to run the business'). A self-employed person without employees meeting fewer than two of these three criteria was defined as an 'Economically dependent worker'. The size of the group accounted for about 1% of all workers, making it a non-negligible group at European level.

Analysis of the working conditions and job quality of these workers compared to other self-employed groups confirmed the blurring of boundaries in their work; indeed, in several ways their working conditions are similar to those of the self-employed without employees but in other dimensions they are closer to dependant employees. An in-depth study of developments relating to this category of workers, especially during the crisis, is needed to better understand the place and role they play in the increasing diversification of status in labour markets.

These difficulties were clearly acknowledged at the 19<sup>th</sup> international conference of labour statisticians which adopted a resolution for the revision of the ISCE93 classification of employment status. The resolution indicates that status of dependent employment can be unclear 'because they are in a situation similar to paid employment but which is disguised as a self-employment or they can be in hybrid forms of employment which share features of both dependent employment and self-employment or are working in triangular arrangements in which it's not clear who the real employer is, what are the workers' rights and who is responsible for them'. It also suggests addressing the heterogeneity of the self-employed group. Indeed, the group of self-employment covers an increasing range of situations.

the single market (including strengthening the free movement of goods and services, public procurement and the digital economy<sup>(59)</sup>) provides new opportunities for self-employment via outsourcing and offshoring of tasks, – to the extent that such vertical disintegration requires smaller, more specialised enterprises engaged in interdependent business networks. Nevertheless, realisation of this potential can require a specific set of management skills (such as intercultural awareness) and business services

<sup>(59)</sup> See, for instance, Pataki (2014).

(such as searching for new markets abroad<sup>(60)</sup>) that might not be automatically provided by markets. Moreover, such flexibility and fragmentation of the production process may have adverse effects on the job security and bargaining power of the self-employed and micro-enterprises.

Secondly, collaboration across borders may have positive impacts on business

<sup>(60)</sup> For example, Belgian economic mission led by Prince Philippe to visit Russia at <http://www.diplomatie.be/moscowfr/default.asp?id=44&mnu=44>



opportunities via knowledge spill-overs, input-output linkages and labour market pooling, etc.<sup>(61)</sup>. See, for example, Delgado et al. (2010). However, an absence of adequate transport and ICT interconnectivity may hinder business expansion.

Finally, to the extent that the public sector expands its activities such as education and health, it may crowd out opportunities for self-employment.

### 3.7. Less red tape and more red carpet

Excessive bureaucracy and red tape are time-consuming and resource-draining procedures that may discourage start-ups and the expansion of existing businesses, especially micro and small firms which lack the capacity to absorb such a burden.

For example, the High Level Group on Administrative Burdens (2014) estimates that exempting micro-entities from the European accounting and auditing rules could yield annual savings of EUR 6.3 billion in the EU. Ciriaci (2014), covering 17 EU Member States during the period 2004-2011, estimates that a 1 percentage point decrease in the cost of starting a business may give rise to a 0.2% increase in start-ups, while a decrease of 1 day in the time needed to conclude the export procedures may increase start-ups by 0.3%. They also note that the time needed to start a new company ranges from less than 5 days in Belgium, Portugal, the Netherlands and Hungary to more than 20 days in Malta, Poland, Spain and Austria<sup>(62)</sup>. Furthermore, higher entry costs strengthen the possibility of corruption and undeclared work. See, for instance, Djankov et al. (2002).

In other words, streamlining and simplifying excessive bureaucracy and red tape can give an important boost to start-ups and their expansion while making public administration more business-friendly.

### 3.8. Ensuring macro-economic stability

The business cycle can have an ambiguous impact on self-employment and entrepreneurship. On the one hand, self-employment may be an escape route for some individuals if regular jobs are unavailable – especially in the absence of a strong safety net in case of job loss. See, for instance, Fairlie (2010) for the case of the United States. Moreover, start-ups may be boosted when capital goods (such as real estate) of bankrupt businesses (the number of which increases during a downturn) can be acquired at a low price. At the same time, the new businesses may trigger a self-reinforcing increase in demand (for intermediary goods and services), which may in turn trigger new start-ups. On the other hand, a persistent lack of aggregate demand<sup>(63)</sup> and limited access to credit (in the wake of the financial and sovereign debt crisis) may discourage new entrants and induce flows away from self-employment.

Nevertheless, the impact of the business cycle on self-employment will vary with the specific business characteristics, such as the nature of activity and the firm size. For example, in sectors that are particularly sensitive to the business cycle (such as construction), flows out of self-employment will be stronger than in less sensitive sectors (such as food). Firm size matters also – albeit not unambiguously. For example, Pal et al. (2014), covering Swedish textile-related SMEs over the 1989-2010 period, provide evidence that the self-employed without employees show the strongest ability to adapt to changes in demand, but Ejeremo and Xiao (2014), using a sample of Swedish firms covering the period from 1991 to 2007, report that being active in new technologies during recessions is particularly risky for small firms because of their lack of access to capital.

### 3.9. Summary

This section has reviewed the framework conditions that can affect movements into self-employment, and identified several channels through which labour market and social policies (in close coordination with other policies) could

shape these framework conditions. More particularly, it highlighted the potential roles of:

- fostering a more entrepreneurial culture via promoting, inter alia, entrepreneurial education and skill formation from a young age and a more positive public perception of self-employment and entrepreneurship;
- addressing market failures in financial markets by facilitating, inter alia, access to finance for vulnerable groups such as young people as well as access to risk-financing for small businesses;
- alleviating tax compliance costs for solo self-employed and small businesses;
- ensuring adequate social protection in the face of new emerging forms of self-employment such as independent professionals;
- ensuring free access to (domestic and international) markets;
- promoting a clear, stable and predictable regulatory environment;
- promoting suitable business support services such as fostering one-stop shops that provide all business support services;
- creating a stable macro-economic environment.

## 4. GEARING LABOUR MARKET AND SOCIAL POLICIES TO BOOST SELF-EMPLOYMENT AND ENTREPRENEURSHIP

Ongoing structural developments will create new opportunities for self-employment and entrepreneurship. For example, further digitalisation of the economy will create new opportunities, such as e-commerce in the app-economy. At the same time, as the EU's capacity to generate knowledge is expected to intensify, spin-offs from knowledge centres (such as universities) will create new opportunities for entrepreneurs to transfer knowledge into market action, while the further greening of the economy and tackling of social problems will create new business opportunities.

<sup>(61)</sup> Commission initiatives to foster transnational collaboration include the Your Europe Business Portal, Enterprise Europe Network, and the SME Internationalisation Portal.

<sup>(62)</sup> By late 2014, see [http://ec.europa.eu/enterprise/magazine/articles/smes-entrepreneurship/article\\_11103\\_en.htm](http://ec.europa.eu/enterprise/magazine/articles/smes-entrepreneurship/article_11103_en.htm)

<sup>(63)</sup> See, for instance, Davidsson and Gordon (2015).

Nevertheless, these developments carry the risk that ongoing trends in labour market polarisation may be reinforced to the extent that the number of successful entrepreneurs at the top (such as successful app-entrepreneurs and free professionals in services) and the number of precarious self-employed at the bottom (such as dependent self-employed) increase, while mid-level opportunities are absent. Moreover, starting a business carries the risk of failure, which may stigmatise and discourage entrepreneurship.

This section will identify labour market and social policies to facilitate the realisation of the job potential of these ongoing structural changes.

#### 4.1. Smarter use of ICT as an enabler of entrepreneurship

Ongoing ICT innovations (such as cloud computing<sup>(64)</sup> or digital platforms to buy and sell goods and services) reduce business start-up costs<sup>(65)</sup>, create new business opportunities when products and services get a global reach<sup>(66)</sup> and may attract crowd sourcing, whereby tasks (such as data management and software development) are outsourced to micro-enterprises via online platforms<sup>(67)</sup>.

Nevertheless, this potential will not be realised automatically since entrepreneurs face several barriers in the EU, including limited access to capital, slow internet access across the EU, inconsistent regulatory policies across the EU, as well as a lack of clarity and knowledge regarding relevant legal frameworks. See, for instance, European Commission (2012a) and Breslin et al. (2014).

More specifically from a labour market perspective, barriers to entrepreneurship and self-employment in the digital economy include a lack of e-skills (such

as app development and e-leadership), finance and the low bargaining power of single digital entrepreneurs. These barriers call for labour market policies that promote e-skills and digital entrepreneurship (to exploit new technologies and markets) as well as knowledge of cloud computing and relevant social platforms. See European Commission (2012a).

Furthermore, by promoting networking, small enterprises can exchange experience and achieve the critical mass needed to negotiate preferential terms with key business partners (such as financial companies), reduce social and professional isolation and improve skills. See, for instance, European Commission (2012a), YEA (2015), Eurofound (2015) and the Watify platform<sup>(68)</sup>. Finally, promoting the use of alternative forms of financing for early-stage technology start-ups should be strengthened by improving, inter alia, financial literacy.

Ongoing ICT innovations will create opportunities for highly skilled self-employed individuals who work without employees, such as journalists, consultants, etc. (i.e., the independent professional or iPros)<sup>(69)</sup>. See, for instance, Rapelli (2012)<sup>(70)</sup>. A basic characteristic of their work<sup>(71)</sup> is that they are flexible and innovative and operate in high-value, high-knowledge professional sectors, thereby offering cost efficiency for their clients. However, while iPros behave entrepreneurially they do not plan to employ people but their activities can lead indirectly to additional job creation if they improve the clients' growth potential. See, for instance, Leighton (2015) and Eurofound (2015).

This type of employment primarily attracts the elderly, highly educated as well as women with children. See, for instance, Bosch et al. (2012) and Bosch et al. (2014) for developments in the Netherlands (where tax differences are an important incentive in becoming an

independent professional). Nevertheless, as this type of self-employment expands, specific challenges (including developing and maintaining skills, health insurance and retirement schemes) might have to be addressed by appropriate framework conditions. See, for instance, Leighton (2015).

#### 4.2. Supporting business exploitation of spin-offs and networking

In a knowledge- and technology-intensive economy, spin-offs and entrepreneurship are important intermediaries for transmitting knowledge into market action. However, while the phenomenon of spin-offs has a long tradition in the United States, it has only developed in the EU since the late 1990s. Spin-offs derive from two sources, either from a company or from research activity, usually an academic department<sup>(72)</sup>.

Industrial spin-offs are either established by employees from an incumbent firm in the same industry or engaged by a company which can then concentrate on its core business<sup>(73)</sup>. Nevertheless, evidence of their growth performance is ambiguous. For example, Veld and Veld-Merkoulova (2004), exploring a sample of 156 European industry spin-offs founded by listed companies between 1987 and 2000, found that spin-offs do not show a stronger long-run performance than other entrants. However, Dahl and Gjerløv-Juel (2010), studying the Danish economy from 1995 to 2004, report that industry spin-offs survive longer and create more jobs compared to other entrants. Klepper (2009), focusing on the United States economy<sup>(74)</sup>, reports that firms founded by former employees from incumbent firms in the same industry tend to outperform new entrants and sometimes incumbent firms as well.

<sup>(64)</sup> See also 'European Cloud Computing Strategy' at <http://ec.europa.eu/digital-agenda/en/european-cloud-computing-strategy>

<sup>(65)</sup> As costs are only incurred by usage of existing infrastructure owned by others.

<sup>(66)</sup> For example, Breslin et al. (2014) estimate that the EU app developer workforce (mainly performing contract work) will grow from about 1 million in 2013 to 2.7 million in 2018 – where 39% will be small independent developers (17% being hobbyists with potential and 16% part-time). Their growth potential will primarily be focussed on hiring a development and sales executive. Moreover, European SMEs embracing ICT would grow two to three times faster.

<sup>(67)</sup> See, for instance, Eurofound (2015).

<sup>(68)</sup> Available at <https://ec.europa.eu/growth/tools-databases/dem/watify>

<sup>(69)</sup> Leighton (2015) estimates that iPros increased from just under 6.2 million in 2014 to 8.9 million in 2013 (with the strongest growth in the Netherlands, Poland and France and the weakest growth in Italy). Not all iPros choose this route voluntarily.

<sup>(70)</sup> In Eurostat's NACE 2 classification it concerns the self-employed without employees in the sectors J to S. See Rapelli (2012) for more technical details.

<sup>(71)</sup> Not to be confused with involuntary dependent self-employed – see Sub-Section 4.3.2.

<sup>(72)</sup> There are also spin-offs derived from other types of research centres or from R&D departments of large firms.

<sup>(73)</sup> In the case of listed companies, the establishment of a spin-off positively affects the value of the parent companies in two ways: increasing the number of securities traded on the market (Habib et al., 1997) and reducing the information asymmetry between the firm and the capital market (Krishnaswami and Subramaniam, 1999). See also the Draft Council Conclusions on 'The promotion of the social economy as a key driver of economic and social development in Europe' at <http://data.consilium.europa.eu/doc/document/ST-13766-2015-INIT/en/pdf>

<sup>(74)</sup> Klepper (2009) provides a comprehensive review of industry spin-offs and a focus on the successful case of Silicon Valley.

Academic spin-offs are another vehicle to take advantage of the high-quality research originating from European knowledge centres, such as universities. For entrepreneurs the challenge is to transmit this knowledge into market actions exploiting technology transfer<sup>(75)</sup> and academic spin-offs<sup>(76)</sup>. The previous figures suggest that the real issue might be the sustainability of the spin-off ventures. Some authors argue that there are too few European academic spin-offs (Williams, 2005), while others suggest there are too many (Lambert, 2003).

Factors affecting the survival of spin-offs include the: degree of industry concentration (Nerkar and Shane, 2003); level of the initial patent stock; industry experience; and social and human capital of the founding team – Shane and Stuart (2002), Müller (2006). Egelin et al. (2007) find that Austrian academic spin-offs have a higher survival rate but they do not perform better, in growth terms, than other new firms.

Nevertheless, the relative performance of the academic and non-academic spin-offs is not clear-cut. For example, Ensley and Hmieleski (2005), exploring a sample of 102 high-technology university-based start-ups, report that independent new firms perform better in terms of net cash flow and revenue growth than academic spin-offs, but Egelin et al. (2003) and Dahlstrand (1997) suggest that university spin-offs grow faster than non-academic start-ups.

On the other hand, the additional resources needed to identify and access new markets and business partners may be a strong barrier to starting innovative businesses. Nevertheless, such costs can be tempered by participating in business networks. At the European level such networks are often funded by European public funds and offer highly interactive platforms to help small enterprises fully

exploit business opportunities. These networks facilitate: access to information on EU legislation, advice on access to finance (e.g. COSME programme), support for innovation and technology transfer (e.g. LIFE+ programme<sup>(77)</sup>), and help to address resource efficiency challenges and turn them into business opportunities (e.g. GreenEcoNet<sup>(78)</sup>).

### 4.3. Greening small businesses

In addition to framework conditions and policies affecting the creation and development of micro and small enterprises in general (as discussed in Section 3), from the labour market and social policy perspective, some very specific conditions are particularly relevant to promoting green self-employment<sup>(79)</sup>. First, for micro and small enterprises the administrative burden for monitoring and reporting obligations, imposed by environmental legislation, is disproportionately higher than for larger enterprises, due to high fixed costs and a lack of specialised personnel to deal with the requirements. In that sense, measures such as size-related exemptions, coaching and training, and simplification of obligations could free human resources that can be used to develop the core activity instead. See, for instance, Danish Technological Institute and PLANET S.A. (2010).

Moreover, as eco-innovation is crucial for the further greening of the economy there is a strong need for platforms that allow interaction between small enterprises, policy-makers and researchers and that help identify and develop new business opportunities in the green economy. See, for instance, GreenEcoNet<sup>(80)</sup>.

Furthermore, strengthening of the entrepreneurial culture might need to be complemented by the fostering of a green entrepreneurship culture. Likewise, starting in the green economy

requires some specific skills, such as communication skills to educate customers about the circular economy in addition to the ability to master technology- or science-intensive processes associated with the greening of the economy. See, for example, European Commission (2014c).

Finally, as activities by green SMEs often lack credible business cases to justify funding by private lenders, there can be a need for public finance of projects that experiment with new green technologies and create new business opportunities.

### 4.4. Innovating through social enterprises

A social market economy facing ongoing structural changes might need social entrepreneurs, to address pressing social needs that are not tackled by the markets or governments. Key differentiating characteristics of social entrepreneurs are their pursuit of social objectives (usually at a local level including aid for certain categories of disadvantaged persons), reinvestment of profits to achieve this social objective and organisation and ownership along participatory principles. See, for instance, European Commission (2014a)<sup>(81)</sup>. Social innovation and social entrepreneurship have strong potential to address new social needs driven by, inter alia, demographic changes<sup>(82)</sup> (such as active ageing), technological changes (such as lack of ICT training)

<sup>(75)</sup> Technology transfer is another important issue regarding the commercialisation of research results where there is a huge gap between Europe and North America (European Commission, 2007). Rothaermel et al. (2007) provide the most comprehensive literature review of the topic of university entrepreneurship.

<sup>(76)</sup> Estimates of academic spin-offs created are not readily available. Wright et al. (2008) report the following numbers: 4 543 in the United States (1980-2003), 1 100 in Canada (1962-2003), 97 in Australia (1984-2005), 320 in Belgium (1980-2003), 1 230 in France (1984-2005), 1 650 in the United Kingdom (1981-2003) and 300 in the Netherlands (1984-1999).

<sup>(77)</sup> [http://ec.europa.eu/environment/ecoap/about-action-plan/community-funding-programmes/index\\_en.htm](http://ec.europa.eu/environment/ecoap/about-action-plan/community-funding-programmes/index_en.htm)

<sup>(78)</sup> <http://greeneconet.eu/>

<sup>(79)</sup> See, for instance, European Commission (2014) for the Green Action Plan for SMEs.

<sup>(80)</sup> See at <http://project.greeneconet.eu/>

<sup>(81)</sup> There is no uniform definition of social entrepreneur, social entrepreneurship or social enterprise in the literature. See, for example, Brouard and Larivet (2010) for an overview of alternative definitions. In this chapter 'a social enterprise is one whose main objective is to achieve a social objective rather than make a profit for their owners or shareholders. It operates by providing goods and services for the market in an entrepreneurial and innovative fashion and uses its profits primarily to achieve social objectives. It is managed in an open and responsible manner and, in particular, involves employees, consumers and stakeholders affected by its commercial activities.' See COM/2011/0682 final at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52011DC0682:EN:NOT>. See also the draft Council Conclusions on 'The promotion of the social economy as a key driver of economic and social development in Europe' at <http://data.consilium.europa.eu/doc/document/ST-13766-2015-INIT/en/pdf>

<sup>(82)</sup> For example, around 30% of the initiatives documented in the Implementation of the Social Investment Package mapping repository are ICT-enabled social innovations. For more details, see Misuraca et al. (forthcoming).



as well as changing social patterns (such as family structures)<sup>(83)</sup>.

As national legal frameworks for social enterprises differ across Member States, harmonised data on the number and type of jobs in social enterprises are not readily available<sup>(84)</sup> and one has to use case studies. For example, the BIS definition estimates that, in 2014, 5% of SME employers were social enterprises in the United Kingdom, with 28% in arts/recreation, 18% in education and 13% in health. See BIS (2015)<sup>(85)</sup>. Nevertheless, social entrepreneurship is not yet an integral part of the enterprise culture in several new Member States. See, for instance, Borzaga et al. (2008).

In addition to the barriers specified in Section 3 above, specific barriers faced by social entrepreneurs include access to funding, a lack of visibility and an overly complex regulatory environment (such as in public procurement and state aid measures for social and local services), a lack of business support and development structures, training, and workforce development, and difficult access to markets. See, for example, European Commission (2014d).

The underdevelopment of the funding system was also confirmed by a 2013 study on imperfections in the social investment market<sup>(86)</sup> as well as by a number of national studies. For instance, in a United Kingdom survey with 865 social enterprises<sup>(87)</sup>, lack of/poor access to/affordability of finance (45%)

<sup>(83)</sup> For a comprehensive overview of the current state, size and scope of social enterprises in Europe, see ICF Consulting Services (2014), 'A map of social enterprises and their eco-systems in Europe', available at <http://ec.europa.eu/social/BlobServlet?docId=12988&langId=en>. DG RTD FP7 research projects on social entrepreneurship analyse and compare the specificities of social entrepreneurship in EU countries including the historical development across various policy fields and the specific barriers (EFESIIS, SEFORIS, TSI, SIMPACT, CRESSI). See also Stephan, Uhlener and Stride (2015), Baglioni and Chabanet (2015), Salamon and Sokolowski (2014), Nicholls and Edmiston (2015), and Rehfeld and Terstriep (2015).

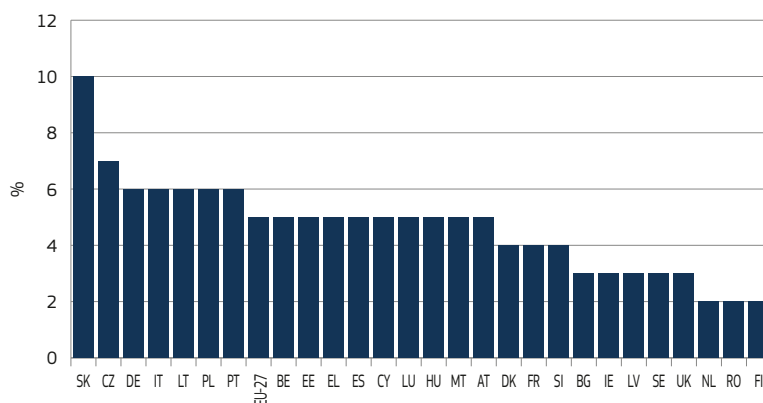
<sup>(84)</sup> See for instance the estimates in the country reports available at <http://ec.europa.eu/social/keyDocuments.jsp?advSearchKey=socEntcntryrepts&mode=advancedSubmit&langId=en&policyArea=&type=0&country=0&year=0&orderBy=docOrder>

<sup>(85)</sup> GEM (2009) estimates that in 2009 on average 3% of the working population in Western Europe and 2.7% in Eastern Europe was engaged in social entrepreneurship, compared to 5% in the United States, and 3% in Latin America.

<sup>(86)</sup> Spiess-Knaff, W. (2013).

<sup>(87)</sup> Social Enterprise UK (2011).

Chart 26: Percentage of people saying that the risk of failure and its legal and social consequences are too high



Source: Eurostat (2012) – Flash Eurobarometer 354.

was ranked first among the barriers for start-ups, before cash flow (22%), lack of appropriate skills/experience (19%) and lack of awareness of social enterprise among customers (15%). As the United Kingdom is one of the most developed markets for social entrepreneurship finance, it can be expected that the demand for capital is not met in most parts of Europe.

Such specific needs can be addressed through the creation of platforms that enable participants to connect, learn from and share experiences with each other (e.g. Social Innovation Europe<sup>(88)</sup>), raise awareness of social innovations (e.g. Social Innovation Tournament<sup>(89)</sup>), improve business conditions for social entrepreneurship (e.g. Social Business Initiative<sup>(90)</sup>), help access finance (e.g. Employment and Social Innovation (EaSI) programme<sup>(91)</sup> and European Social Fund<sup>(92)</sup>), and strengthen incubation structures for social innovation in Europe<sup>(93)</sup> and, where appropriate, simplify organisational and administrative requirements to start activities<sup>(94)</sup>.

<sup>(88)</sup> For more details, see <https://webgate.ec.europa.eu/socialinnovationeurope/>

<sup>(89)</sup> For more details, see <http://institute.eib.org/programmes/social/social-innovation-tournament/>

<sup>(90)</sup> For more details, see <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0682:FIN:EN:PDF>

<sup>(91)</sup> For more details, see <http://ec.europa.eu/social/main.jsp?catId=1084&langId=en>

<sup>(92)</sup> For more details, see <http://ec.europa.eu/esf/main.jsp?catId=531&langId=en>

<sup>(93)</sup> For more details, see [http://ec.europa.eu/regional\\_policy/sources/docgener/presenta/social\\_innovation/social\\_innovation\\_2013.pdf](http://ec.europa.eu/regional_policy/sources/docgener/presenta/social_innovation/social_innovation_2013.pdf)

<sup>(94)</sup> See, for instance, <http://data.consilium.europa.eu/doc/document/ST-13766-2015-INIT/en/pdf>

## 4.5. Giving a second chance after (honest) failure

Starting any new business carries a risk of failure and insolvency, which may stigmatise entrepreneurs and discourage new start-ups. For example, Chart 26 shows that the risk of failure and its legal and social consequences deters a not insignificant number of citizens from starting their own business – ranging from 2% in Finland, Romania and the Netherlands to 10% in Slovakia. Nevertheless, ('honest') failure could be seen to be part of the learning curve and may result in the next start-up being more successful<sup>(95)</sup>.

Several measures could help reduce stigmatisation of (honest) business failure, including informative, educational programmes on bankruptcy, keeping the liquidation period as short as possible (in cases of no own criminal fault), provision of advisory services to manage debt as well as the development of networks for 'second starters'<sup>(96)</sup>.

## 4.6. Summary

This section discussed labour market and social policies that can strengthen start-ups of one-person, micro and small businesses in an economy subject to ongoing structural changes. More particularly it emphasised the opportunities and

<sup>(95)</sup> It is estimated that up to 18% of successful entrepreneurs actually failed in their first try. See, for instance, Enterprise Europe Network at <http://www.brusselsnetwork.be/eu-regulations-m/1703-second-chances-for-entrepreneurs.html>

<sup>(96)</sup> On the European Commission's actions on giving a Second Chance, see [http://ec.europa.eu/growth/smes/promoting-entrepreneurship/advice-opportunities/bankruptcy-second-chance/index\\_en.htm](http://ec.europa.eu/growth/smes/promoting-entrepreneurship/advice-opportunities/bankruptcy-second-chance/index_en.htm)

challenges created by a further expansion of the digitised economy, the transmission of new knowledge into market action, the greening of the economy and the tackling of pressing social issues.

Addressing these specific challenges and opportunities might involve a series of integrated labour market and social policies that could:

- contribute to a further strengthening of entrepreneurship skills, including in the field of the digital and green economy as well as social entrepreneurship;
- tackle administrative barriers for the self-employed and small businesses;
- facilitate and encourage the creation of platforms to share experience and knowledge, especially for the young, old, migrants and women;
- address the needs of emerging forms of self-employed work including social entrepreneurship and independent professionals;
- reduce the stigmatisation of business failure.

## 5. TARGETING UNDER-REPRESENTED GROUPS

This section identifies labour market and social policies that can facilitate and encourage the transition of under-represented groups (such as women and the young) towards self-employment, thereby strengthening social cohesion.

Labour market and social policies<sup>(97)</sup> have the potential to mitigate adverse starting conditions caused by unfavourable personal (such as long-term unemployment) or household (such as family responsibilities) conditions, while at the same time making self-employment and entrepreneurship a more attractive career opportunity. Of particular interest to the analysis in this chapter are labour market policies that support start-ups for the unemployed and under-represented groups, who often face strong barriers in terms of finance, training, coaching and mentoring. See, for instance, OECD/EC (2014a).

<sup>(97)</sup> Including active labour market policies and social cohesion policies. See for instance <http://pdf.mutual-learning-employment.net/pdf/en9910.pdf>

Labour market policies promoting start-ups by unemployed persons can have a strong potential to create jobs which integrate the most vulnerable in society. See, for instance, Zouhar et al. (2015). It would appear that their effectiveness is largely determined by their design (including non-monetary support, such as helping identify opportunities), the persons targeted, the framework conditions (including the business cycle), potential displacement effects (whereby business is taken away from other entrepreneurs) and dead-weight losses (if, for instance, the start-up would have been started without support). See, for instance, Kelly et al. (2002).

In order to strengthen their effectiveness, it would appear that such programmes should not be too complicated to understand or too costly to be administered. See, for instance, Parker (2009). Relevant stakeholders should be consulted early on in the design and the programmes should be evaluated before implementation. Once implemented, they should be monitored, evaluated and corrected over time. See, for instance, European Commission and OECD (2012d). However, in the EU, the capacity to assess their effectiveness is rather limited. See, for instance, Gruenwald (2014) and Strorey (2008). Moreover, given that failure after participating in such support programmes is a possibility, such failure may further stigmatise the recipient and reduce their access to social benefits. See, for instance, Chahill and Quin (2014) and Halabisky (2014).

### 5.1. Supporting start-ups by the unemployed

Self-employment is one of the options for unemployed people to get back to work. However, the unemployed (especially the long-term unemployed) often lack the expertise and experience to establish supplier and customer networks, or access finance. See, for instance, Caliendo et al. (2015). In such cases, well-targeted support programmes could help the unemployed with the start-up of a business<sup>(98)</sup>.

Several design issues have to be taken into account when launching such programmes. Monetary support can take

<sup>(98)</sup> See for instance the back to work enterprise allowance in Ireland at [http://www.citizensinformation.ie/en/social\\_welfare/social\\_welfare\\_payments/social\\_welfare\\_payments\\_and\\_work/back\\_to\\_work\\_enterprise\\_allowance.html](http://www.citizensinformation.ie/en/social_welfare/social_welfare_payments/social_welfare_payments_and_work/back_to_work_enterprise_allowance.html)

several forms depending on the beneficiary's characteristics, in which case it is a challenge to determine the amount of the financial support, its duration and eligibility criteria. For example, when the Hartz-reforms were implemented in Germany in the early 2000s, unemployed individuals could choose between two support programmes when starting a business. 'Start-up subsidies'<sup>(99)</sup> were primarily used by relatively less educated females and young males, while 'bridging allowances'<sup>(100)</sup> were primarily used by unemployed individuals with experience in the sector where they launched their business. Nevertheless, while subsidised start-ups show a higher survival rate, they lag behind regular businesses in terms of income, business growth and innovation<sup>(101)</sup>. See, for instance, Caliendo and Kritikos (2007), Caliendo and Steiner (s.a.) and Caliendo and Künn (2013).

Non-monetary support is also an important dimension in the design of start-up programmes which can take many forms including promoting entrepreneurship skill formation and coaching – albeit for a limited period to avoid dependence. Important initiatives under the European Social Fund (ESF) in the area of entrepreneurship and self-employment<sup>(102)</sup> include support to entrepreneurship skill formation, access to finance, regulatory and institutional frameworks and efficient policy implementation, complemented by targeted support to women entrepreneurs<sup>(103)</sup> and disadvantaged and disabled people<sup>(104)</sup>. In this way ESF contributes (in accordance with the principle of subsidiarity) to reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions.

<sup>(99)</sup> i.e. lump sum of EUR 600/month for the first year, EUR 360/month for the second, and EUR 240/month for the third.

<sup>(100)</sup> i.e. an amount equal to unemployment benefits for a period of 6 months (plus a lump sum of roughly 70% of the same, to cover social security contributions).

<sup>(101)</sup> The latter may be due to the fact that less qualified individuals self-select into entrepreneurship due to reduced costs of entry, or that subsidised founders might face for example discrimination in capital markets. See, for instance, Caliendo et al. (2015).

<sup>(102)</sup> For more details, see <http://ec.europa.eu/social/main.jsp?catId=952&langId=en>

<sup>(103)</sup> See <http://ec.europa.eu/esf/main.jsp?catId=533&langId=en>

<sup>(104)</sup> See <http://ec.europa.eu/esf/main.jsp?catId=50&langId=en>

The effectiveness of such programmes is also affected by the process to select the beneficiaries since the financial support appeals to two groups of the unemployed. On the one hand, there are those who want to explore their abilities and if successful will remain self-employed. On the other hand, there are those who, without the financial support, face costs that exceed their revenues so that the financial support subsidises start-ups with limited prospects. Other cases are people who applied because their unemployment benefits would expire soon. One way to temper such adverse selections would be close scrutiny of the potential beneficiaries' business plans by independent assessors. See, for instance, Homberty et al. (2013) and Caliendo and Kritikos (2007). Apart from such adverse selection, these programmes may have an adverse effect on beneficiaries' risk taking and efforts since the cost of failure is largely borne by the subsidising authority. See, for instance, Caliendo et al. (2015).

All in all, the literature indicates that while start-up subsidies for the unemployed may help return some of the unemployed back to employment, traditional active labour market policies could be more effective instruments for returning the unemployed back into employment.

## 5.2. Tackling the gender deficit

Only about one third of the EU's self-employed are women, varying from 17% in Malta to 41% in Latvia. See Chart 13 above. Often, personal and household conditions, such as control of work-private life balance or job satisfaction, are more important to women than men in their decision to become self-employed. See, for instance, Hughes (2003) and Piacentini (2013)<sup>(105)</sup>. Nevertheless, socio-cultural factors (such as gender stereotyping) have an adverse impact on women's opportunities and choice to become self-employed – though empirical research suggests that lower-educated women are more affected than their higher-educated counterparts. See, for instance, Cloin et al. (2011). Moreover,

<sup>(105)</sup> Differences in personal characteristics between men and women such as perceived differences in risk tolerance or management styles are discussed elsewhere in the literature. See, for instance, Minniti and Nardo (2007).

as women are usually more involved in household duties and childcare than men, their range of activities (including business size) is significantly limited, especially if the necessary framework conditions such as adequate childcare facilities and maternity leave provisions are not available. Consequently, female entrepreneurs are more inclined to start home-based and part-time businesses. See, for instance, Estrin and Mickiewicz (2011) and Raknerud and Rønsen (2014).

Institutions also affect women's decision to become self-employed<sup>(106)</sup>. For example, the strong male orientation of existing business networks may hinder women's start-ups and business expansion. See, for instance, GHK and Technopolis (2008). In addition, women's educational choices often limit their opportunities in an economy characterised by an increasing demand for tasks that require STEM skills<sup>(107)</sup> – in which the older age cohorts of women have particularly limited expertise.

Economic conditions also affect women's opportunity to become self-employed. For example, Fraser (2005), focussing on SMEs in the United Kingdom, reports that women often face less favourable credit terms (such as higher interest rates) than men when starting a business. Williams (2009), using data from the European Community Household Panel in 1999–2001, reports that women who receive a lower wage relative to other women are more likely to leave wage-employment for self-employment.

Labour market and social policies to tackle these adverse drivers of the gender deficit in self-employment and entrepreneurship differ from case to case but usually include gender mainstreaming of entrepreneurial education and training, facilitating women's access to finance, and supporting networking between women entrepreneurs and amongst government agencies. See, for instance, GHK and Technopolis (2008)<sup>(108)</sup>.

<sup>(106)</sup> See chapter III.2 of this review (part on family policies) on the effect of childcare and other institutional factors on mothers' labour market attachment in general.

<sup>(107)</sup> Financial literacy of women is often also less than for men. See, for instance, OECD (2012).

<sup>(108)</sup> See also <http://ec.europa.eu/digital-agenda/en/22-women-smart-growth> [http://ec.europa.eu/enterprise/newsroom/cf/itemdetail.cfm?item\\_id=3387](http://ec.europa.eu/enterprise/newsroom/cf/itemdetail.cfm?item_id=3387) <http://ec.europa.eu/growth/smes/>

## 5.3. Helping young people into self-employment

Ongoing structural changes such as the further digitalisation of the economy create new business opportunities for young people<sup>(109)</sup>. See, for example, Box 4. Nevertheless, the young face some very specific challenges when starting a business.

First, limited access to finance is often an obstacle for a start-up by young entrepreneurs due to, inter alia, a lack of collateral or incomplete information about the young person's capacity. In such cases, micro-finance loans or grants with a special focus on the young could help start-ups – as discussed in Section 3.4 above.

Young entrepreneurs often see themselves as a major source of technology-driven innovation (due to their flexibility and knowledge)<sup>(110)</sup> but may lack the experience to start a business. See, for instance, YEA (2013). At the same time they also lack the networks and social capital to build 'legitimacy' amongst key stakeholders (e.g. financiers, customers, suppliers). See, for example, Green (2013).

To overcome these barriers, several studies find that (potential) youth entrepreneurs are best helped through integrated packages of support<sup>(111)</sup>. For example, the effectiveness of supplying finance will be enhanced when it is complemented by advice, coaching and networking. Moreover entrepreneurship skills should be supported by embedding entrepreneurship teaching throughout the education system, stimulating the sense of initiative and creativity, including among those who choose not to become entrepreneurs.

Eurofound<sup>(112)</sup> finds that self-employment among young people is associated with personality traits, characterised by

<sup>(109)</sup> FP7 Project Strategic Transitions for Youth Labour in Europe (STYLE) provides a comprehensive understanding of the causes of very high unemployment among young people and assesses the effectiveness of labour market policies designed to mitigate this phenomenon. See also Sheehan and McNamara (2015).

<sup>(110)</sup> Especially in the field of social media, mobile technologies, data analytics, machine-to-machine connectivity and cloud technologies.

<sup>(111)</sup> See EC / OECD (2012).

<sup>(112)</sup> See Eurofound (2015a).

creativity and innovative tendencies and lower risk aversion. As a result, effective policy measures should be highly selective, in order to be efficient<sup>(113)</sup>. Eurofound concludes that, as entrepreneurship is only a viable career path for those young people equipped with the right skills, attitudes and values, future initiatives should focus on this target group to ensure the best use of public funds. This also implies that youth entrepreneurship is not a panacea for youth unemployment.

#### 5.4. Encouraging self-employment transitions prior to retirement

The EU workforce will continue to age in the coming decennia. Postponing retirement and working longer will be a necessary (but not sufficient) condition to sustain the European social market economy. Facilitating and encouraging older employees' transition to self-employment is one way to strengthen their labour market participation and to help them remain active members of an inclusive society.

Older workers often acquire a unique range of skills during their professional life, knowledge, experience and contacts that they may want to valorise by starting their own business. At the same time, older workers may be looking for more flexibility to accommodate specific needs in terms of workload and work organisation. These may be a strong incentive for older workers to become self-employed entrepreneurs. However, older workers may also be pushed into self-employment, as in the case of layoffs following company restructuring and not being offered a new job or another option (such as pre-retirement).

Specific barriers (compared with mid-aged workers) that may deter older workers from starting a business include age stigmatisation (leading to, for example, a limited access to finance – especially in the case of unemployed older persons), a lack of specific training and knowledge (such as of recent technological developments), a poorer (physical and mental) health and pressing family responsibilities (such as provision of elderly care to a dependent family member). See, for instance, Kibler et al. (2012).

<sup>(113)</sup> This is also a conclusion from EC/OECD (2012).

#### Box 4: Young ICT entrepreneurs

ICT evolves at such a fast pace that there is always a demand for knowledge in specific tools or programming languages that did not even exist two years ago. It is very difficult for professionals to keep up-to-date with the technology. Full-time workers in this demanding sector have limited time to learn and develop new skills. This is one opportunity window for youngsters, who could become the experts and leaders that the economy demands. Such 'state-of-the-art' knowledge is potentially the main asset for innovative start-ups rather than financial capital.

This has been the case with the boom of new businesses in 'apps' and social networks in recent years, such as Whatsapp, Instagram and Uber, all of which have exceeded USD 1 billion in value and were founded by people in their 30s. Institutional support and guidance could improve the survival rate of these companies and their growth potential, such as increasing practical entrepreneurial skills amongst students (e.g. STARTIFY7<sup>(1)</sup>), mapping acceleration services delivered to start-ups (e.g. OpenAxel<sup>(2)</sup>), building bridges between ICT researchers and entrepreneurial-minded individuals (e.g. ICT2B<sup>(3)</sup>), and delivering legal services to start-ups (e.g. iLINK<sup>(4)</sup>).

<sup>(1)</sup> For more details, see <https://ec.europa.eu/digital-agenda/en/news/introducing-startify7-summer-academy-system-young-future-ict-entrepreneurs>

<sup>(2)</sup> For more details, see <http://www.openaxel.com/>

<sup>(3)</sup> See <http://www.ict2b.org/>

<sup>(4)</sup> See <https://ec.europa.eu/digital-agenda/en/news/launch-ilinc-portal-help-ict-startups-face-their-legal-challenges>

Adequate measures to address these barriers are ensuring that tax and social security systems do not contain disincentives to entrepreneurship for older people, the provision of well-targeted advice (especially for those who have not previously worked in self-employment), guidance and support, the development of online platforms where experience can be shared, ensuring that older entrepreneurs have access to financing schemes, the strengthening of ICT and financial literacy and awareness-raising about the value-added of entrepreneurship by older workers. See, for instance, European Commission and OECD (2012a).

Finally, older entrepreneurs' business and entrepreneurial experience acquired during their business career can contribute to the mentoring and advising of young entrepreneurs. See, for instance, the Entrepreneurship 2020 Action Plan.

#### 5.5. Promoting self-employment among ethnic minorities

Generally speaking, ethnic minorities show a higher propensity to be self-employed than the local population, albeit in sectors with low entry cost and poor prospects for growth and diversification, such as collecting and selling discarded materials for recycling and street vending. Apart from

cultural differences, such outcomes are driven by a variety of factors, including discrimination, language barriers, a lack of access to finance, an absence of targeted support services and limited entrepreneurship skills.

The impact of discrimination on ethnic entrepreneurship is ambiguous. On the one hand a lack of job offers due to employment discrimination against ethnic minorities may push migrants into self-employment. On the other hand, if consumers discriminate against ethnic sellers, the minorities may have little incentive to become self-employed. See, for instance, Borjas and Bronars (1989).

Other barriers less experienced by the local population include language, education and labour market institutions<sup>(114)</sup>. Although poor knowledge of the national language would not be a barrier to starting a business in an ethnic enclave, it may be an important barrier to expansion beyond the enclave. See, for instance, Clark and Drinkwater (2000) and Constant and Zimmermann (2004). Other barriers include the fact that the education and experience acquired in the country of origin are often not recognised by local employers, which raises migrants' likelihood of becoming

<sup>(114)</sup> It is beyond the scope of this chapter to elaborate on legal obstacles to the establishment of businesses by legal migrant entrepreneurs.



self-employed in low value-added activities<sup>(115)</sup>. See, for instance, Kanas et al. (2009). Furthermore, labour market institutions such as minimum wages may form an additional barrier into waged employment thereby pushing migrants whose skills are not fully recognised into self-employment. Moreover, strong tradition, custom and family ties may drive new ethnic entrepreneurs along the path taken by their parents – adapted to their changing circumstances. See, for example, Ibrahim and Galt (2011).

Adequate labour market policies can address these barriers by measures such as the provision of guidance and support by public employment services, improving credential recognition for immigrants and offering specialised training schemes to develop more solid business projects and become more aware of financing opportunities. See, for instance, OECD/EC (2014a).

## 5.6. Promoting self-employment among disadvantaged and disabled people

Self-employment has some potential to integrate disadvantaged and vulnerable groups, such as ex-offenders, recovering drug abusers and the homeless, into society. However, market forces will not address such pressing socio-economic challenges, so that well targeted labour market and social policies have a strong potential to strengthen social inclusion.

For the disabled, self-employment may be an appropriate way into the labour market because of its potentially high flexibility in terms of workload, work schedule and work location. Appropriate policies to support this transition could include raising awareness about the desirability and feasibility of entrepreneurship by disabled people, adapting existing training and start-up programmes to the needs of these people, and making full use of ICT connectivity. Just like in the case of the unemployed, policies should also address an appropriate transition from access to benefits to labour market participation. See, for instance, European Commission and OECD (2012e).

<sup>(115)</sup> Though, the higher the level of origin-country education, the less likely they are to be self-employed.

To improve the effectiveness such needs have to be addressed at the local level as this allows for better-targeted counselling, training and education in support of self-employment among the disadvantaged and vulnerable groups.

## 5.7. Summary

This section explored the potential of well-targeted social and labour market policies that address the challenges faced by the groups of people who face adverse starting conditions and are currently under-represented in self-employment, including women and the young. Such policies might include:

- the further strengthening of facilities for child and elderly care;
- promoting access to network platforms adapted to the specific characteristics of the targeted groups;
- financial support (including well-designed transition from benefit eligibility for unemployed);
- promotion of role models;
- tackling gender and age stigmatisation as well as discrimination.

Nevertheless, this section also emphasised that such policies carry several downside risks such as adverse selection and deadweight costs and that a timely evaluation of such policies is crucial to make informed decisions regarding their design, implementation and development.

## 6. LABOUR MARKET AND SOCIAL POLICIES TO FOSTER JOB CREATION THROUGH SELF-EMPLOYMENT AND ENTREPRENEURSHIP

Micro-businesses are crucial for job creation in the European Union – as discussed in Section 2. Key factors that have a direct impact on their potential to expand include their productivity and innovation capacity, as well as cost and non-cost competitiveness – which are often affected by country-specific conditions. In other words, strengthening their job growth potential calls for labour market and social policies (in close coordination with other policies such as the creation of more integrated and competitive product

and services markets<sup>(116)</sup>) that promote the survival of start-ups, strengthen their innovation capacity, reduce hiring costs and provide better working conditions and that take into account country-specific characteristics such as catching-up potential and economic specialisation.

## 6.1. Labour market and social characteristics affecting start-up survival

Surviving as self-employed or an entrepreneur is not straightforward in an ever changing world<sup>(117)</sup>. For example, Chart 27 shows that in 2012 there were strong variations across Member States in the probability that a self-employed person would survive the first year, with the highest probabilities in Cyprus and Sweden and the lowest in Lithuania and Portugal – where it is significantly lower than for large enterprises (with 10 or more employees). Chart 28 shows that there are strong differences in the 5-year survival rates, but that these correlate more with those of larger enterprises.

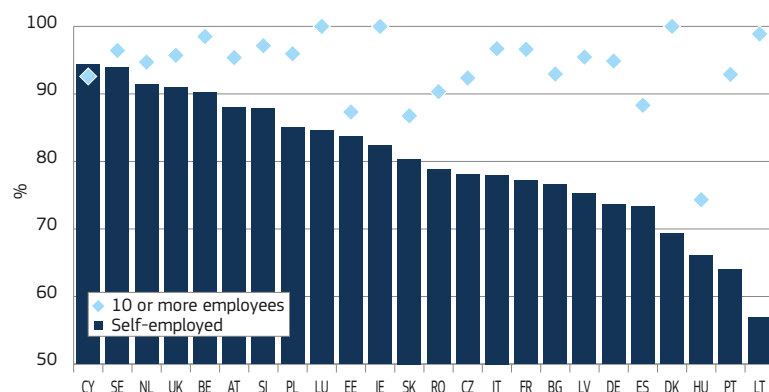
An exit from self-employment may be voluntary or forced depending on a broad range of factors, including personal (such as dissatisfaction with the job) and household (such as childcare responsibilities) characteristics, industry-specific characteristics (such as lack of market growth) as well as institutional (such as lack of business support services) and macro-economic conditions (such as insufficient aggregate demand in an economic downturn). See, for instance, Millán, Congregado and Román (2012)<sup>(118)</sup>. More specifically, a non-exhaustive overview of relevant empirical research indicates the following.

<sup>(116)</sup> As highlighted in the Annual Growth Survey 2016, improving the functioning of product and services markets remains a challenge for many Member States, and includes improving the flexibility of product and services markets, improving the quality of research and innovation, reducing regulatory and administrative burden, strengthening public administration and improving the judicial system and insolvency frameworks. For more details, see [http://ec.europa.eu/europe2020/making-it-happen/annual-growth-surveys/index\\_en.htm](http://ec.europa.eu/europe2020/making-it-happen/annual-growth-surveys/index_en.htm)

<sup>(117)</sup> As individuals can operate successive businesses, surviving as self-employed or an entrepreneur should not be confused with venture closing. See, for example, Parker (2009).

<sup>(118)</sup> Estimating the impact of variables on survival is done in the context of duration models. Nevertheless, these estimates should be interpreted with due care because of several problems, such as selection problems whereby samples often cover only the firms that survived. See, for instance, Parker (2009).

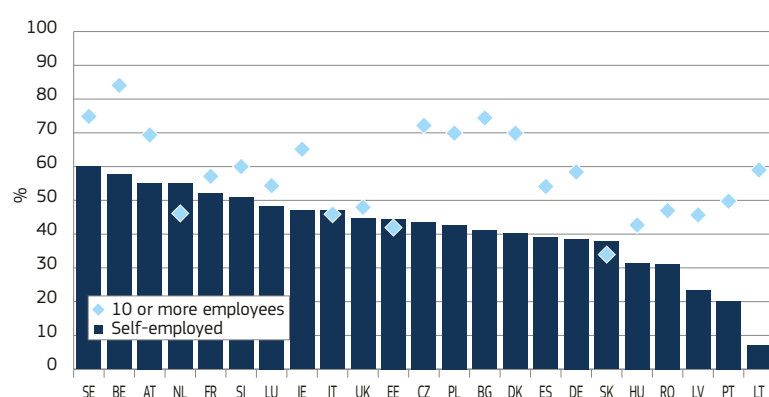
Chart 27: Survival rate of the self-employed without employees after 1 year – 2012



Source: DG EMPL calculations based on Eurostat (bd\_9bd\_sz\_cl\_r2).

Note: Number of enterprises in the reference period (t) newly born in t-1 having survived to t divided by the number of enterprise births in t-1.

Chart 28: Survival rate of the self-employed without employees after 5 years – 2012



Source: DG EMPL calculations based on Eurostat (bd\_9bd\_sz\_cl\_r2).

Note: Number of enterprises in the reference period (t) newly born in t-1 having survived to t divided by the number of enterprise births in t-1.

### 6.1.1. Personal characteristics

Personal characteristics can have an important impact on survival in self-employment as they have a direct impact on a person's motivation, ability, effort and risk-taking. Empirical research has identified the following. More years of education increases survival prospects significantly. See, for instance, Boden and Nucci (2010). Employees who learn more about their business before starting have a stronger likelihood of surviving. See, for instance, Raffiee and Feng (2014). Opportunity entrepreneurs have a stronger probability of surviving since they are usually better prepared than necessity entrepreneurs. Nevertheless, necessity entrepreneurs' likelihood of surviving increases significantly if the venture is connected with previous professional

expertise. See, for instance, Block and Sandner (2009)<sup>(119)</sup>.

It would appear that women's self-employed survival is adversely affected by their more limited access to capital than men. See, for instance, Boden and Nucci (2010). Moreover, in cases of self-employment with a history of unemployment, women's survival seems to depend mainly on individual characteristics (marital status, education) while men's survival is predominantly related to the economic situation (main source of household income). See, for instance, Cueto and Mato (2006)<sup>(120)</sup>.

Finally, businesses established by teams are more likely to survive than those established by individuals. See, for instance, Shrivastava and Tamvada (2011).

<sup>(119)</sup> Using the German Socio-Economic Panel Study for the 1990-2003 period.

<sup>(120)</sup> Studying self-employment subsidies in Spain.

### 6.1.2. Household characteristics

Self-employment survival is also strongly related to the possibility of combining professional life with household responsibilities. Nevertheless, while in the absence of adequate childcare provisions very young children may limit parents' opportunities for self-employment, as older children start to help parents in their business or take care of the younger siblings, the self-employed may be able to stay longer in self-employment.

It would appear that a person's social capital<sup>(121)</sup> also matters for business survival. For example, Davidsson and Honig (2003), inferring from a sample of Swedish adults, suggest that inter- as well as intra-firm networks can make an important contribution to firms' survival.

### 6.1.3. Industry-specific characteristics

Industry-specific characteristics are also important, including the following. In emerging industries (such as new high-technology products) there is usually more room for start-ups to experiment and benefit from the expansion of the industry and stay longer in business. See, for example, Agarwal and Gort (1996). Moreover for start-ups with high entry costs, growth reduces average costs per unit output so that they are less likely to exit as the market expands. See, for instance, Ghosal (2002). Furthermore, a small firm's ability to survive is often adversely affected by limited access to international markets, finance, technology, management skills and knowledge, so a small firm's survival can also be strengthened by integrating its activities into global value chains. Finally, spin-offs within an industry seem to have a stronger survival rate – especially when knowledge is embodied in human rather than physical capital<sup>(122)</sup>. See, for instance, Garvin (1983).

Institutional settings, such as adequate business development services can have a direct impact on the survival of a business as better counselling can help

<sup>(121)</sup> i.e. the ability of actors to extract benefits from their social structures, networks and memberships. See, for instance, Portes (1998).

<sup>(122)</sup> Nevertheless, such spin-offs may also destroy employment in the incumbent firms – although the empirical assessment of such impacts is not straightforward. See, for instance, Gjerløv-Juel and Dahl (2011).

inexperienced starters to avoid entry mistakes. See, for instance, Santarelli and Vivarelli (2007). Finally, it is to be expected that small businesses are more likely to survive and expand their activities in a stable macro-economic environment (when aggregate demand is high).

## 6.2. Shaping drivers of additional job creation

Hiring and firing by one-person, micro and small enterprises will occur when they expand their activities (e.g. due to an expanding market) or reorganise their production process (e.g. due to product and production process innovation). Several factors affect an enterprise's growth, including the entrepreneurs' ability to identify opportunities, innovate and develop effective human resources strategies as well as his/her financial management abilities. See, for instance, Janczak and Bares (2010). Moreover, firms which are active in innovation networks have a stronger capacity to transfer ideas and knowledge into market action. See, for example, Mitusch and Schimke (2011). Furthermore, in countries which are far from the world's technological frontier there is strong potential for growth catching-up, which can in turn be strengthened by the presence of a skilled work force and access to export markets. See, for instance, OECD (2010). Nevertheless, in order to manage such change successfully the self-employed need the right managerial skills, adapted to digital networks and international value chains, as well as the ability to reallocate labour in a flexible but secure way and offer high-quality jobs. Labour market and social policies have a specific role to play in this process, including the following.

### 6.2.1. Strengthening entrepreneurial skills

Several personal factors affect entrepreneurs' decisions to hire labour. While these cannot be affected directly by labour market policies, other personal characteristics which are crucial to expanding a business, such as entrepreneurial skills, can be promoted by labour market policies.

In a continually changing world, entrepreneurial skills are crucial to identifying and exploiting new opportunities and mitigating entrepreneurial risks. Improving the availability of entrepreneurial skills

covers a wide area of policy domains, including education, industrial and labour policies. More specifically, it might be necessary for such policies to create the right framework conditions and incentives to raise awareness and motivation for entrepreneurship, define what the entrepreneurial skills are<sup>(123)</sup> and develop such skills to support citizens in transforming ideas into entrepreneurial action.

It would be beyond the scope of this chapter to discuss such policies in detail but from a labour market and social perspective it should be emphasised that access of all students, including women, as well as disadvantaged and disabled people, to entrepreneurship education is important and that a shortage of human resources and funding for this type of education should be addressed in an efficient and equitable way. Moreover, the literature underlines that such education and training should be well-tailored. Indeed, at the one extreme, some entrepreneurs need the skills to manage 'born-global' enterprises, (see, for instance, Eurofound (2012b), Gundling (2007)), while at the other extreme, low-skilled people who wish to get back into work want to establish small businesses (such as small shops or food processing) that do not require high skills.

Finally, it should be recognised that as small firms expand and plan to hire workers they often need to offer their new staff an opportunity to acquire firm-specific skills. Nevertheless, such capacity often involves high fixed costs which may be a significant barrier. From this perspective, SMEs can receive support and guidance to better bridge (green) skills gaps including distance learning schemes as well as consultancy and advisory services. See, for instance, European Commission (2014c).

### 6.2.2. Supporting innovative entrepreneurship

The interaction between entrepreneurship and technological progress runs in both directions. On the one hand, entrepreneurs are micro-drivers of innovation, which in turn affects their potential to

create jobs. On the other hand, ongoing technological developments in, for example, the digital world create new business opportunities such as taking part in value-adding networks of small enterprises.

The capacity of small enterprises to innovate is driven by a variety of conditions (most of which they have in common with larger enterprises), such as an adequate supply of skilled labour (including researchers), enforceable intellectual property rights, favourable tax regimes, etc.<sup>(124)</sup>. Nevertheless, for small enterprises to strengthen their innovation capacity it is especially important to face low entry costs and be able to penetrate niche markets without too much bureaucratic burden, while at the same time having the opportunity to collaborate with other firms in knowledge networks<sup>(125)</sup>. See, for instance, Vaona and Pianta (2006) and Dahlstrand and Stevenson (2010).

While labour market policies can contribute to the setting of the right framework conditions for innovation, they should also address the direct impact of innovation on job creation. Indeed, from a labour market perspective, a distinction has to be made between three types of innovation. First, there is sustaining innovation that replaces old goods and services and has (almost) no impact on the quantity of jobs. Second, there is efficiency innovation that allows production of the same output with fewer resources (including labour) which may induce a job loss (at the level of the enterprise)<sup>(126)</sup>. Third, there is market creating innovation that creates new goods and services and has the potential to create new jobs (at the level of the enterprise).

In this process, some enterprises will succeed while others will fail and to the extent that success and failure are associated with high employee churn, labour market policies could complement this

<sup>(124)</sup> See, for instance, 'How to succeed as an SME in the internal market: Innovation strategies for cross-border business' at <http://eurofound.europa.eu/observatories/emcc/articles/other-business/how-to-succeed-as-an-sme-in-the-internal-market-innovation-strategies-for-cross-border-business>

<sup>(125)</sup> See also FP7 project VICO results; available at [http://cordis.europa.eu/publication/rcn/14044\\_en.html](http://cordis.europa.eu/publication/rcn/14044_en.html)

<sup>(126)</sup> Nevertheless, to the extent that the innovation reduces output prices, demand may increase – which may offset the initial fall in jobs.

<sup>(123)</sup> On the definition of entrepreneurship as a competence, the European Commission is carrying out work to define a common reference framework for the key competence; see 'Sense of initiative and Entrepreneurship' available at <https://ec.europa.eu/jrc/en/entrecomp>



rising need for flexibility by strengthening employment security – so that employees become more receptive to change following innovations.

Furthermore, in order to be able to attract new employees, micro and small enterprises will have to be able to offer quality jobs. However, the rapid pace at which innovations (such as new green building techniques) are expected to be adopted carries the risk that their impact on job quality gets more difficult to monitor in a timely fashion. This will be especially the case for micro and small enterprises that do not have the necessary resource to make adequate assessments of new processes and products (e.g. larger firms have better access to financial resources and technologies, benefits from scale, access to information, internal human resources, and access to skills programmes).

Innovation will also affect job composition. For instance, innovations in Key Enabling Technologies (KETs) at the SME level are expected to carry a relatively stronger growth potential for high-skilled workers than for medium- or low-skilled workers. Such outcomes may then strengthen ongoing labour market polarisation, which will call for labour market policies that tackle all kinds of traps and promote upward mobility, such as active labour market policies and life-long learning.

Finally, it should be noted that technological progress that involves economies of scale can limit the opportunities of micro and small enterprises to the extent that they operate below the minimum efficient scale<sup>(127)</sup>. For example, Congregado et al. (2014), using data for 23 OECD countries over the period 1972–2008, report results that suggest that economies of scale and scope continue to play an important role in advanced economies.

### 6.2.3. Preparing for an interconnected world economy

Talent is one of the main drivers of successful start-ups, especially in the ICT sector which is extremely knowledge intensive. Talent is a natural ability or

<sup>(127)</sup> Including economies of scale in areas such as production, distribution and management, that make it for example more difficult for the local retailer to compete with multinational retail corporations. Nevertheless, developments in ICT have decreased the importance of economies of scale.

a certain aptitude for certain tasks. In today's highly technical world talent is probably a more important asset than experience, due to the uncertainties that fast technological change imposes<sup>(128)</sup>.

Two types of talent are required for a healthy ICT start-up: entrepreneurial and technical, both are complementary and inter-dependent.

There is a fair amount of technical talent within the EU: Five EU Member States are among the 10 countries with top developers<sup>(129)</sup>. London, Paris and Berlin are among the cities with the highest numbers of developers<sup>(130)</sup>. But the EU lags behind in turning these skills into profitable business: the rate of ICT start-ups per million people in the EU is low compared with the United States and very low compared to Israel, the world leader.

Therefore, the EU has the potential to improve the creation of ICT start-ups and to support their growth to build global leaders. Talent is the main ingredient in the equation and the EU competes in a global economy for this scarce resource. Policies to develop talent can take many forms, and could focus on, inter alia, alternative forms of education, gender balance and the bridge between tech-ideas and business as the following examples illustrate.

Historically, women have had low participation rates in STEM education<sup>(131)</sup> and jobs. Recent statistics show a change in that trend as junior IT workers (less than 2 years of experience) show a higher share of women than of men<sup>(132)</sup>. And even if it is still difficult to find significant numbers of women in 'hard' technical positions, ICT start-ups are creating new types of position, using female talents: community managers<sup>(133)</sup>, e-marketing or user experience experts.

<sup>(128)</sup> Eesley, C. E. and Roberts, E. B. (2012), 'Are You Experienced or Are You Talented?: When Does Innate Talent versus Experience Explain Entrepreneurial Performance?' *Strategic Entrepreneurship Journal*, 6: pp. 207–219. <http://dx.doi.org/10.1002/sej.1141>.

<sup>(129)</sup> <http://goo.gl/pwGZj3>

<sup>(130)</sup> <http://stackoverflow.com/research/developer-survey-2015>

<sup>(131)</sup> 'Of 1,000 women with a Bachelors or other first degree, only 29 hold a degree in Information and Communication Technologies (ICTs) (as compared to 95 men)' ([http://europa.eu/rapid/press-release\\_IP-13-905\\_en.htm](http://europa.eu/rapid/press-release_IP-13-905_en.htm)).

<sup>(132)</sup> <http://stackoverflow.com/research/developer-survey-2015#profile-women>

<sup>(133)</sup> <http://www.adweek.com/socialtimes/community-manager-report/476638>

The interactions between technology and business can be strengthened by measures such as the development of an entrepreneurial mind-set among those with IT skills and the strengthening of IT comprehension among those with entrepreneurial vision. The complexities of technology make the management of such start-ups different from other types of companies. Innovation or technology without a business approach could explain many of the failures in these kinds of companies<sup>(134)</sup>. Therefore specific talent in the management of ICT start-ups must be further developed.

Nevertheless, in a globalised world, talent moves easily across borders and it is not unusual that start-ups founded in Europe move to other countries looking for growth opportunities outside the EU. The main reasons for this talent migration could be the better prospects of finding funds, potential interactions with similar companies and access to bigger markets. A response to talent migration can be to facilitate the acquisition of foreign talent<sup>(135)</sup>.

### 6.2.4. Reducing hiring and firing costs

Excessive hiring costs can be an important barrier for one-person, micro and small enterprises to hiring additional labour. For example, Muehleman and Pfeifer (2013) estimate that in Germany the average hiring costs for high-skilled workers amounts to more than 8 weeks of wage payments and that a 1% increase in the number of hires increases hiring costs by 1.3%.

Several factors affect the cost of hiring an employee. It takes time and effort to post a vacancy and process a job interview, which may also involve the cost of external advisors or placement agencies. In that sense promoting ICT developments to improve the flow of information about job vacancies across Europe, such as EURES<sup>(136)</sup>, may decrease search costs thereby lowering,

<sup>(134)</sup> <https://www.cbinsights.com/research-reports/The-20-Reasons-Startups-Fail.pdf>

<sup>(135)</sup> In the United States around 25% of tech companies are founded by immigrants (see, for instance, <http://www.economist.com/news/business/21576101-start-ups-founded-immigrants-are-creating-jobs-all-over-america-jobs-machine>), up to 46% according to some surveys (see, for instance, <http://www.svb.com/startup-outlook-report/>).

<sup>(136)</sup> See <https://ec.europa.eu/eures/public/homepage>

especially for micro and small businesses, an important barrier to the hiring of new employees.

Increasing company size may also carry additional size-contingent regulation costs that may discourage business expansion beyond a certain threshold. For example, in France a firm that expands its size beyond 50 employees must, *inter alia*, form work councils, give more union representation, and face higher firing costs. See, for instance, Garicano et al. (2013).

Newly hired workers may lack firm-specific human capital and need training – which involves training costs as well as pay during training. See, for instance, Blatter et al. (2012). Moreover, once the employee has received his/her initial training there will be a continuous need for skill development. Nevertheless, micro and small enterprises often lack the capacity to provide this training such that they have to rely on external support mechanisms – which raises the need for external advice, guidance and information on all aspects of learning opportunities. See, for instance, Cedefop (2010).

Stringent employment protection legislation may give rise to high firing costs which may induce employers to outsource tasks. This is especially the case for the smallest firms, since the hiring and firing costs (where it involves fixed costs) are bigger relative to total labour costs than for larger firms. See, for instance, Millán et al. (2013). Nevertheless, while outsourcing may provide some flexibility, it also carries the risk that a reorientation of tasks may require costly renegotiation of contracts. See, for instance, Parker (2009). Moreover, employment protection regulation may also vary with company size thereby affecting enterprises' incentives to expand business beyond a certain threshold. For example, Schivardi and Torrini (2007) estimate that in Italy where firms with a size over 15 employees face substantially more stringent regulations, the probability of firms' growth reduced by around 2 percentage points near the threshold.

Family businesses in which the majority of decision-making rights are in the possession of families may face strong barriers to hiring talented outsiders in the case of a negative perception of nepotistic and paternalistic practices. See, for

instance, Family Business Expert Group (2009).

Finally, companies in technology and knowledge intensive activities usually establish their competitive advantage by hiring and retaining talented people. As a consequence, such enterprises need to create working conditions that offer these talented people an incentive to maximise effort and stay loyal to the firm.

## 6.2.5. Encouraging social entrepreneurship

Most social enterprises have a strong potential to create jobs since they tend to be labour-intensive (such as second-hand clothes shops employing disabled people to collect, sort, clean and resell goods), allow for flexible work arrangements that facilitate labour market integration (such as part-time jobs for persons from single-parent families) and offer professional career guidance and training. See, for instance, Spear (2002) and Davister et al. (2004).

Social enterprises are often small and local and their success in sustained job creation is driven by a large set of factors including demand for their goods and services<sup>(137)</sup>, availability of financial instruments<sup>(138)</sup>, their interaction with education<sup>(139)</sup>, the existence of support and development structures, as well as other factors<sup>(140)</sup>. Labour market and social policies can help address some of these barriers, such as providing social entrepreneurs with skill formation in human resource management and marketing, advising local start-ups, supporting the search for financial support for their activities, etc.<sup>(141)</sup>. See, for instance, European Commission and OECD (2012c).

<sup>(137)</sup> See, for instance, OECD (2013).

<sup>(138)</sup> In the EU, social enterprises most often combine income from sales with public subsidies linked to their social mission and private donations and/or volunteering. See, for instance, Defourny and Nyssens (2010).

<sup>(139)</sup> See, for instance, Glaeser and Shleifer (2001).

<sup>(140)</sup> It would be beyond the scope of this chapter to discuss all the barriers that are not directly related to the labour market. For more details, see <http://ec.europa.eu/social/main.jsp?langId=en&catId=89&newsId=2149&furtherNews=yes>

<sup>(141)</sup> For more details see, for example, <http://ec.europa.eu/esf/main.jsp?catId=531&langId=en>

Evidence suggests<sup>(142)</sup> that public sector contracting and active labour market policies of the government play an important role in stimulating the creation and development of social enterprise. However, policy frameworks for social enterprises differ widely as far as their forms, scope, content and financial endowment, as well as relevance and imperative for public action, are concerned. A Mapping study covering 29 European countries<sup>(143)</sup> concluded that policy frameworks for social enterprise are sometimes presented within the framework of a broader set of policies targeting the social economy or the civil society/non-profit sector, or within the framework of active labour market policies or social inclusion policies<sup>(144)</sup>.

## 6.2.6. Strengthening working conditions of the self-employed

The group of self-employed is a heterogeneous group in terms of working conditions. For example, Green and Mostafa (2012)<sup>(145)</sup> report clear differences between the two main categories of self-employed workers: the self-employed with (SEW) and the self-employed without (SEWO) employees. More particularly, in terms of earnings, SEW have the highest level compared to all other employment relations (SEWO, employed on indefinite contract, employed on fixed-term contract, TAW). They also enjoy higher

<sup>(142)</sup> See country reports available at <http://ec.europa.eu/social/keyDocuments.jsp?advSearchKey=socentcnyrepts&mode=advancedSubmit&langId=en&policyArea=&type=0&country=0&year=0&orderBy=docOrder>

<sup>(143)</sup> European Commission (2015b), p. 50.

<sup>(144)</sup> The Mapping study outlined some of the components of an enabling policy environment for social enterprise that have already been put in place by countries like Italy and the United Kingdom. They include: the legal recognition or institutionalisation of social enterprise; fiscal incentives for social enterprises; specialist support and infrastructure – business support, coaching, mentoring schemes – that take into account the distinct characteristics of social enterprises; measures designed to facilitate access to markets, notably public sector markets (for example, by creating demand for the services of social enterprises, introducing social clauses in public procurement); measures designed to support access to finance through the creation of dedicated financial instruments and social investment markets more generally, and standardised social impact measurement and reporting systems.

<sup>(145)</sup> Eurofound (2012), Trends in job quality in Europe, [http://www.eurofound.europa.eu/sites/default/files/ef\\_publication/field\\_ef\\_document/ef1228en\\_0.pdf](http://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1228en_0.pdf)

intrinsic job quality<sup>(146)</sup>, even if the SEWO are not far behind: this is linked to their lesser exposure to physical risks, their higher autonomy and their lesser work intensity. Even more clearly, a divide appears in terms of working time, where the SEWO display the highest quality: they have a higher level of working time discretion, report less work at unsocial hours but have longer working hours.

Self-employed without employees report that their health and safety is at risk more frequently than employees and self-employed with workers, 10% of them not being very well informed about health and safety. The proportion of self-employed without employees reporting a lower subjective well-being and being at risk of medical illness is the highest.

The working conditions of the economically dependent worker (EDW)<sup>(147)</sup> are in between those of the employees and those of the self-employed without employees, sometimes having the worst of each situation. Based on the 5<sup>th</sup> European Working Conditions Survey, Eurofound (2013) reports that the incomes of the economically dependent workers 'lie, disproportionately often, in the lowest tercile of their country and their households have a correspondingly high level of difficulty making ends meet. At the same time, they have the lowest level of job security, and fewest opportunities for career advancement'<sup>(148)</sup>.

<sup>(146)</sup> Cf. Eurofound (2012), p. 12: "Intrinsic job quality" refers to the aspects of the job that concern the work and its environment. Four core sets of features of work are associated with meeting people's needs: the quality of the work itself, the social environment in which workers are situated, the physical environment, and the intensity or pace of the work."

<sup>(147)</sup> The EDW has a status that combines features of self-employment – usually their formal status is self-employed – and work characteristics closer to the employed – such as a real absence of independence and autonomy regarding key decisions for the business, such as hiring staff and the financial and economic strategy. The overall proportion of Economically Dependent Workers in the EU-27 is low, representing 0.9% of all workers, with a relatively high variation between countries. It seems that the highest proportions are found in southern countries (such as Italy, Cyprus, Greece and Portugal) and Central and Eastern European countries (such as Slovakia, the Czech Republic, Latvia, Romania and, to a lesser extent, Hungary and Bulgaria). For more details, see Eurofound (2013), 'Self-employed or not self-employed? – Working conditions of "economically dependent workers"', prepared by Oostveen, A., Biletta, I., Parent-Thirion, A. and Vermeulen, G.

<sup>(148)</sup> Eurofound 2013.

## 6.2.7. Addressing challenges and opportunities for social dialogue

Identifying the workers' employment status is of particular relevance, for the worker him/herself, for society, for potential employers but also in industrial relations terms.

Indeed some key questions are at stake here. The economically dependent worker 'issue is relevant from the industrial relations point of view since economically dependent workers do not generally benefit from the protection granted to employees by both law and collective bargaining, including provisions on health and safety, information and consultation, working time, vocational training and social protection. They also fall outside the traditional reach of trade union representation'<sup>(149)</sup>.

Most of these workers face a lack of representation in the regular industrial relations processes. The overall self-employed category is not naturally represented by most of the current social partners' organisations. In a handful of countries, representation has been devised by a few employers' and/or trade unions' organisations. The liberal professionals are often organised in independent interest associations. 'Crafts persons and small entrepreneurs, including those in agriculture, are typically represented by specific trade and employer organisations, while journalists and performing artists have in many countries a long tradition of strong unionisation'<sup>(150)</sup>.

Trade unions often have an established representation in construction and in certain countries they have recently included new self-employed workers in their representational domains. Moreover some trade unions do attempt to organise and represent categories of workers, whose status can be found in the blurred zone between self-employment and subordinated employment. This is not an easy task for trade unions, which are mainly structured around the standard employment relationships establishing a contractual link between an individual (worker) and a company (employer), along either occupational or sectoral lines.

<sup>(149)</sup> Id.

<sup>(150)</sup> Eurofound 2009, 'Self-employed workers; industrial relations and working conditions' [http://www.eurofound.europa.eu/sites/default/files/ef\\_files/docs/comparative/tn0801018s/tn0801018s.pdf](http://www.eurofound.europa.eu/sites/default/files/ef_files/docs/comparative/tn0801018s/tn0801018s.pdf)

Furthermore, the issue of collective negotiation coverage of these ambiguous and unclear employment relations is very complex. In this regard, as already identified in the 2002 Eurofound study on 'Economically dependent workers, employment law and industrial relations', three options could be explored:

- 'an extension of (most of) the provisions and protections typical of dependent employment to new forms of employment, including self-employed workers who may be regarded as "economically dependent". (...);
- the definition of a third intermediate status which would stand mid-way between dependent and autonomous work and would benefit from an intermediate level of regulation and protection. (...);
- the establishment of a common set of basic rights and protections that would apply to all workers, irrespective of their formal employment relationships (in addition to the existing regulatory framework for dependent employees). (...)'.

Given the complexity of their status and the peculiarity of the applicable regulation, strengthening the working conditions of the self-employed might require participation of all social actors and the self-employed themselves.

## 6.3. Summary

This section highlighted that a necessary condition for additional job creation is that start-ups survive and expand their activities in a labour intensive way. The survival of start-ups is affected by a variety of factors which can to a large extent be shaped by social and labour market policies (together with other policies), including personal (e.g. education and skill formation) and household (e.g. family responsibilities) characteristics, industry (e.g. maturity of sector) and macro-economic conditions (e.g. aggregate demand) as well as institutional settings (e.g. a well-functioning market for business development services).

Once business activity expands, the demand for labour services may increase so that employees will be hired. However, this will not happen automatically and social and labour market policies have a



strong potential to reinforce this process, inter alia, by:

- strengthening managerial skills (especially among women and youth);
- supporting micro and small firms' innovation capacity (e.g. accommodating trial and error with flexible but secure working arrangements);
- promoting the geographical (e.g. strengthening of cross-border portability of pension rights) and occupational (e.g. recognition of informally acquired skills) mobility of employees;
- reducing hiring costs (e.g. full use of EURES).

Nevertheless, at the same time, micro and small businesses may also fail so that jobs may be lost. This might call for designing labour market policies along flexicurity principles to improve the working of the labour market while at the same time making employees more receptive to change. Moreover, as the group of social enterprises increases there may be a stronger need to improve their business environment by taking into account their specific operating nature.

## 7. CONCLUSIONS

This chapter has investigated the extent to which labour market and social policies, in close coordination with other policies, can strengthen the incentives and means to start up, sustain and expand one-person, micro and small businesses. Its main findings are as follows.

Self-employment and entrepreneurship remain important drivers of job creation. Even though there has been some decline in self-employment in recent decades in most Member States, about 16% of employed people in the EU were self-employed in 2014, with small and micro-enterprises providing about one third of total employment.

Self-employment varies significantly, however, from one group to another, with significantly lower shares, for women, young and non-EU nationals. Moreover, only about one third of the self-employed actually employ any others.

Ongoing structural changes, such as technological progress, globalisation

and the greening of the economy will undoubtedly create new opportunities for self-employment and entrepreneurship. However, the full potential will not be realised unless the right framework condition and policies are in place to accommodate the new ways of production and consumption.

While such general framework conditions are important for large enterprises, these conditions are particularly important for one-person, micro and small enterprises<sup>(151)</sup>. For example, for micro and small businesses, fixed costs of tax compliance can be very high relative to their turnover.

In this context, the analysis in this chapter might suggest that labour market and social policies, in close coordination with other policies, could strengthen job creation through self-employment and entrepreneurship by:

- supporting the development of comprehensive, affordable **entrepreneurial education** (especially in schools, vocational institutions and universities);
- strengthening skills, including **e-skill formation** (e.g. to meet the strong growth potential for app-entrepreneurs) and **financial literacy**;
- **giving a second chance** to honest business failures (e.g. by tackling the stigmatisation of bankruptcy via education and information);
- ensuring **appropriate career guidance** (especially for the young and long-term unemployed via, for instance, public employment services);
- achieving a good **balance between work and private life** for the self-employed (e.g. via well-designed child-support facilities);
- helping to **transmit knowledge into market action** (e.g. by facilitating and encouraging academic spin-offs);
- strengthening the **risk-bearing capacity** of financial markets for micro and small enterprises (e.g. by

bolstering micro-credit providers' ability to lend);

- addressing the needs of **new emerging forms of doing business** (e.g. the independent professionals (iPros) and crowd sourcing);
- **mitigating adverse starting conditions** caused by unfavourable personal or household conditions (e.g. via well-targeted cost-effective programmes that are evaluated and corrected in due time);
- promoting **innovative entrepreneurial solutions to society's most pressing social challenges** (e.g. via social enterprises that provide jobs for people at the margin of the labour market);
- addressing the risk that not all forms of self-employment will be of **high quality** (e.g. by strengthening the social protection rights of economically dependent self-employed workers);
- **reducing hiring costs** (e.g. by full exploitation of job mobility networks like EURES);
- **matching skills supply** with demand of expanding micro and small enterprises;
- complementing the rising need for labour reallocation by a **strengthening of employment security along flexicurity principles**<sup>(152)</sup> so micro and small businesses can expand by making employees more receptive to change.

Finally, it should be recognised that designing and implementing such policies might require the consultation of the SME stakeholders as well as the necessary capacity to monitor and evaluate these policies in terms of their cost-effectiveness and equity, and to correct them when necessary.

<sup>(151)</sup> i.e. 'Think Small First'. See also A 'Small Business Act' for Europe at <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52008DC0394>

<sup>(152)</sup> Including a further strengthening of active labour market policies, promoting life-long learning, and more flexible and secure contractual arrangements and social security (including the portability of social security rights).

## REFERENCES

- Acs, Z., Arenius, P., Hay, M. and Minniti, M., *Global Entrepreneurship Monitor. 2004 Executive Report*, 2004, available at [http://www.gemconsortium.org/assets/uploads/1313077389GEM\\_2004\\_Global\\_Report.pdf](http://www.gemconsortium.org/assets/uploads/1313077389GEM_2004_Global_Report.pdf)
- Agarwal, R. and Gort, M., 'The Evolution of Markets and Entry, Exit and Survival of Firms', *Review of Economics and Statistics*, No 78, 1996, pp. 489-498.
- Applica, *Recent changes in self-employment and entrepreneurship across the EU*, Research note, No 6/2015, unpublished manuscript, 2015.
- Baglioni, S. and Chabanet, D., *How can policy makers improve their country's support to social enterprises?*, European Policy Brief FP7 Project EFESIIS, 2015.
- Baumol, W. J., 'Entrepreneurship in Economic Theory', *American Economic Review*, Vol. 58, 1968, pp. 64-71.
- Bhola, R., Verheul, I., Thurik, R. and Grilo, I., 'Explaining engagement levels of opportunity and necessity entrepreneurs', *EIM Business and Policy Research*, H200610, 2006, available at <http://repub.eur.nl/pub/9705/>
- Block, J. and Sandner, P., 'Necessity and opportunity entrepreneurs and their duration in self-employment: Evidence from German Micro Data', *Journal of Industry, Competition and Trade*, Vol. 9, No 2, 2009, pp. 117-137.
- Boden, R. and Nucci, A., 'On the Survival Prospects of Men's and Women's New Business Ventures', *Journal of Business Venturing*, Vol. 15, 2010, pp. 347-362.
- Böheim, R. and Muehlberger, U., *Dependent Forms of Self-employment in the UK*, *Zeitschrift für Arbeitsmarkt Forschung*, Vol. 42, 2009, pp. 182-195.
- Borjas, G. and Bronars, S., 'Consumer Discrimination and Self-Employment', *The Journal of Political Economy*, Vol. 97, No 3, 1989, pp. 581-605.
- Borzaga, C., Galera, G. and Nogales, R., *Social Enterprise: A New Model for Poverty Reduction and Employment Generation. An Examination of the Concept and Practice in Europe and the Commonwealth of Independent States*, EMES and UNEDP, 2008, available at <http://www.undp.ro/download/UNDP%20RBEC%20Report%20on%20Social%20Enterprises.pdf>
- Bosch, N., de Graaf-Zijl, M. and van Vuuren, D., *Discussiebijdrage t.b.v. 'IBO Zelfstandigen zonder personeel'*, 2014, available at <http://www.cpb.nl/publicatie/discussiebijdrage-tbv-%E2%80%98ibo-zelfstandigen-zonder-personeel%E2%80%99>
- Bosch, N., Roelofs, G., van Vuuren, D. and Wilkens, M., 'De huidige en toekomstige groei van het aandeel zzp'ers in de werkzame beroepsbevolking', *CPB Achtergronddocument*, 2012, available at <http://www.cpb.nl/publicatie/de-huidige-en-toekomstige-groei-van-het-aandeel-zzp-ers-in-de-werkzame-beroepsbevolking>
- Breslin, J., Card, D., Dabrowski, M. and Mulligan, M., *Sizing the EU App Economy*, Eurapp Final Report, 2014, available at [http://ec.europa.eu/information\\_society/newsroom/cf/dae/document.cfm?doc\\_id=4485](http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=4485)
- Brouard, F. and Larivet, S., *Essay of clarifications and definitions of the related concepts of social enterprise, social entrepreneur and social entrepreneurship*, in Fayolle and Matlay (eds.), (2010).
- Brown, J., Earle, J. and Lup, D., *What Makes Small Firms Grow? Finance, Human Capital, Technical Assistance, and the Business Environment in Romania*, IZA Discussion Paper, No 1343, 2004, available at <http://ftp.iza.org/dp1343.pdf>
- Caliendo, M., Hogenacker, J., Künn, S. and Wießner, F., *Subsidized Start-Ups out of Unemployment: A Comparison to Regular Business Start-Ups*, IZA Discussion Paper, No 8817, 2015, available at <http://ftp.iza.org/dp8817.pdf>
- Caliendo, M. and Kritikos, A., *Start-Ups by the Unemployed: Characteristics, Survival and Direct Employment Effects*, IZA Discussion Paper, No 3220, 2007, available at <http://ftp.iza.org/dp3220.pdf>
- Caliendo, M. and Künn, S., *Regional Effect Heterogeneity of Start-Up Subsidies for the Unemployed*, IZA Discussion Paper, No. 7460, 2013, available at <http://ftp.iza.org/dp7460.pdf>
- Caliendo, M. and Steiner, V. (s.a.), *Evaluating Start-Up Subsidies for the Unemployed: Effectiveness and Monetary Efficiency of Two Subsidy Programs*, available at [http://ec.europa.eu/economy\\_finance/events/2007/labour\\_market\\_140307/papers/caliendo\\_steiner\\_en.pdf](http://ec.europa.eu/economy_finance/events/2007/labour_market_140307/papers/caliendo_steiner_en.pdf)
- Carrasco R., 'Transitions to and from Self-Employment in Spain: an Empirical Analysis', *Oxford Bulletin of Economics and Statistics*, Vol. 61, No 3, 1999, pp. 315-341.
- Cincera, M. and Galgau, O., *Impact of Market Entry and Exit on EU Productivity and Growth Performance*, European Commission, Directorate-General for Economic and Financial Affairs, Economic Papers, No 222, 2005, available at [http://ec.europa.eu/economy\\_finance/publications/publication712\\_en.pdf](http://ec.europa.eu/economy_finance/publications/publication712_en.pdf)
- Ciriaci, D., 'Business Dynamics and Red Tape Barriers', *European Economy, Economic Papers* 532, 2014, available at [http://ec.europa.eu/economy\\_finance/publications/economic\\_paper/2014/pdf/ecp532\\_en.pdf](http://ec.europa.eu/economy_finance/publications/economic_paper/2014/pdf/ecp532_en.pdf)
- Clark, K. and Drinkwater, S., 'Pushed out or Pulled in? Self-employment among Ethnic Minorities in England and Wales', *Labour Economics*, Vol. 7, No 5, 2000, pp. 603-628.
- Congregado, E., Golpe, A. and van Stel, A., 'The role of scale economies in determining firm size in modern economies', *The Annals of Regional Science*, Vol. 52, No 2, 2014, pp. 431-455.
- Constant, A. and Zimmerman, K., 'Self-employment against employment or unemployment: Markov transitions across the business cycle', *Eurasian Business Review*, Vol. 4, No 1, 2013, pp. 1-37.
- CPB Netherlands Bureau for Economic Policy Analysis, *A Study on R&D Tax Incentives Final report*, Taxation Papers, Working Paper No 52-2014, 2014, available at [http://ec.europa.eu/taxation\\_customs/resources/documents/taxation/gen\\_info/economic\\_analysis/tax\\_papers/taxation\\_paper\\_52.pdf](http://ec.europa.eu/taxation_customs/resources/documents/taxation/gen_info/economic_analysis/tax_papers/taxation_paper_52.pdf)
- Criscuolo, C., Gal1, P. and Menon, C., *The Dynamics of Employment Growth: New Evidence from 18 Countries*, OECD Science, Technology and Industry Policy

- Papers, 2014, available at [http://www.oecd-ilibrary.org/science-and-technology/the-dynamics-of-employment-growth\\_5jz417hj6hg6-en](http://www.oecd-ilibrary.org/science-and-technology/the-dynamics-of-employment-growth_5jz417hj6hg6-en)
- Cueto, B. and Mato, J., 'An analysis of self-employment subsidies with duration models', *Applied Economics*, Vol. 38, No 1, 2006, pp. 23-32.
- Dahl, M. and Gjerløv-Juel, P., *The Growth and Job Creation of Spin-Offs: Empirical Evidence from Denmark*, 2010, available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1581741](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1581741)
- Dahlstrand, A. and Stevenson, L., 'Innovative entrepreneurship policy: linking innovation and entrepreneurship in a European context', *Annals of Innovation & Entrepreneurship*, 1: 5602, 2010, available at [http://journals.co-action.net/index.php/aie/article/view/5602/html\\_34](http://journals.co-action.net/index.php/aie/article/view/5602/html_34)
- Danish Technological Institute and PLANET S.A., *SMEs and the environment in the European Union*, 2010, available at [http://ec.europa.eu/enterprise/policies/sme/business-environment/files/main\\_report\\_en.pdf](http://ec.europa.eu/enterprise/policies/sme/business-environment/files/main_report_en.pdf)
- Davidsson, P. and Gordon, S., 'Much Ado About Nothing? The Surprising Persistence of Nascent Entrepreneurs Through Macroeconomic Crisis', *Entrepreneurship Theory and Practice*, 2015, available at <http://onlinelibrary.wiley.com/doi/10.1111/etap.12152/pdf>
- Davidsson, P. and Honig, B., 'The role of social and human capital among nascent entrepreneurs', *Journal of Business Venturing*, Vol. 18, 2003, pp. 301-331.
- Davister, C., Defourny J. and Gregoire, O., *Work Integration Social Enterprises in the European Union: An Overview of Existing Models*, EMES Working Papers, No 04/04, 2004, available at <http://www.emes.net/what-we-do/publications/working-papers/work-integration-social-enterprises-in-the-european-union-an-overview-of-existing-models/#sthash.SGOWTeke.dpuf>
- Delgado, M., Porter, M. and Stern, S., *Clusters and Entrepreneurship*, 2010, available at <ftp://ftp2.census.gov/ces/wp/2010/CES-WP-10-31.pdf>
- Diamandis, P. and Kotler, S., *BOLD: How to Go Big, Create Wealth and Impact the World*, Simon & Schuster, 2015.
- Djankov, S., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A., 'The regulation of entry', *Quarterly Journal of Economics*, Vol. 117, 2002, pp. 1-35.
- Duell, N., *How To Promote Self-Employment Of Young People In Europe*, Peer Review on 'Pathways to support young people into Self-employment', 2011.
- ECORYS, *Bankruptcy and second chance for honest bankrupt entrepreneurs*, Final report, 2014, available at [http://www.eea.gr/system/uploads/asset/data/7071/ptoheusi\\_ee\\_2014.pdf](http://www.eea.gr/system/uploads/asset/data/7071/ptoheusi_ee_2014.pdf)
- Eichfelder, S. and Schorn, M., 'Tax compliance costs: A business administration perspective', *Diskussionsbeiträge des Fachbereichs Wirtschaftswissenschaft der Freien Universität Berlin, Betriebswirtschaftliche Reihe 2009/03*, 2009, available at [http://edocs.fu-berlin.de/docs/servlets/MCRFileNodeServlet/FUDOCs\\_derivate\\_000000000508/discpaper03\\_09.pdf?hosts=](http://edocs.fu-berlin.de/docs/servlets/MCRFileNodeServlet/FUDOCs_derivate_000000000508/discpaper03_09.pdf?hosts=)
- Ejermo, O. and Xiao, J., 'Entrepreneurship and survival over the business cycle: how do new technology-based firms differ?', *Small Business Economics*, Vol. 43, No 2, 2014, pp. 411-426.
- Ejrnæs, M. and Hochguertel, S., *Entrepreneurial Moral Hazard in Income Insurance: Empirical Evidence from a Large Administrative Sample*, Tinbergen Institute Discussion Paper, 2008-065/3, 2008, available at [http://www.researchgate.net/publication/5160908\\_Entrepreneurial\\_Moral\\_Hazard\\_in\\_Income\\_Insurance\\_Empirical\\_Evidence\\_from\\_a\\_Large\\_Administrative\\_Sample](http://www.researchgate.net/publication/5160908_Entrepreneurial_Moral_Hazard_in_Income_Insurance_Empirical_Evidence_from_a_Large_Administrative_Sample)
- Ensley, M. and Hmieleski, K., 'A comparative study of new venture top management team composition, dynamics and performance between university-based and independent start-ups', *Research Policy*, Vol. 34, 2005, pp. 1091-1105.
- van Es, F. and van Vuuren, D., *A decomposition of the growth in self-employment*, CPB Discussion Paper, No 145, 2010, available at <http://www.cpb.nl/en/publication/decomposition-growth-self-employment>
- Estrin, S. and Mickiewicz, T., 'Female Entrepreneurship in Developed and Developing Economies', *Small Business Economics*, Vol. 37, No 4, 2010, pp. 397-415.
- Estrin, S. and Mickiewicz, T., *Entrepreneurship in Transition Economies: The Role of Institutions and Generational Change*, IZA Discussion Paper, No 4805, 2010a, available at <http://ftp.iza.org/dp4805.pdf>
- Eurofound, 'New forms of employment', 2015, available at <http://www.eurofound.europa.eu/publications/report/2015/working-conditions-labour-market/new-forms-of-employment>
- Eurofound, 'Youth entrepreneurship in Europe: Values, attitudes, policies', 2015a, available at <http://www.eurofound.europa.eu/publications/report/2015/labour-market/youth-entrepreneurship-in-europe-values-attitudes-policies>
- Eurofound, 'Features of micro and small enterprises in the EU', 2012a, available at [http://eurofound.europa.eu/sites/default/files/ef\\_files/pubdocs/2002/85/en/1/ef0285en.pdf](http://eurofound.europa.eu/sites/default/files/ef_files/pubdocs/2002/85/en/1/ef0285en.pdf)
- Eurofound, 'Born global: The potential of job creation in new international businesses', 2012b, available at [http://eurofound.europa.eu/sites/default/files/ef\\_publication/field\\_ef\\_document/ef1265en.pdf](http://eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1265en.pdf)
- Eurofound, 'Self-employed Workers: Industrial Relations and Working Conditions', 2010, available at [http://eurofound.europa.eu/sites/default/files/ef\\_files/docs/comparative/tn0801018s/tn0801018s.pdf](http://eurofound.europa.eu/sites/default/files/ef_files/docs/comparative/tn0801018s/tn0801018s.pdf)
- European Centre for Development of Vocational Training (Cedefop), 'Support to trainers competence development in small and medium-sized enterprises', outcomes of peer learning activities, 2010, available at [www.cedefop.europa.eu/files/PLA3\\_report\\_v5.pdf](http://www.cedefop.europa.eu/files/PLA3_report_v5.pdf)
- European Commission, 'Entrepreneurship Education: A road to success. A compilation of evidence on the impact of entrepreneurship education strategies and measures', 2015, available at <http://ec.europa.eu/growth>



[tools-databases/newsroom/cf/itemdetail.cfm?item\\_id=8056&lang=en](http://ec.europa.eu/tools-databases/newsroom/cf/itemdetail.cfm?item_id=8056&lang=en)

European Commission, 'A map of social enterprises and their eco-systems in Europe. Synthesis report', 2015b, available at: [ec.europa.eu/social/BlobServlet?docId=12987&langId=en](http://ec.europa.eu/social/BlobServlet?docId=12987&langId=en)

European Commission, 'Annual Report on European SMEs 2013/2014 – A Partial and Fragile Recovery', 2014, available at [http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/supporting-documents/2014-annual-report-smes-2014\\_en.pdf](http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/supporting-documents/2014-annual-report-smes-2014_en.pdf)

European Commission, 'Social Innovation. A Decade of Changes', 2014a, available at <https://webgate.ec.europa.eu/socialinnovationeurope/en/magazine/methods-and-tools/articles-reports/social-innovation-decade-changes>.

European Commission, 'Single Market Act. Together for new growth', 2014b, available at [http://ec.europa.eu/internal\\_market/smart/docs/20120206\\_new\\_growth\\_en.pdf](http://ec.europa.eu/internal_market/smart/docs/20120206_new_growth_en.pdf)

European Commission, 'Green Employment Initiative: Tapping into the job creation potential of the green economy', COM(2014) 446 final, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, 2014c, available at <http://ec.europa.eu/transparency/regdoc/rep/1/2014/EN/1-2014-446-EN-F1-1.Pdf>

European Commission, 'A map of social enterprises and their ecosystems in Europe', 2014d, available at <http://ec.europa.eu/social/BlobServlet?docId=12988&langId=en>

European Commission, 'Unleashing the potential of Crowdfunding in the European Union', Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2014) 0172 final, 2014e, available at <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52014DC0172>

European Commission, 'An Investment Plan for Europe', Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the

Committee of the Regions, COM(2014) 903 final, 2014f, available at <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2014:903:FIN>

European Commission, 'Final Report of the Thematic Working Group on Entrepreneurship Education Open Method of Coordination under the work programme of EU2020', 2014g, available at [http://ec.europa.eu/education/policy/strategic-framework/archive/documents/entrepreneurship-report-2014\\_en.pdf](http://ec.europa.eu/education/policy/strategic-framework/archive/documents/entrepreneurship-report-2014_en.pdf)

European Commission, 'A European strategy for Key Enabling Technologies – A bridge to growth and jobs', Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2012) 341 final, 2012, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0341:FIN:EN:PDF>

European Commission, 'Unleashing the Potential of Cloud Computing in Europe', Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2012) 529 final, 2012a, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0529:FIN:EN:PDF>

European Commission, 'Innovation Union Competitiveness report', 2011, available at <http://ec.europa.eu/research/innovation-union/pdf/competitiveness-report/2011/iuc2011-full-report.pdf#view=fit&pagemode=none>

European Commission, 'Entrepreneurship in Higher Education, Especially in Non-Business Studies', Final Report of the Expert Group, 2008, available at [http://ec.europa.eu/enterprise/policies/sme/files/support\\_measures/training\\_education/entr\\_highed\\_en.pdf](http://ec.europa.eu/enterprise/policies/sme/files/support_measures/training_education/entr_highed_en.pdf)

European Commission, 'Towards Common Principles of Flexicurity: more and better jobs through flexibility and security', Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2007) 359 final, 2008a, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0359:FIN:EN:PDF>

European Commission, 'Fostering entrepreneurial mindsets through education and learning', Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, COM(2006) 33 final, 2006, available at <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52006DC0033>

European Commission, 'European Tax Survey', Commission Staff Working Paper, SEC(2004)1128/2, 2004, available at [http://ec.europa.eu/taxation\\_customs/resources/documents/1128-04\\_en.pdf](http://ec.europa.eu/taxation_customs/resources/documents/1128-04_en.pdf)

European Commission, 'Best Project On Restructuring, Bankruptcy And A Fresh Start', Final Report of The Expert Group, 2003, available at [http://ec.europa.eu/enterprise/policies/sme/files/sme2chance/doc/failure\\_final\\_en.pdf](http://ec.europa.eu/enterprise/policies/sme/files/sme2chance/doc/failure_final_en.pdf)

European Commission and Organisation for Economic Cooperation and Development (OECD), 'Policy Brief on Youth Entrepreneurship', 2012, available at <http://ec.europa.eu/social/BlobServlet?docId=13503&langId=en>

European Commission and Organisation for Economic Cooperation and Development (OECD), 'Policy Brief on Senior Entrepreneurship, 2012a, available at [http://www.oecd.org/cfe/leed/EUEMP12A1201\\_Brochure\\_Entrepreneurial\\_Activities\\_EN\\_v7.0\\_accessible.pdf](http://www.oecd.org/cfe/leed/EUEMP12A1201_Brochure_Entrepreneurial_Activities_EN_v7.0_accessible.pdf)

European Commission and Organisation for Economic Cooperation and Development (OECD), 'Policy Brief on Social Entrepreneurship', 2012c, available at <http://ec.europa.eu/social/BlobServlet?docId=13503&langId=en>

European Commission and Organisation for Economic Cooperation and Development (OECD), 'Policy Brief on Evaluation of Inclusive Entrepreneurship Programmes', 2012d, available at [http://www.oecd.org/cfe/leed/Policy\\_brief\\_evaluation\\_inclusive\\_entrepreneurship\\_programmes.pdf](http://www.oecd.org/cfe/leed/Policy_brief_evaluation_inclusive_entrepreneurship_programmes.pdf)

European Commission and Organisation for Economic Cooperation and Development (OECD), 'Policy Brief on Entrepreneurship for People with Disabilities', 2012e, available at <http://www.oecd.org/cfe/leed/>



- Policy-brief-entrepreneurship-people-disabilities.pdf
- European Employment Policy Observatory (EEPO), 'Stimulating job demand: the design of effective hiring subsidies in Europe', *European Employment Policy Observatory Review*, 2014, available at <http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=7713>
- European Private Equity and Venture Capital Association (EVCA), 'Employment Contribution of Private Equity and Venture Capital in Europe', 2005, available at [http://www.evca.eu/uploadedfiles/c2\\_evca\\_exec\\_employment\\_contribution\\_pe\\_2005\\_english.pdf](http://www.evca.eu/uploadedfiles/c2_evca_exec_employment_contribution_pe_2005_english.pdf)
- Eurostat, 'Entrepreneurship in the EU and Beyond', *Flash Eurobarometer*, 354, 2012, available at [http://ec.europa.eu/public\\_opinion/flash/fl\\_354\\_en.pdf](http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf)
- Eurostat, 'Entrepreneurship determinants: culture and capabilities', 2012a, available at <http://ec.europa.eu/eurostat/documents/3217494/5748437/KS-31-12-758-EN.PDF/99dba9d4-b7a2-4206-b588-14e7c62ebf0b?version=1.0>
- Evans, D. and Jovanovic, B., 'An Estimated Model of Entrepreneurial Choice under Liquidity Constraints', *Journal of Political Economy*, Vol. 97, No 4, 1989, pp. 808-827, available at <http://www.jstor.org/stable/pdf/1832192.pdf?acceptTC=true>
- Expert Group on Taxes (2007), 'Simplified Tax Compliance Procedures for SMEs', Final Report of the Expert Group, available at [http://ec.europa.eu/enterprise/policies/sme/files/support\\_measures/taxsimple/taxsimp\\_en.pdf](http://ec.europa.eu/enterprise/policies/sme/files/support_measures/taxsimple/taxsimp_en.pdf)
- Fairlie, R., *Entrepreneurship, Economic Conditions, and the Great Recession*, IZA Discussion Paper, No 5725, 2010, available at <http://ftp.iza.org/dp5725.pdf>
- Family Business Expert Group, 'Overview of Family-Business-Relevant Issues: Research, Networks, Policy Measures and Existing Studies', Final Report of the Expert Group, 2009, available at [http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/family-business/family\\_business\\_expert\\_group\\_report\\_en.pdf](http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/family-business/family_business_expert_group_report_en.pdf)
- Fayolle, A. and Matlay, H., *Handbook of Research on Social Entrepreneurship*, Edward Elgar, 2010.
- Foundation for SME Development, *A Study of Business Support Services and Market Failure*, study conducted under a contract with the Enterprise Directorate-General of the European Commission, 2002, available at <http://www.google.be/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=2&cad=rja&uact=8&ved=OCCUQFjAB&url=http%3A%2F%2Fec.europa.eu%2FdocsRoom%2Fdocuments%2F3646%2Fattachments%2F1%2Ftranslations%2Fen%2Frenditions%2Fpdf&ei=xQpLVaf6OuuN7Aaw8oH4BA&usq=AFQjCNGeaEuUguyvzLjwuMTOW-5tmhlMv2Q&bvm=bv.92765956,d.ZGU>
- Fraser, S., *Finance for Small and Medium Sized Enterprises: A Report on the 2004 UK Survey of SME Finances*, 2005, available at <http://www.wbs.ac.uk/downloads/research/wbs-sme-main.pdf>
- Garvin, D., 'Spin-offs and the new firm formation process', *California Management Review*, Vol. 25, 1983, pp. 3-20.
- GHK and Technopolis, 'Evaluation on Policy: Promotion of Women Innovators and Entrepreneurship', final report, 2008, available at [http://ec.europa.eu/enterprise/dg/files/evaluation/women\\_en.pdf](http://ec.europa.eu/enterprise/dg/files/evaluation/women_en.pdf)
- Ghosal, V., 'Impact of Uncertainty and Sunk Costs on Firm Survival and Industry Dynamics', 2002, available at <https://ideas.repec.org/p/ecj/ac2002/86.html>
- Giannetti, M. and Simonov, A., 'On the determinants of entrepreneurial activity: Social norms, economic environment and individual characteristics', *Swedish Economic Policy Review*, Vol. 11, 2004, pp. 269-313.
- Glaeser, E. and Shleifer, A., 'Not-for-profit entrepreneurs', *Journal of Public Economics*, Vol. 81, 2001, pp. 99-115.
- Global Enterprise Monitor, *2009 Report on Social Entrepreneurship*, 2009, available at <http://www.gemconsortium.org/>
- Green, F., 'Youth Entrepreneurship', a background paper for the OECD Centre for Entrepreneurship, SMEs and Local Development, 2013, available at [http://www.oecd.org/cfe/leed/youth\\_bp\\_final.pdf](http://www.oecd.org/cfe/leed/youth_bp_final.pdf)
- Gruenwald, R., 'Alternative Approaches in Evaluating the EU SME Policy: Answers to the Question of Impact and Legitimization', *Entrepreneurial Business and Economics Review*, Vol. 2, No 2, 2014, pp. 77-88.
- Gundling, E., 'Twelve people skills for doing business across borders', *Employment Relations Today*, Vol. 34, No 2, 2007, pp. 29-42.
- Habib, M. A., Johnsen, B. D. and Naik, N. Y., 'Spin-offs and information', *Journal of Financial Intermediation*, 1997, pp. 153-176.
- Halabisky, D., *Entrepreneurial Activities in Europe – Entrepreneurship for People with Disabilities*, OECD Employment Policy Papers, No. 6, 2014, available at <http://www.oecd-ilibrary.org/docserver/download/5jxrcmkcxjq4.pdf?expires=1435234798&id=id&accname=guest&checksum=F252ECAFD17A3E94A068B9383E29EC5C>
- Halabisky, D., 'The growth process in firms: Job creation by firm age', Small Business Policy Branch, Industry Canada, 2006, available at [https://www.ic.gc.ca/eic/site/061.nsf/vwapj/GrowthFirmsPhaseIV\\_Eng.pdf/\\$FILE/GrowthFirmsPhaseIV\\_Eng.pdf](https://www.ic.gc.ca/eic/site/061.nsf/vwapj/GrowthFirmsPhaseIV_Eng.pdf/$FILE/GrowthFirmsPhaseIV_Eng.pdf)
- Haltiwanger, J., Jarmin, R. and Miranda, J., 'Who Creates Jobs? Small vs. Large vs. Young', *The Review of Economics and Statistics*, Vol. XCV, No 2, 2013, available at [http://www.mitpressjournals.org/doi/pdf/10.1162/REST\\_a\\_00288](http://www.mitpressjournals.org/doi/pdf/10.1162/REST_a_00288)
- Henley, A., 'Job Creation by the Self-employed: The Roles of Entrepreneurial and Financial Capital', *Small Business Economics*, Vol. 25, 2005, pp. 175-196.
- Henrekson, M. and Johansson, D., *Gazelles as job creators: a survey and interpretation of the evidence*, 2010, available at <http://link.springer.com/article/10.1007/s11187-009-9172-z>
- High Level Group on Administrative Burdens, 'Cutting Red Tape in Europe. Legacy and outlook', Final report, 2015, available at [http://ec.europa.eu/smart-regulation/refit/admin\\_burden/docs/08-10web\\_ce-brocuttingredtape\\_en.pdf](http://ec.europa.eu/smart-regulation/refit/admin_burden/docs/08-10web_ce-brocuttingredtape_en.pdf)
- Homberty, J., Schoarz, A. and Sraerx, D., *Can Unemployment Insurance Spur Entrepreneurial Activity? Evidence From France*, 2013, available at [http://www.oecd.org/sti/ind/Hombert\\_Schoar\\_Sraer\\_Thesmar\\_2013.pdf](http://www.oecd.org/sti/ind/Hombert_Schoar_Sraer_Thesmar_2013.pdf)

- Hughes, K., *Pushed or pulled? Women's entry into self-employment and small business ownership*, Gender Work Organ, Vol. 10, No 4, 2003, pp. 433-454.
- International Labour Organisation (ILO), *Biz-up: Self-Employment Skills for Young People*, 2007, available at [http://www.ilo.org/employment/units/rural-development/WCMS\\_159023/lang--en/index.htm](http://www.ilo.org/employment/units/rural-development/WCMS_159023/lang--en/index.htm)
- Janczak, S. and Bares, F., *High Growth SMEs: The Evolution of the Gazelles and Some Evidence from the Field*, HEC Montréal, Working paper No 2010-01, 2010, available at [http://expertise.hec.ca/chaire\\_entrepreneuriat/wp-content/uploads/2010-01-high-growth-smes.pdf](http://expertise.hec.ca/chaire_entrepreneuriat/wp-content/uploads/2010-01-high-growth-smes.pdf)
- Johansson, E., 'Self-Employment and Liquidity Constraints: Evidence from Finland', *The Scandinavian Journal of Economics*, Vol. 102, No 1, 2000, pp. 123-134.
- Kanas, A., van Tubergen, F. and van der Lippe, T., 'Immigrant Self-Employment. Testing Hypotheses About the Role of Origin- and Host-Country Human Capital and Bonding and Bridging Social Capital', *Work and Occupations*, Vol. 36, No 3, 2009, pp. 181-208.
- Kelly, R., Lewis, P. and Mulvey, C., *Self-Employment Programs and Outcomes For Disadvantaged Jobseekers*, CLMR Discussion Paper Series 02/3, 2002, available at [https://business.curtin.edu.au/local/docs/2002.3\\_SelfEmploymentPrograms.pdf](https://business.curtin.edu.au/local/docs/2002.3_SelfEmploymentPrograms.pdf)
- Kerr, W. and Nanda, R., *Financing Constraints and Entrepreneurship*, Harvard Business School, Working Paper 10-013, 2010, available at <http://www.hbs.edu/faculty/Publication%20Files/10-013.pdf>
- Kibler, E., Wainwright, T., Kautonen, T. and Blackburn, R., '(Work)life after work?: Older entrepreneurship in London – motivations and barriers', 2012, available at [http://www.academia.edu/714990/Work\\_Life\\_after\\_work\\_understanding\\_barriers\\_to\\_older\\_entrepreneurship\\_in\\_London](http://www.academia.edu/714990/Work_Life_after_work_understanding_barriers_to_older_entrepreneurship_in_London)
- Klepper, S., 'Spinoffs: A review and synthesis', *European Management Review*, Vol. 6, 2009, pp.159-171.
- KMU Forschung Austria, 'Overview of Family Business Relevant Issues', 2008, available at [http://ec.europa.eu/enterprise/policies/sme/documents/family-business/index\\_en.htm](http://ec.europa.eu/enterprise/policies/sme/documents/family-business/index_en.htm)
- Krishnaswami, S. and Subramaniam, V., 'Information asymmetry, valuation, and the corporate spin-off decision', *Journal of Financial Economics*, 1999, pp. 73-112.
- Kritikos, A., Kneiding, C. and Germelmann, C., 'Demand Side Analysis of Microlending Markets in Germany', IZA Discussion Paper, No 4292, 2009, available at <http://ftp.iza.org/dp4292.pdf>
- Lambert, R., 'Lambert Review of Business – University Collaboration', London: HMSO, 2003.
- Leighton, P., 'Future Working: The Rise of Europe's Independent Professionals (iPros)', 2015, available at [http://wp.efip.org/wp-content/uploads/2014/03/Future\\_Working\\_Full\\_Report.pdf](http://wp.efip.org/wp-content/uploads/2014/03/Future_Working_Full_Report.pdf)
- Mason, C. and Brown, R., 'High Growth Firms in Scotland', 2010.
- Mazzucato, M., *Financing Innovations and Growth: Reforming a Dysfunctional System*, European Policy Brief, FP7 Project Finance, Innovation and Growth (FINNOV), 2012, available at [http://www.finnov-fp7.eu/sites/default/files/FINNOV\\_Policy\\_Brief.pdf](http://www.finnov-fp7.eu/sites/default/files/FINNOV_Policy_Brief.pdf)
- Millán, J., Congregado, E. and Román, C., 'Determinants of self-employment survival in Europe', *Small Business Economics*, Vol. 38, No 2, 2012, pp. 231-258.
- Millán, A., Millán, J., Román C. and van Stel, A., *How does employment protection legislation influence hiring and firing decisions by the smallest firms?*, 2013, available at <http://www.ondernemerschap.nl/pdf-ez/H201216.pdf>
- Minniti, M. and Nardo, C., 'Being in Someone Else's Shoes: the Role of Gender in Nascent Entrepreneurship', *Small Business Economics*, Vol. 28, 2007, pp. 223-238, available at <http://link.springer.com/article/10.1007/s11187-006-9017-y>
- Misuraca, G., Colombo, C., Radescu, R. and Bacigalupo, M., *ICT-enabled Social Innovation in support to the Implementation of the Social Investment Package – IESI*, JRC Technical Reports, forthcoming.
- Mitusch, K. and Schimke, S., *Gazelles - High-Growth Companies*, final report financed under the Competitiveness and Innovation Framework Programme, 2011, available at [http://ec.europa.eu/enterprise/policies/innovation/files/proinno/gazelles-final-report\\_en.pdf](http://ec.europa.eu/enterprise/policies/innovation/files/proinno/gazelles-final-report_en.pdf)
- Muehleemann, S. and Pfeifer, H., *The Structure of Hiring Costs in Germany: Evidence from Firm-Level Data*, IZA Discussion Paper, No 7656, 2013, available at <http://ftp.iza.org/dp7656.pdf>
- Müller, B., *Human capital and successful academic spin-off*, ZEW Discussion Paper 06-81, 2006, available at <ftp://ftp.zew.de/pub/zew-docs/dp/dp06081.pdf>
- Mutual Information System on Social Protection (MISSOC), 'Social protection in the Member States of the European Union, of the European Economic Area and in Switzerland', Social protection of the self-employed, 2014, available at <http://ec.europa.eu/social/BlobServlet?docId=5662&langId=en>
- Nerkar, A. and Shane, S., 'When do start-ups that exploit patented academic knowledge survive?', *International Journal of Industrial Organization*, Vol. 21, No 9, 2003, pp. 1391-1410.
- Nicholls, A. and Edmiston, D. *CRESSI's approach to social innovation: Lessons for Europe 2020*, FP7 Project Creating Economic Space for Social Innovation (CRESSI) Working Paper 13, 2015, available at [http://www.sbs.ox.ac.uk/sites/default/files/research-projects/CRESSI/docs/CRESSI\\_Working\\_Paper\\_13\\_D1.4\\_16Mar2015.pdf](http://www.sbs.ox.ac.uk/sites/default/files/research-projects/CRESSI/docs/CRESSI_Working_Paper_13_D1.4_16Mar2015.pdf)
- Organisation for Economic Cooperation and Development (OECD), *Entrepreneurship at a Glance 2014*, 2014, available at [http://www.oecd-ilibrary.org/industry-and-services/entrepreneurship-at-a-glance-2014\\_entrepreneur\\_aag-2014-en](http://www.oecd-ilibrary.org/industry-and-services/entrepreneurship-at-a-glance-2014_entrepreneur_aag-2014-en)
- Organisation for Economic Cooperation and Development (OECD) and European Commission, 'The Missing Entrepreneurs 2014. Policies for Inclusive Entrepreneurship in Europe', 2014a, <http://www.oecd.org/industry/the-missing-entrepreneurs-2014-9789264213593-en.htm>
- Organisation for Economic Cooperation and Development (OECD), *Job Creation Through The Social Economy And Social Entrepreneurship*, 2013, at [http://www.oecd.org/cfe/leed/130228\\_Job%20Creation%20through%20the%20Social%20](http://www.oecd.org/cfe/leed/130228_Job%20Creation%20through%20the%20Social%20)

- Economy%20and%20Social%20Entrepreneurship\_RC\_FINALBIS.pdf
- Organisation for Economic Cooperation and Development (OECD), 'Women and financial literacy', 2012, available at [http://www.oecd.org/daf/fin/financial-education/TrustFund2013\\_OECD\\_INFE\\_Women\\_and\\_Fin\\_Lit.pdf](http://www.oecd.org/daf/fin/financial-education/TrustFund2013_OECD_INFE_Women_and_Fin_Lit.pdf)
- Organisation for Economic Cooperation and Development (OECD), 'Measuring Entrepreneurship', OECD Statistics Brief, No 15, 2010a, available at [www.oecd.org/dataoecd/50/56/46413155.pdf](http://www.oecd.org/dataoecd/50/56/46413155.pdf)
- Organisation for Economic Cooperation and Development (OECD), 'High-Growth Enterprises. What Governments can do to Make a Difference', OECD Studies on SMEs and Entrepreneurship, 2010, available at [https://www.tem.fi/files/28938/High-Growth\\_Enterprises\\_What\\_Governments\\_Can\\_Do\\_to\\_Make\\_a\\_Difference.pdf](https://www.tem.fi/files/28938/High-Growth_Enterprises_What_Governments_Can_Do_to_Make_a_Difference.pdf)
- Organisation for Economic Cooperation and Development (OECD), 'The Changing Boundaries of Social Enterprises', 2009, available at [http://www.oecd-ilibrary.org/employment/the-changing-boundaries-of-social-enterprises\\_9789264055513-en](http://www.oecd-ilibrary.org/employment/the-changing-boundaries-of-social-enterprises_9789264055513-en)
- Pal, R., Torstensson, H. and Mattila, H., 'Antecedents of organizational resilience in economic crises – an empirical study of Swedish textile and clothing SMEs', *International Journal of Production Economics*, Vol. 147, 2014, pp. 410-428.
- Parker, S., *The Economics of Entrepreneurship*, Cambridge University Press, 2009.
- Pataki, Z., 'The Cost of Non-Europe in the Single Market "Cecchini Revisited", An overview of the potential economic gains from further completion of the European Single Market', European Parliamentary Research Service, 2014, available at [http://www.europarl.europa.eu/RegData/etudes/STUD/2014/510981/EPRS\\_STU\(2014\)510981\\_REV1\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2014/510981/EPRS_STU(2014)510981_REV1_EN.pdf)
- Pfeiffer, F., and Reize, F., 'Business start-ups by the unemployed: An econometric analysis based on firm data', *Labour Economics*, Vol. 7, No 5, 2000, pp. 629-663.
- Piacentini, M., *Women Entrepreneurs in the OECD: Key Evidence and Policy Challenges*, OECD Social, Employment and Migration Working Papers, No 147, 2013, available at [http://www.oecd-ilibrary.org/social-issues-migration-health/women-entrepreneurs-in-the-oecd\\_5k43bvtkmb8v-en](http://www.oecd-ilibrary.org/social-issues-migration-health/women-entrepreneurs-in-the-oecd_5k43bvtkmb8v-en)
- Portes, A., 'Social Capital: Its Origins and Applications in Modern Sociology', *Annual Review of Sociology*, Vol. 24, No 1, 1998, pp. 1-24.
- PricewaterhouseCoopers (PWC), *Paying Taxes indicators (the Total Tax Rate, the time to comply and the number of payments)*, 2015, available at <http://www.pwc.com/gx/en/paying-taxes/pdf/pwc-paying-taxes-2015-high-resolution.pdf>
- Raffiee, J. and Feng, J., 'Should I Quit My Day Job?: A Hybrid Path to Entrepreneurship', *Academy of Management Journal*, Vol. 57, No 4, 2014, pp. 936-963.
- Raknerud, A. and Rønsen, M., 'Why are there so few female entrepreneurs? An examination of gender differences in entrepreneurship using Norwegian registry data', *Statistics Norway*, Discussion Papers, No 790, 2014, available at [http://www.ssb.no/en/forskning/discussion-papers/\\_attachment/204324?ts=1497aa3d670](http://www.ssb.no/en/forskning/discussion-papers/_attachment/204324?ts=1497aa3d670)
- Rapelli, S., *European I-Pros: A Study*, Professional Contractors Group, 2012, available at [https://www.pcg.org.uk/sites/default/files//media/documents/RESOURCES/efip\\_report\\_english.pdf](https://www.pcg.org.uk/sites/default/files//media/documents/RESOURCES/efip_report_english.pdf)
- Rehfeld, R. and Terstriep, J., *Middle range Theorising Bridging Micro and Meso Level of Social Innovation*, FP7 Project SIMPACT Working Paper 1, 2015.
- Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI), 'A Study on labour market transitions using micro-data from the Statistics on Income and Living Conditions (SILC)', Research Project for the European Commission, DG EMPL, 2013, available at <http://www.ec.europa.eu/social/BlobServlet?docId=7375&langId=en>
- Román, C., Congregado, E. and Millán, J. M., 'Start-up incentives: Entrepreneurship policy or active labour market programme?', *Journal of Business Venturing*, Vol. 28, 2013, pp. 151-175.
- Román, C., Congregado, E. and Millán, J., 'Dependent self-employment as a way to evade employment protection legislation', *Small Business Economics*, Vol. 37, No 3, 2011, pp. 363-392.
- Rothaermel, F. T., Agung, S. D. and Jiang, L., 'University entrepreneurship: A taxonomy of the literature', *Industrial and Corporate Change*, Vol. 16, No 4, 2007, pp. 691-791.
- Salamon, L. and Sokolowski, W., *The Third Sector in Europe: Towards a Consensus Conceptualization*, FP 7 Project Third Sector Impact (TSI) Working Paper Series No 2, 2014.
- Santarelli, E. and Vivarelli, M., 'Entrepreneurship and the process of firms' entry, survival and growth', *Industrial and Corporate Change*, Vol. 16, No 3, 2007, pp. 455-488.
- Scarpetta, S., Hemmings, P., Tresselt, T. and Woo, J., *The role of policy and institutions for productivity and firm dynamics: evidence from micro and industry data*, OECD Economic Working Paper (2002)15, 2002, available at <https://ideas.repec.org/p/oec/ecocaaa/329-en.html>
- Schuetze, H. and Bruce, D., 'Tax policy and entrepreneurship', *Swedish Economic Policy Review*, Vol. 11, 2004, pp. 233-265.
- Shane, S. and Stuart, T., 'Organizational endowments and the performance of university start-ups', *Management Science*, Vol. 48, No 1, 2002, pp. 154-170.
- Sheehan, M. and McNamara, A., *Business Start-ups and Youth Self Employment*, FP7 Project Strategic Transitions for Youth Labour in Europe (STYLE), Working Paper, 2015.
- Shrivastava, M. and Tamvada, J., *Entrepreneurial Teams, Optimal Team Size, and Founder Exits*, 2011, available at [http://www.iza.org/conference\\_files/EntreRes2011/tamvada\\_j3400.pdf](http://www.iza.org/conference_files/EntreRes2011/tamvada_j3400.pdf)
- Social Enterprise UK, *Fightback Britain: A report on the State of Social Enterprise Survey 2011*, 2011, available at: [http://www.socialenterprise.org.uk/uploads/editor/files/Publications/Fightback\\_Britain.pdf](http://www.socialenterprise.org.uk/uploads/editor/files/Publications/Fightback_Britain.pdf)
- Spear, R., *National Profiles of Work Integration Social Enterprises: United Kingdom*, 2002, available at <http://emes.net/publications/working-papers/national-profiles-of-work-integration-social-enterprises-united-kingdom/>

- Spieß-Knafl, W. and Jansen, S. A., *Imperfections in the social investment market and options on how to address them*, on behalf of the European Commission, 2013, available at <https://www.zu.de/info-wAssets/forschung/dokumente/cisoc/Final-Report-Imperfections-in-the-Social-Investment-Market-ZU-vfinal.pdf>
- Stephan, U., Uhlaner, L., and Stride, C., 'Institutions and Social Entrepreneurship: The Role of Institutional Voids, Institutional Support and Institutional Configurations', *Journal of International Business Studies*, FP 7 Project SEFORIS, Vol. 46, 2015, pp. 308-331.
- Sztompka, P., 'Looking Back: The year 1989 as a Cultural and Civilizational Break', *Communist and Post-Communist Studies*, Vol. 29, No 2, 1996, pp. 115-129.
- Storey, D., 'Entrepreneurship and SME Policy', *World Entrepreneurship Forum 2008 Edition*, 2008, [http://www.google.be/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CB8QFjAA&url=http%3A%2F%2Fwww.world-entrepreneurship-forum.com%2Fcontent%2Fdownload%2F1698%2F39646%2Fversion%2F1%2Ffile%2FStorey\\_Entrepreneurship%2520and%2520SME%2520Policy.pdf&ei=Sl6JVb-PLIG1UOiEgOgE&usg=AFQjCNGYGsZEsBRNze mvPBRLUFmASTcDZw](http://www.google.be/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CB8QFjAA&url=http%3A%2F%2Fwww.world-entrepreneurship-forum.com%2Fcontent%2Fdownload%2F1698%2F39646%2Fversion%2F1%2Ffile%2FStorey_Entrepreneurship%2520and%2520SME%2520Policy.pdf&ei=Sl6JVb-PLIG1UOiEgOgE&usg=AFQjCNGYGsZEsBRNze mvPBRLUFmASTcDZw)
- Torrini, R., 'Cross-country differences in self-employment rates: the role of institutions', *Labour Economics*, Vol. 12, No 5, 2005, pp. 661-683.
- Vaona, A. and Pianta, M., *Firm size and innovation in European manufacturing*, Kiel Working Paper, No 1284, 2006, available at <https://www.ifw-members.ifw-kiel.de/publications/firm-size-and-innovation-in-european-manufacturing/kap1284.pdf>
- Valdani Vicari & Associati SRL (VVA) and Centre for European Economic Research (ZEW), *SME taxation in Europe – An empirical study of applied corporate income tax-tion for SMEs compared to large enterprises*, 2015, available at [http://ec.europa.eu/growth/tools-databases/newsroom/cf/itemdetail.cfm?item\\_id=8377](http://ec.europa.eu/growth/tools-databases/newsroom/cf/itemdetail.cfm?item_id=8377)
- Veld, C. and Veld-Merkoulova, Y., 'Do spin-offs really create value? The European case', *Journal of Banking and Finance*, Vol. 28, No 5, 2004, pp. 1111-1135.
- Werner, E. et al., *Social protection rights of economically dependent self-employed workers*, Directorate General for Internal Policies, Policy Department A: Employment Policy, 2013, available at [http://www.europarl.europa.eu/RegData/etudes/etudes/join/2013/507449/IPOL-EMPL\\_ET\(2013\)507449\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/join/2013/507449/IPOL-EMPL_ET(2013)507449_EN.pdf)
- Williams, D., *Gender Discrimination and Self-Employment Dynamics in Europe*, IRISS Working Paper Series 2009-20, 2009, available at <http://www.ceps.lu/?type=module&id=104&tmp=2908>
- Williams, D., 'Effects of Childcare Activities on the Duration of Self-Employment in Europe', *Entrepreneurship Theory and Practice*, Vol. 28, No 5, 2004, pp. 467-485.
- Williams, E., *Too few university spin-out companies*, Warwick Ventures, Warwick University, 2005.
- Williams, C. and Martinez, A., 'Is the informal economy an incubator for new enterprise creation? A gender perspective', *International Journal of Entrepreneurial Behavior & Research*, Vol. 20, No 1, 2014, pp. 4-19.
- Young Entrepreneurs' Alliance Summit (YEA), *Entrepreneurial Innovation: how to unleash a key source of growth and jobs in the G20 countries*, 2013, available at <http://www.g20yea.com/en/wp-content/uploads/Accenture-Entrepreneurial-Innovation-G20-YEA-Report.pdf>
- Zouhar, J. et al., *The Impact of Labour Markets on Entrepreneurial Activities*, European Policy Brief FP7 Project CUPESSSE, 2015, available at <http://cupesse.eu/fileadmin/cupesse/downloads/policy-briefs/Policy-brief-II.pdf>



# Labour legislation in support of job creation<sup>(1)</sup>

## 1. INTRODUCTION

Does labour legislation support or frustrate job creation? This chapter reviews the scope and rationale for labour legislation and discusses the potential link between, on the one hand, a specific subset of legislation – Employment Protection Legislation (EPL) – and the efficiency of civil justice in enforcing such legislation, and, on the other hand, labour market outcomes (job finding and job separation rates). It uses available indicators of EPL and civil justice efficiency and both correlation and regression analysis. The chapter also looks at another subset of labour legislation – occupational safety and health (OSH) legislation – and how OSH can contribute to better jobs, productivity and growth.

The chapter discusses briefly how socio-economic and structural change (associated with technology, globalisation, population ageing, greening of the economy, equal opportunities...) is bringing about greater flexibility in employment contracts. This, together with the need to ensure that the provisions of labour legislation cover all workers, argues in favour of reviewing existing legislation which in some cases extends several centuries into the past.

The chapter attempts to answer the following questions: What is labour

legislation and what is the purpose of national and EU level labour legislation? What is its relationship with alternative ways to regulate labour market interactions? To what extent does labour legislation differ across Member States and why? How much have contractual arrangements evolved, how varied are they and what challenges does this pose? How do EPL and OSH impact on labour market outcomes? What is the role of civil justice and law enforcement?

The current situation in the EU is one of high unemployment, with very high long-term unemployment and youth unemployment. Employment is increasing but slowly. Structural, chronically high unemployment rates and long-term unemployment represent a permanent and unacceptable loss of human capital: they discourage workers and lead to premature withdrawal from the labour market and to social exclusion.

Supply-side problems in general and labour legislation in particular are accused of being obstacles to job creation. Perceptions abound that labour legislation is ‘too strict; too complex; not enforced; not in line with societal changes; not consistent, resulting in unequal treatment of workers and segmentation’. At the same time, labour legislation is seen as a key determinant of job creation as much as other institutional, public administration and product market conditions (Global Competitiveness Report and the

Doing Business Report)<sup>(2)</sup>. Questions are often raised as to whether legislation or its enforcement should be reformed in support of job creation, and how labour legislation could be adjusted to respond to socio-economic and structural change.

Note that labour legislation covers many dimensions of work relationships and the work environment, making it difficult to assess its impact on job creation. It is also part of a broader institutional framework which includes Active Labour Market Policies (ALMP), access to Lifelong Learning (LLL) and social protection systems and must be seen in relation to those other institutional features. Indeed, countries which appear to have more flexible contractual arrangements may also have strong social protection and stricter activation policies. In other countries, labour legislation is more encompassing as it was developed to ensure protection of the worker when social protection was otherwise weak.

<sup>(2)</sup> Labour legislation is put forward as a framework condition (World Competitiveness Report of the World Economic Forum at <http://www.weforum.org/reports/global-competitiveness-report-2014-2015> and the Doing Business Report of the World Bank Group at <http://www.doingbusiness.org/reports/global-reports/doing-business-2015>) affecting the ability of individuals and countries to conduct business alongside other key conditions associated with the regulatory framework of a country (bureaucracy and red tape, transparency in contracts, restrictive and discriminatory rules for businesses, the independence and efficiency of the judicial system, energy) or physical and ICT infrastructure for example.

<sup>(1)</sup> By Ana Xavier, Alfonso Arpaia, Federico Lucidi, Lucile Castex-Chauve, Tim Van Rie, Fabiana Pierini and Robert Strauss.

The analysis in this chapter is set in the context of the Europe 2020 Strategy<sup>(3)</sup>, which is the EU's Strategy for promoting smart, sustainable and inclusive growth, and the European Semester, which is the EU economic governance framework. Over the years, structural reforms, including labour market reforms, have received increased attention, as they are important and necessary tools for unlocking the EU's growth potential.

The 2016 Annual Growth Survey (AGS)<sup>(4)</sup>, which defines the annual priorities to help Member States return to higher growth levels in accordance with the Europe 2020 Strategy, proposes to pursue an integrated approach to economic policy built around three main pillars, all of which must act together – boosting investment, accelerating structural reforms (including labour market reforms) and pursuing responsible growth-friendly fiscal consolidation.

As indicated in the 2016 AGS and in the Joint Employment Report<sup>(5)</sup> underpinning the key employment messages contained in the AGS, labour market policies need to balance flexibility and security considerations. The AGS proposes that comprehensive reform efforts are needed to achieve both flexibility and security in the world of work. EPL should continue to be modernised and simplified to ensure effective protection of workers and the promotion of labour market transitions between different jobs and occupations. Measures should consider, at the same time, labour market segmentation, adequate wage developments, well-designed income support systems, and policies to ease transitions to new jobs, equip jobseekers with the right skills and better match them with vacancies, with the involvement of social partners. These are indeed an expression of the four components of flexicurity policies: a) employment legislation, b) ALMPs c) LLL and d) social protection<sup>(6)</sup>.

As indicated in the 2016 AGS and the JER, in recent years, the increase in overall employment has been driven mainly by an increase in temporary contracts

which is not unusual in the early stages of a recovery. The more general move towards more flexible labour markets should facilitate employment creation but should also enable transitions towards more permanent contracts. It should not result in more precarious jobs. Member States should also step up efforts to combat undeclared work. As proposed in the JER *'Reforms supporting well-functioning, dynamic and inclusive labour markets must continue. Member States should also continue, and in some cases step up, measures addressing the challenge of segmented labour markets, ensuring a proper balance between flexibility and security.'*

In this context, labour legislation can play an important role in supporting (or frustrating) job creation.

**Section 2 of this chapter** looks at the existing definition of legislation in general and labour legislation in particular. It presents a brief overview of the history of modern labour market legislation and the rationale for its development and existence, to provide some context for the analysis and to familiarise readers with the concepts. It provides an overview of the main characteristics of EU-level employment legislation. It also discusses other ways to regulate labour market interactions.

**Section 3** looks at the notion of 'contract' and 'employment contract' and illustrates their variety and complexity. It discusses the potential influence of structural change in shaping the contract landscape. It assesses the impact on job quality and social protection of atypical or non-standard employment and civil contracts. It analyses some evidence of labour market segmentation.

**Section 4** focuses on EPL as a subset of employment legislation. It examines the rationale for the existence of EPL and describes existing measures of EPL. It discusses the main differences across Member States and recent developments. It finishes with a discussion of EPL in relation to other labour market institutions.

**Section 5** looks at the role of civil justice in the enforcement of labour law and EPL. It looks at the length of legal proceedings as an indicator of the efficiency of civil and commercial justice. It analyses some correlations between

EPL indicators and indicators of efficiency of civil justice and at the role EPL plays in job finding and separation while controlling for the efficiency of civil justice. **Section 6** is an overview of recent changes in labour legislation in EU Member States. **Section 7** provides some policy conclusions.

Note that this chapter does not cover in detail the functioning of social dialogue and industrial relations and the laws governing them. Social dialogue and industrial relations are covered by chapter II.3 of this Review.

## 2. LABOUR LEGISLATION: SCOPE AND PURPOSE

This section looks at the definition of labour legislation, its scope, its purpose and its relation with collective agreements. It provides a simple classification of legal systems across the EU. It shows the historical, cultural and political factors that lay behind the development of labour legislation in different Member States and some of the differences between them. The section ends by defining EU law and its characteristics, why it exists and the broad areas it covers.

### 2.1. Labour law and fields of application

In broad terms, 'Law' can be understood as a collection of principles, regulations and rules which a particular country, state, region, town or community recognises as regulating the actions of its members and which is enforced by the imposition of penalties. These principles, regulations and rules are established by some authority and are applicable to the community whether in the form of written legislation or in the form of custom and practice<sup>(7)</sup>. They are recognised and enforced by judicial decision<sup>(8)</sup>.

These principles, regulations and rules of conduct or action regulate different aspects of society, be it work interactions (e.g. employment contracts), commercial interactions (e.g. contracts for the provision of goods and services), private relationships between individuals (e.g. wedding contracts) or

<sup>(3)</sup> [http://ec.europa.eu/europe2020/index\\_en.htm](http://ec.europa.eu/europe2020/index_en.htm).

<sup>(4)</sup> [http://ec.europa.eu/europe2020/pdf/2016/ags2016\\_annual\\_growth\\_survey.pdf](http://ec.europa.eu/europe2020/pdf/2016/ags2016_annual_growth_survey.pdf).

<sup>(5)</sup> [http://ec.europa.eu/europe2020/pdf/2016/ags2016\\_draft\\_joint\\_employment\\_report\\_en.pdf](http://ec.europa.eu/europe2020/pdf/2016/ags2016_draft_joint_employment_report_en.pdf).

<sup>(6)</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0359:FIN:EN:PDF>.

<sup>(7)</sup> This is the case of common law in the UK and much of the US for example, where the body of law is developed primarily from judicial decisions based on custom and precedent, unwritten in statute or code.

<sup>(8)</sup> Various dictionaries.

the use of common services (e.g. garbage collection, water provision, public parks)<sup>(9)</sup>. This set of rules is covered by a system of adjudication that assesses how these rules are applied in each individual case.

A system of law commonly presumes that: 1) the rules are commonly known and recognised by the community where they are applicable; 2) they are binding and there are penalties for breaking those rules which often increase in intensity with the severity and frequency of violation; 3) there is a controlling organisation/entity who is responsible for enforcing the law and imposing penalties when informed; and 4) there is a process of adjudication when there are disagreements regarding whether an offence has occurred and what penalty should be imposed (Ostrom, 2000, in McLeod, 2010).

This body of principles, regulations and rules is typically subdivided into groups of rules concerned with a particular subject such as commercial law or labour law. Labour law can be understood as regulating the relationships between workers, employers, trade unions and employers' associations, as well as the role of the state. It can pertain to an individual worker or to a group of workers. It can refer to contracts specifying the rights and obligations of workers and employers, minimum wages, working hours and overtime, dismissal, collective bargaining, social dialogue and industrial relations, health and safety, discrimination by age, gender, race, religion or disability, child labour and harassment.

The employment relationship is regulated by the employment or work contract, the collective agreements and the national and EU legislation. The employment contract is the basic element of labour law. 'The essential feature of an employment relationship is that for a certain period of time a person performs services for and under the direction of another person in return for which he receives remuneration.' (CJEU, Lawrie-Blum, 3/07/1986). The employment contract usually defines the rights and obligations of the worker and the employer i.e. what is expected from both the employer and employee.

<sup>(9)</sup> As cited by McLeod, Ostrom (2000) has shown that many societies have developed efficient systems of rules and adjudication for example for regulating the use of common-pool resources, thereby avoiding the tragedy of the commons (Hardin (1968)).

When imposing obligations on the two parties, it assumes compliance of both parties with the general law and labour law, i.e. the Labour Code if there is one, as the employment contract cannot contain provisions which would derogate from the law.

Many contract terms and conditions are covered by written legislation or by common law, including compensation, holidays and holiday pay, sick leave rights and pay, notice in the event of dismissal, the right to join a trade union, and the description of the job. The maximum number of hours worked in a given time period is also set by law in many countries, and legal acts regulate overtime and the related compensation. Most Member States have a statutory minimum wage<sup>(10)</sup>. They also have legal acts regulating health and safety standards in the workplace.

Just as a specific body of law has evolved to regulate employment contracts and issues associated with employment, specific bodies such as employment courts have been created to rule on employment-related disputes in many countries (e.g. the United Kingdom and Italy). Such disputes may also be mediated by various bodies such as private mediation and arbitration.

## 2.2. Alternative ways of regulating labour market interactions: the role of collective agreements

As an alternative or complement to labour legislation, representatives of workers and employers (the social partners) can jointly regulate certain aspects of the labour market through collective agreements. Such agreements can be concluded between workers' representatives (typically trade unions) and a single employer at establishment or company level. Trade unions may also bargain with the representatives of several employers to set terms of employment in a given sector or at cross-industry level (multi-employer bargaining). While collective agreements can be very narrow in scope (e.g. wages in a given company or sector), they may also regulate certain aspects of the labour market that are outside the scope of labour law (for instance social

security, health and safety or vocational education and training).

In principle, collective agreements apply to members of the signatory parties, with the membership (density rate) of the employers' organisation as the crucial factor determining the agreement's coverage. In some Member States the terms of a collective agreement may be extended to all the employers in a given domain (Visser, 2013). In addition, public authorities may regulate other aspects of collective bargaining outcomes, including: the validity of agreements beyond their expiry; the hierarchical ordering between collective agreements at different levels (which levels take precedence); or the conditions under which actors can derogate from an agreement (and its possible direction). These settings, as well as the 'capacity' of social partners differ widely across Member States (see chapter II.3 on social dialogue; EUROFOUND 2014; European Commission 2015, Chapters 1 and 2).

Collective agreements are usually concluded at the initiative of social partners on the basis of a shared problem diagnosis. The prospect of legislation, however, may act as an incentive or a trigger for social partners to enter negotiations. This applies particularly when both parties consider that the likely outcome of a legislative procedure will be less favourable to them, compared to a bargained solution between social partners ('bargaining in the shadow of the law').

In addition to bi-partite social dialogue between employers and workers' representatives, or unilateral involvement by the state, tri-partite 'concertation' involves public authorities at different levels, possibly resulting in social pacts regulating (certain aspects of) working conditions and labour relations (for more details, please refer to the social dialogue chapter).

Please note that this chapter does not cover in detail the functioning of social dialogue and industrial relations and the laws governing them. Social dialogue and industrial relations are covered by chapter II.3 of this Review.

<sup>(10)</sup> Minimum wages in some countries without a statutory minimum such as Sweden are regulated by collective agreement.



### 2.3. A brief history of labour law

Some form of regulatory system covering the employment relationship has existed ever since people have worked for someone else<sup>(11)</sup>. However, modern labour law has its roots in the late 18<sup>th</sup> and 19<sup>th</sup> century, when legal acts were adopted to address concerns associated with industrialisation. With the development of trade unions and the socio-economic and labour market changes that resulted from the two World Wars and technological change, labour legislation developed rapidly in the second half of the 20<sup>th</sup> century.

Modern labour law developed in parallel with the Industrial Revolution<sup>(12)</sup>. With it, small-scale production changed to large-scale factories and workers' relationships with their employers moved from formal subordination and deference to a contract whereby people were free to choose who to work for. However, the freedom of contract that came with the Industrial Revolution did not change the worker's dependency on his employer and the relationship remained imbalanced. This is due to the fact that most of the wealth and decision-making power, and hence the thrust of existing legislation at the time, was concentrated on the side of employers (landlords, factory owners, merchants)<sup>(13)</sup>.

<sup>(11)</sup> For example a form of employment law operated 4000 years ago when minimum wage laws and liability rules were included in the Code of Hammurabi in 2000 BC (MacLeod, 2010). During feudal times in England, for example, significant and sometimes opposite labour laws followed the Black Death ending with the so-called Truck Acts in 1464, that required that workers be paid in cash and not kind. In 1772 slavery was abolished in England and subsequent Acts enforced prohibition throughout the British Empire. Other countries followed suit.

<sup>(12)</sup> For reference see Lewis (1976), A. C. L. Davies (2004); [https://en.wikipedia.org/wiki/History\\_of\\_labour\\_law](https://en.wikipedia.org/wiki/History_of_labour_law); [https://en.wikipedia.org/wiki/Labour\\_law](https://en.wikipedia.org/wiki/Labour_law).

<sup>(13)</sup> As in Adam Smith (1776) 'It is not, however, difficult to foresee which of the two parties (...) have the advantage in the dispute, and force the other into a compliance with their terms. The masters, being fewer in number, can combine much more easily; and the law, besides, authorises, or at least does not prohibit their combinations, while it prohibits those of the workmen. We have no acts of parliament against combining to lower the price of work; but many against combining to raise it (...). A landlord, a farmer, a master manufacturer, a merchant, though they did not employ a single workman, could generally live a year or two upon the stocks which they have already acquired. Many workmen could not subsist a week, few could subsist a month, and scarce any a year without employment. In the long run the workman may be as necessary to his master as his master is to him; but the necessity is not so immediate.'

As a result, during the late 18<sup>th</sup> and most of the 19<sup>th</sup> century, many basic principles of modern labour law were developed to improve aspects of working conditions in large factories through legislation. Labour legislation also eventually developed to deal with the challenges associated with new employment relationships and as a means to mitigate the inherent imbalance and the potential conflict that could arise between the two sides of the employment relationship.

The first examples of modern labour law are found in England and related to child labour. While the use of child labour has been commonplace in history, the industrialisation of manufacturing in the 18<sup>th</sup> and 19<sup>th</sup> centuries saw a rapid increase in child employment<sup>(14)</sup>. A serious outbreak of fever in 1784 in cotton mills near Manchester raised public awareness of the difficult conditions children worked under. A number of legal acts<sup>(15)</sup> followed which prohibited child labour under 9 years of age, limited the employment of children under 18 years of age, limited working hours to 12 a day, abolished night work and provided for inspectors to enforce the law. They also covered the provision of a basic level of education for all apprentices and adequate accommodation and clothing. Further steps involved the restriction in the working hours of women and children in factories to 10 hours per day. Several legal acts defining minimum health and safety standards at work (e.g. ventilation, signalling) were adopted throughout the 19<sup>th</sup> and early 20<sup>th</sup> century in England followed by other industrialised countries.

Note though that while legislation was passed in association with concerns over working conditions of workers and notably children and women, the Combination Act of 1799 outlawed trade unions and was not repealed until 1874, with some elements not fully repealed until 1974. This shows that the development of modern labour legislation in Britain as well as in much of Europe that started with the Industrial Revolution went well into the 20<sup>th</sup> century and is still ongoing.

<sup>(14)</sup> The works of Charles Dickens paint an accurate, if horrifying, picture of England in the 18<sup>th</sup>-19<sup>th</sup> centuries.

<sup>(15)</sup> Such as the 1802 Factory Act.

In France, and in the aftermath of the French Revolution, legislation in 1841 prevented children's employment in factories before 8 years of age and prohibited night labour for any child under 13. This was extended to employment of girls under 21 in 1874, and in 1892 legislation specific to women's employment was introduced which is still in force, following some amendments in 1900. The working day was limited to 12 hours for adults in 1848 (reduced to 11 hours in 1900) with subsequent laws defining the coverage and exemptions including any work for the government in the interests of national defence or security. The 1892 Act established a free day a week, in addition to eight annual holidays. A 1906 Law established Sunday rest, though allowing substitution of another day in certain industries and certain circumstances. Night labour was prohibited for workers under 18, and only exceptionally permitted for girls and women over 18 in specified trades. In mines and underground quarries employment of women and girls is prohibited except at surface works. Inspection services were also created. Throughout the 19<sup>th</sup> and 20<sup>th</sup> century France legalised trade unions, regulated paid leave and limited the working week to 40 hours.

Germany passed a number of labour laws throughout the 19<sup>th</sup> century, including those pertaining to health insurance, old age and disability insurance. A law of 1903 regulated child labour in industrial establishments, prohibited employment underground of female workers and limited the hours of women and young workers in many occupations, although already in 1891 the Imperial government could limit the working hours of workers in industries where excessive length of the working day was seen as endangering their health. The 1891 legislation introduced Sunday rest, annual holidays and church festivals with exceptions. Children could not be employed by their parents or guardians before the age of 10 years or by other employers before the age of 12 years and could not be employed at all in several occupations; and not between the hours of 8 p.m. and 8 a.m. Full compliance with the requirements for school attendance and with appropriate rest periods had to be respected. In term time,

employment of children was limited to 3 hours a day. Night work between 8.30 p.m. and 5.30 a.m. was forbidden and overtime could be allowed under certain conditions to meet unforeseen pressure or for work on perishable goods. The law provided for meal times and a 4-week maternity leave extendable to 6 weeks.

Other events accelerated the development of labour legislation. These included the two World Wars and for some countries the availability of natural resources. Wars required the contribution of every available person and resource. As most men were away on military service, women took over traditional 'men's jobs' in factories and on the land. This drove the movement for equal rights for women both in society (e.g. the right to vote) and in the labour market (e.g. equal pay).

The 1919 Treaty of Versailles attempted to address the aggressive economic competition between nations, identified as one of the causes of the First World War and which also had detrimental effects for workers. The solution to ensure social justice for workers was to establish minimum labour standards in binding international law. The Treaty created the International Labour Organisation (ILO) whose role was to draw up common standards between countries. These minimum common standards include freedom of association, adequate wages, a maximum 48-hour week, minimum rest periods, equal pay for women, abolition of child labour and fair treatment of migrant workers.

The 1944 ILO Declaration of Philadelphia puts forward a number of fundamental principles: that 'labour is not a commodity', that 'freedom of expression and association are essential to sustained progress', that 'poverty anywhere constitutes a danger to prosperity everywhere' and the principle of ensuring 'a just share of the fruits of progress to all'. This was followed by a number of conventions and the 1998 Declaration on Fundamental Principles and Rights at Work which established that all States, by virtue of their membership of the ILO, should aim to apply the conventions on freedom of association, protection of the right to organise and collective bargaining, the abolition of forced labour, discrimination in employment

and occupation, minimum age and the worst forms of child labour.

## 2.4. Why does labour law exist?

All countries in the world have a more or less comprehensive system of labour law, created and adapted to their individual circumstances. Labour legislation covers a vast area in order to protect workers at the place of work and to protect workers and society from the costs and risks associated with work and work dismissal / job separation. It includes protection against the loss of earnings, financial distress, ill-health as well as erosion of skills and work experience, i.e. human capital, that come with job loss especially in a context of limited income protection in case of unemployment. It may also ensure a protective working environment against accidents and disability as well as protection of the broader environment.

The employment relationship is based on an inherent inequality between the two parties. The worker depends economically on the employer. The worker has to conform to the employer in terms of the content of tasks, organisation of work, workplace rules, hiring and firing. In return he/she has rights (under the law) which mitigate the risks of arbitrary behaviour and introduce procedural requirements, minimum standards or the principle of reasonable justification for decisions of the employer. This is recognised in law as the 'legal permanent subordination' of the employee to the employer and is balanced by a number of (mutual) obligations.

While there is a comprehensive rationale for the development of labour law (see below), Posner (2003) argues that employment law, especially the common law, has evolved over time to address particular problems that appeared repeatedly before the courts, rather than as a solution to the problem of efficiently organising economic activity. Nevertheless, Collins (2011) argues that 'An investigation of the idea of labour law calls for a theory (...) which should justify the existence and weight of such typical rules and principles of labour law as minimum wages, safety regulations, maximum hours of work, the

outlawing of discrimination against particular groups, and the recognition of a trade union for the purposes of collective bargaining. Labour law requires a theory of why such mandatory constraints should exist.'

Two such theories of labour law have been put forward (Collins, 2011). One is associated with the principles of social justice. The existence of labour legislation is related to society's goals of fairness and ensuring a fairer distribution of wealth, power and goods. According to the ILO<sup>(16)</sup>, 'Social Justice is based on equality of rights for all peoples and the possibility for all human beings without discrimination to benefit from economic and social progress everywhere. Promoting social justice is about more than increasing income and creating jobs. It is also about rights, dignity and voice for working women and men as well as economic, social and political empowerment.' On the basis of social justice<sup>(17)</sup>, the ILO member countries have agreed and adopted a number of principles in their Declarations and Conventions. In this case, labour law intervenes in the labour market to protect and improve the position of poorer and weaker members of society. Such a theory supports the practice of collective bargaining and explains the imposition of basic labour standards such as a minimum wage.

The other theory relates to efficiency-improving or welfare maximisation considerations. Labour legislation exists to address market failures caused by transaction costs and asymmetric information, potential coercion and opportunism by employers given the potential incompleteness of contracts, and the wish to promote efficiency and competitiveness through a well-coordinated and flexible division of labour. From this perspective, labour law exists to address problems associated with contracts of employment. A perfectly competitive market

<sup>(16)</sup> [http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms\\_151740.pdf](http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_151740.pdf).

<sup>(17)</sup> The ILO's Constitution says, 'Universal and lasting peace can be established only if it is based upon social justice.' These words were echoed by the ILO's first Director-General, Albert Thomas, who argued that 'Economic and social questions are indissolubly linked and economic reconstruction can only be sound and enduring if it is based on social justice.'

requires three main pre-conditions: 1) Free movement; 2) Perfect information among buyers and sellers; and 3) no one seller or buyer can influence the market price. However, labour markets have a number of market imperfections, including:

- **Labour immobility** (both occupational and geographical) due to skills mismatch, loss of skills, barriers to entry, language barriers, family reasons, differences in prices and housing costs.
- **Disincentives to find and take paid work associated with the so-called Poverty Trap and the Unemployment Trap.** Low wage earners often find that the effective marginal tax rate for earning extra pay is high and poorest groups might actually face higher tax rates than the rich. Loss of benefits, additional tax and social security costs as well as high costs of child care and commuting may mean that moving into work actually involves a loss of household income.
- **Discrimination in the labour market** based on race, gender, age, sexual orientation and other non-alterable features. Such discriminatory behaviour is due to information failure or to deliberately under-valuing or failing to appreciate the contribution made by certain groups. Employers are unable to directly observe the productive ability of individuals and therefore observable characteristics such as gender or race are used as proxies built on deeply held irrational prejudices.
- **Monopsony power of employers,** where a dominant employer in an industry or a local area might use their 'buying power' to drive wages below a level that might exist in a more competitive market.
- **Skills gaps in the labour market due to inadequate incentives for the acquisition of skills.** Workers and employers may not fully understand the costs and benefits of training; workers may feel that they are under-rewarded for training; people on low incomes cannot afford the cost of acquiring

new skills. Employers may also feel that training is not worth the risks – trained employees leave, giving a free ride to their next employer and there are costs involved with re-hiring and re-training.

Market failure therefore provides a rationale for governments to intervene in the operation of labour markets through labour legislation.

These two justifications – efficiency and social justice – have been used to explain the normative foundations of labour law. Criticisms of these theories – that fairness can be pursued by alternative taxation and welfare measures and that labour legislation would constrain other efficiency goals – has led to a third theoretical justification based on rights, i.e. that labour law in market economies is justified by some more 'forceful' type of rights (Collins, 2011).

Articles 23 and 24 of 'The Universal Declaration of Human Rights' <sup>(18)</sup> include a number of provisions regarding the world of work – the right to work; free choice of employment; favourable conditions of work; protection against unemployment; no discrimination; equal pay for equal work; just and favourable remuneration supplemented if necessary by social protection; the right to form and join trade unions; the right to leisure and reasonable limitation of working hours and periodic holiday with pay – while Articles 5-9, 20 and 22 refer more generally to no slavery, no discrimination, equal protection under the law, freedom of association and the right to social security.

Labour rights, however, are not as fundamental as liberty, security and subsistence; they are not universal (applicable to every human being for the very fact they are human) or timeless but apply primarily to those in employment or employment-like relationships. Equally, the amount of pay or the extent of holidays depends on what each society can afford. The world of labour (forms of work, systems of production) is changing and labour rights should adapt to these

<sup>(18)</sup> These two main articles were then developed into four articles of the UN Covenant of Economic, Social and Cultural Rights.

circumstances. Nevertheless, a theory that is non-universal, time bound, less absolute and less morally compelling but which still forcefully addresses these criticisms may be of interest.

'A theory of justice' by John Rawls (1972) provides a basis for a theory of rights that supports the existence and coverage of labour legislation. Rawls argues that reasonable people under the veil of ignorance (not knowing what one will become or the goals one may have and whether they will be achieved) will accept certain principles (of justice or fairness) which consider the prospects of the worst off in case they become one. Two principles underlie the protection of some individual rights and some broad criteria for welfare distribution and protection of those more vulnerable: the liberty principle and the difference principle <sup>(19)</sup>.

In the field of work, this would mean that under the veil of ignorance individuals do not know whether they will be workers or employers or unemployed but know that one spends a large part of their time at work and that work provides essential income. Therefore, the two general principles of justice have to hold for an individual to agree to participate in the world of work which involves constraints and a hierarchical structure that exercises power and

<sup>(19)</sup> The two principles are 1) that 'Each person has the same infeasible claim to a fully adequate scheme of **equal basic liberties**, which scheme is compatible with the same scheme of liberties for all' (liberty principle); 2) that 'Social and economic inequalities are to satisfy two conditions: a) They are to be attached to offices and positions open to all under conditions of **fair equality of opportunity**; b) They are to be to the greatest **benefit of the least-advantaged members of society** (the difference principle).' Rawlsian citizens are not only free and equal; they are also reasonable and rational: they hold a capacity of a sense of justice and have the capacity to pursue and revise their own view of what is valuable in human life. So Rawls defines so-called primary goods as those that are essential for developing and exercising the two moral powers, and useful for pursuing a wide range of specific conceptions of the good life. Primary goods are of five types: a) The basic rights and liberties; b) Freedom of movement, and free choice among a wide range of occupations; c) The powers of offices and positions of responsibility; d) Income and wealth; and e) The social bases of self-respect: the recognition by social institutions that gives citizens a sense of self-worth and the confidence to carry out their plans.



coordination<sup>(20)</sup>. That can explain why legal rules in the field of employment developed<sup>(21)</sup>.

## 2.5. Differences across Member States

There are wide differences in the rules and procedures regarding labour relations across the EU. These differences reflect different legal and institutional traditions. In countries with civil law traditions a substantial part of contractual labour relations are regulated by law – written legislation, while in common law countries it relies on private contracts and litigation. In the latter countries, courts have more ample judicial discretion than in the former.

Legal systems can be broadly categorised according to their origins. Common-law systems developed in the United Kingdom are also found primarily in former British colonies<sup>(22)</sup>. Broadly speaking, common law relies more heavily on judicial precedent

<sup>(20)</sup> In terms of the primary goods above: a) resembles the principle of freedom of association; b) resembles the principle of right to work; c) resembles the good governance in the workplace; d) resembles the right to fair remuneration; and e) resembles the principle of fair treatment in the workplace. One limitation of this theory is that in its inherently individualistic approach derived from liberal political theory, it does not necessarily defend collective rights.

<sup>(21)</sup> Others, like Robert Nozick (1974), have criticised Rawls in relation to the Second Principle (difference principle). Nozick argues that people who have or produce certain things have rights over them and believes that unjustly taking someone's holdings violates their rights even if for distribution. In this context, he argues that only a 'minimal state' (see also John Locke) devoted to the enforcement of contracts and protecting people against crimes like assault, robbery or fraud can be morally justified. Nozick appears to have reconsidered his views later in life indicating that such a system could eventually lead to the vast majority of resources being pooled in the hands of the extremely skilled, or, through gifts and inheritance, in the hands of the extremely skilled friends and children. Nozick's entitlement theory comprises three main principles: 1) **a principle of justice in acquisition** – this principle deals with the initial acquisition of holdings. It is an account of how people first come to own common property, what types of things can be held, and so forth; 2) **A principle of justice in transfer** – this principle explains how one person can acquire holdings from another, including voluntary exchange and gifts; and 3) **A principle of rectification of injustice** – how to deal with holdings that are unjustly acquired or transferred, whether and how much victims can be compensated, how to deal with long past transgressions or injustices carried out by a government, and so on.

<sup>(22)</sup> Canada has a dual legal system. While in most provinces and territories private law (i.e. matters having to do with property and civil law) is derived from the common law tradition (English legal system), in Québec private law is derived from the civil law tradition (French legal system).

than legislation to set legal standards, and legal proceedings are adversarial. Civil law, with variants from France, Germany and Scandinavia places greater emphasis on statutory laws. Dispute settlement under civil law tends to be inquisitorial rather than adversarial. Legal systems based on the French civil-law system are found in much of Western Europe (e.g. Italy and Spain), Africa and South America. Japan, Korea and many former centrally-planned countries have legal systems based on the German model (Venn 2009). Djankov et al. (2003) identify five types of legal systems in Europe, namely: the common law system (e.g. the United Kingdom); the French system; the Scandinavian system; the German system; and former socialist systems.

Apart from different legal systems, legislation and notably EPL vary in function of the development of social protection systems. Where unemployment insurance and/or benefits were weak, countries decided that the firm had a greater duty to continue to employ a worker and/or provide greater compensation when dismissing him/her. If contributions to unemployment insurance from firms and workers and/or general taxation also paid by firms and workers provided adequate replacement income in the case of job loss, the firms tended to be held less liable to assure income. Thus, typically those countries with well-developed and 'generous' unemployment benefit schemes had lower levels (less costly to the firm) of EPL. The choice of firm-funded or more collectively-funded replacement income following job loss is also linked with whether countries see firms as essentially serving narrow shareholder interests or part of a wider scheme where they need more broadly to serve stakeholder interests which include their workers.

## 2.6. Labour regulation and legislation at EU level

Labour law is one of the areas where there are considerable differences among the EU countries, with higher levels of protection of workers in some Member States than in others. At the same time, businesses from the various EU countries compete freely in the Single Market for goods and services, regardless of these different labour standards. Consequently, as higher labour protection might entail higher costs for businesses, companies in Member States with high levels of worker protection could find themselves

at a competitive disadvantage vis-à-vis businesses from EU countries with lower labour law standards.

In this context, companies and national authorities may be tempted to compete on the basis of a lowering of their labour standards, rather than on factors such as productivity and efficiency, or the quality and innovation of their goods and services. If this occurs, other firms and countries in the Single Market may be prompted to follow suit, triggering a downward spiral in standards that is often referred to as a 'race to the bottom'. If price competition in the Single Market for goods and services provided an incentive to adopt inadequately low labour standards, this would not be compatible with the EU's mission to have a social market economy.

The EU plays a role in preventing such a race to the bottom, by establishing a level playing field in the form of common labour standards applicable to all businesses operating in the Single Market. The extent to which the EU should play this role, harmonising aspects of labour law and thus preventing distortions of competition or providing minimum labour standards, has been debated since the early years of the European Economic Community (EEC). Since the late 1980s, there has also been a widespread view that the Single Market should be accompanied by a platform of minimum EU-wide social rights. In practice, the approach taken has been to adopt EU legislation that sets minimum standards in a number of important areas, while promoting an overall improvement in working conditions and avoiding social dumping across the EU.

The EU has explicit objectives in the field of labour law and working conditions. These objectives, and the means of achieving them, are set out in a specific 'social policy' title of the Treaties (Articles 151 to 161 of the Treaty on the Functioning of the European Union, TFEU). The Treaty thus sets an objective of upward development of living and working conditions, to be achieved in part by measures designed to encourage cooperation between Member States, and in part by adopting minimum requirements for gradual implementation, while taking account of national differences and the need to keep the EU as a whole competitive (Article 151). This objective is underpinned by the workers' rights set out in EU law. Article 153 of the TFEU sets out in detail the fields in which the Union may

act with a view to achieving its social policy objectives:

- improvement of the working environment to protect workers' health and safety;
- working conditions;
- protection of workers when their employment contract is terminated;
- information and consultation of workers;
- representation and collective defence of the interests of workers and employers, including co-determination (this refers basically to workers' participation, beyond information and consultation);
- conditions of employment for third-country (that is, non-EU) nationals legally residing in the EU;
- equality between men and women with regard to labour market opportunities and treatment at work.

Labour law directives are subject to several special conditions set out in Article 153 of the TFEU. **First**, they may **set only minimum requirements for gradual implementation. They do not prevent countries from maintaining or introducing more stringent protective measures for workers, as long as these are compatible with the Treaties.** Indeed, directives typically state that they do not rule out legislative, regulatory or administrative provisions, or collective agreements, that are more favourable to workers, and that a directive's implementation cannot justify a reduction in the general level of protection for workers in the fields that the directive covers.

This means that directives do not impose a uniform labour law across the EU in the areas that they cover. They lay down a

safety net of minimum requirements that EU countries have to comply with, in a way that suits their particular national legal and industrial relations structures and practices. They are in principle free to exceed these basic requirements if they wish. In practice, directives may require no changes at all to national labour law, as countries' existing provisions may be more stringent than the directive's minimum standards. As an example, the 2001 framework directive on employee information and consultation required no, or virtually no, change to existing provisions in around a quarter of EU countries, minor changes in around half of the countries, and major changes in only the remaining quarter.

The **second** distinctive feature of labour law directives is that **national authorities may entrust 'management and labour' – that is, workers, employers and their representatives at various levels – at their joint request, with the implementation of these directives.** In such cases, collective agreements between trade unions and employers would contain the provisions required by the directives. Governments must always be able to guarantee the results required by the directive.

This provision reflects the fact that in some EU countries the social partners play a primary or significant role in regulating workplace matters, with legislation taking a secondary place. In practice, the option of leaving the implementation of directives wholly to collective agreements is not often used in such countries, not least because it is rare for such agreements to cover 100% of the workers and employers to which a directive's requirements apply. However, collective agreements have played the leading role in implementing various information and consultation directives in countries such as Belgium, Denmark and Italy. And in various cases, social partners can jointly define the policy orientations through an agreement, the coverage of

which is then extended by the legislator through legislation.

**Third, all directives on labour and working conditions issues must avoid imposing administrative, financial and legal constraints in a way that would hold back the creation and development of small and medium-sized enterprises (SMEs).** For example, the framework information and consultation directive seeks to avoid placing constraints on SMEs by applying its requirements only to undertakings with at least 50 employees or establishments with at least 20 employees (the choice is left to individual countries).

Articles 154 and 155 of the TFEU refer to industrial relations and social dialogue. Article 154 of the TFEU indicates that before submitting proposals in the social policy field, the Commission shall consult management and labour regarding the possible direction and content of the proposals. Article 155 of the TFEU stipulates that dialogue between management and labour at EU level may, if they so wish, lead to 'contractual relations', including agreements. In all cases, the partners can decide to implement the agreement 'in accordance with the procedures and practices specific to management and labour and the Member States' – in other words, the agreement will be implemented by the signatories' national member organisations, in ways consistent with the industrial relations systems in each Member State.

Where the agreement deals with employment or social matters which fall within the EU's competence, the social partners may ask the Commission to propose a decision (in practice, usually a directive) to be adopted by the Council, giving the agreement legal force across the EU. Table 1 below gives a non-exhaustive overview of EU labour law and instances where social dialogue has been important in defining EU-level legislation<sup>(23)</sup>. See Table 7 in Annex 1 for a more detailed description of the same Directives.

<sup>(23)</sup> In addition to the directives listed in Table 1 and Annex 1, two cross-industry EU social partner agreements on parental leave have been implemented by directives (Directive 2010/18/EU, repealing and replacing Directive 96/34/EC). An agreement by the social partners of the maritime transport sector on the Maritime Labour Convention was implemented by Directive 2009/13/EC. An agreement by the social partners of the hospital and healthcare sector on preventing sharp injuries was implemented by Directive 2010/32/EU.

Table 1: Short overview of EU labour law

Item	Directive Title
<b>Working conditions – Individual rights</b>	
Information on individual employment conditions	Council Directive 91/533/EEC of 14 October 1991 on an employer's obligation to inform employees of the conditions applicable to the contract or employment relationship.
Health and safety in fixed-term and temporary employment	Council Directive 91/383/EEC of 25 June 1991 supplementing the measures to encourage improvements in the safety and health at work of workers with a fixed-duration employment relationship or a temporary employment relationship.
Young people at work	Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.
Posting of workers	Directive 96/71/EC of the European Parliament and of the Council of 16 December 1996 concerning the posting of workers in the framework of the provision of services.
Posting of workers	Directive 2014/67/EU of the European Parliament and of the Council of 15 May 2014 on the enforcement of Directive 96/71/EC concerning the posting of workers in the framework of the provision of services and amending Regulation (EU) No 1024/2012 on administrative cooperation through the Internal Market Information System ('the IMI Regulation') (Text with EEA relevance).
Part time	Council Directive 97/81/EC of 15 December 1997 concerning the Framework Agreement on part-time work concluded by UNICE, CEEP and the ETUC. Council Directive 98/23/EC of 7 April 1998 on the extension of Directive 97/81/EC on the framework agreement on part-time work concluded by UNICE, CEEP and the ETUC to the United Kingdom of Great Britain and Northern Ireland. Note: based on EU social partner agreement.
Fixed-term work	Council Directive 1999/70/EC of 28 June 1999 concerning the framework agreement on fixed-term work concluded by the ETUC, UNICE and CEEP. Note: based on EU social partner agreement.
Working time	Directive 2003/88/EC of the European Parliament and of the Council of 4 November 2003 concerning certain aspects of the organisation of working time.
Temporary agency work	Directive 2008/104/EC of the European Parliament and of the Council of 19 November 2008 on temporary agency work.
Employer Insolvency	Directive 2008/94/EC of the European Parliament and of the Council of 22 October 2008 on the protection of employees in the event of the insolvency of their employer (Text with EEA relevance).
Item	Directive Title
<b>Working conditions – Sectorial</b>	
Maritime transport	Council Directive 1999/63/EC of 21 June 1999 concerning the Agreement on the organisation of working time of seafarers concluded by the European Community Ship owners' Associations (ECSA) and the Federation of Transport Workers' Unions in the European Union (FST). Council Directive 2009/13/EC of 16 February 2009 implementing the Agreement concluded by the European Community Ship owners' Associations (ECSA) and the European Transport Workers' Federation (ETF) on the Maritime Labour Convention, 2006, and amending Directive 1999/63/EC. Note: based on EU social partner agreement.
Civil aviation	Council Directive 2000/79/EC of 27 November 2000 concerning the European Agreement on the Organisation of Working Time of Mobile Workers in Civil Aviation concluded by AEA, ETF, ECA, ERA and IACA (Text with EEA relevance). Note: based on EU social partner agreement.
Rail transport	Council Directive 2005/47/EC of 18 July 2005 on the Agreement between the Community of European Railways (CER) and the European Transport Workers' Federation (ETF) on certain aspects of the working conditions of mobile workers engaged in interoperable cross-border services in the railway sector. Note: based on EU social partner agreement.
<b>Working conditions – Collective rights</b>	
Collective redundancies	Council Directive 98/59/EC of 20 July 1998 on the approximation of the laws of the Member States relating to collective redundancies.
European Company Statute	Council Regulation (EC) No 2157/2001 of 8 October 2001 on the Statute for a European company (SE).
European Company Statute	Council Directive 2001/86/EC of 8 October 2001 supplementing the Statute for a European company with regard to the involvement of employees.
Transfer of undertakings	Council Directive 2001/23/EC of 12 March 2001 on the approximation of the laws of the Member States relating to the safeguarding of employees' rights in the event of transfers of undertakings, businesses or parts of businesses.
Information and Consultation of employees	Directive 2002/14/EC of the European Parliament and of the Council of 11 March 2002 establishing a general framework for informing and consulting employees in the European Community.
European Cooperative Society (SCE)	Council Regulation (EC) No 1435/2003 of 22 July 2003 on the Statute for a European Cooperative Society (SCE).
European Cooperative Society (SCE)	Council Directive 2003/72/EC of 22 July 2003 supplementing the Statute for a European Cooperative Society with regard to the involvement of employees.
Cross-Border Mergers	Directive 2005/56/EC of the European Parliament and of the Council of 26 October 2005 on cross-border mergers of limited liability companies. (Text with EEA relevance)
European Works Council	Directive 2009/38 of the European Parliament and of the Council of 6 May 2009 on the establishment of a European works council or a procedure in a community-scale group of undertakings for the purposes of informing and consulting employees.



### 3. CONTRACTUAL RELATIONSHIPS AND SEGMENTATION

This section analyses the distinction between an employment contract and a commercial contract for the provision of goods and services. It reviews some existing typology of new forms of employment and employment contracts to illustrate the existing variety in terms of flexibility, autonomy and protection and how labour markets have become more complex in that regard. The overview presented will necessarily be a simplified version of reality as the variety of contracts is indeed very large as can be attested when one searches official websites of relevant ministries/departments in Europe. The section discusses the role of socio-economic and structural change (technology, globalisation, population ageing, greening of the economy, equal opportunities) in shaping the contract landscape. It also examines the possible negative implications in terms of job quality and social protection associated with some atypical or non-standard employment and civil contracts. It provides some evidence of existing labour market segmentation.

#### 3.1. What is a contract and what is an employment/labour contract

A contract attributes rights and responsibilities between parties to a bargain. A labour contract is different from a commercial contract. An employment contract (one of the basic dimensions of labour law) is a type of contract which sets the rights and duties of the employer and the employee. It usually includes amongst other things provisions on working hours, compensation, holidays entitlement, sick leave rights, notice period, redundancy notice and a description of the job.

A contract of employment establishes a relationship with an employee: in exchange for a promise to carry out certain tasks, the employer agrees to pay the employee. The employment contract therefore involves the provision of services, under the direction of another person, in exchange of remuneration<sup>(24)</sup>. As put forward by the

<sup>(24)</sup> The contract of employment will contain terms: a) that are regulated by law such as the minimum statutory notice period; b) terms which have been specifically mentioned, either in writing or orally and have been agreed by both employer and employee; c) implied terms i.e. aspects that are not in writing or agreed orally, but are obvious and need no writing such as stealing from employer or other workers and d) incorporated terms, things that have been put into contracts from specific work rules or collective agreements.

European Court of Justice 'The essential feature of an employment relationship is that for a certain period of time a person performs services for and under the direction of another person in return for which he receives remuneration.' (CJEU, Lawrie-Blum, 3/07/1986). This arguably contrasts with a 'contract for the supply of services' (commercial contract) which regulates a firm's relationship with an outside contractor selling services. In a sales contract, the seller agrees to supply a particular good or service from the set of all possible goods and services, and in exchange the buyer agrees to pay a sum of money (Simon, 1951).

In the general literature, this implies a dividing line between a person who is 'employed' and someone who is 'self-employed' (without employer). An employment contract attributes rights (and obligations) to those who work for others, while a commercial contract assumes that **genuinely** self-employed people are responsible for their own affairs, and the work they do for others should not carry with it an obligation to look after these rights. The reality is, however, more complicated due to the increasing use of different forms of labour contracts which deviate from the traditional type but still involve one person doing work for another.

#### 3.2. Types of contracts

In recent decades there has been an increase in new (atypical or non-standard) forms of employment and work contracts that go beyond the traditional / standard employment contract i.e. the full-time regular work on a permanent contract whereby an employee works for an employer on a full-time, regular and permanent basis. Forms of employment and contracts include not only the standard employee contract and the standard / genuine self-employed, but also atypical or non-standard work and contracts that go beyond the part-time, fixed-time or seasonal work to now include on-demand, on-call, casual or intermittent or agency work, project contracts, job-sharing, lending and pool arrangements, and crowdsourcing. The list is vast and depends on the specific Member State. In addition, civil law contracts have been increasingly used in some Member States to regulate the provision of what are in effect work services.

To illustrate the point, French sites<sup>(25)</sup> give the following list of employment

<sup>(25)</sup> See e.g. <http://travail-emploi.gouv.fr/droit-du-travail/contrats-et-carriere/contrats-de-travail/types-de-contrats/>.

contracts: *Le contrat à durée déterminée « Senior » (CDD Senior); le contrat à durée déterminée (CDD); le contrat à durée déterminée à objet défini; le contrat d'accès à l'emploi (CAE-DOM); le contrat d'apprentissage; le contrat d'apprentissage aménagé (personne handicapée); le contrat de professionnalisation; le contrat de travail à durée indéterminée (CDI); le contrat de travail à temps partiel; le contrat de travail intermittent; le contrat de travail temporaire; le contrat unique d'insertion - contrat d'accompagnement dans l'emploi (CUI-CAE); le contrat unique d'insertion (CUI); dispositions générales; le contrat unique d'insertion - contrat initiative emploi (CUI - CIE); le contrat vendanges.* Belgian sites<sup>(26)</sup> give the following types of work contracts: *Le contrat de travail à durée indéterminée; le contrat de travail à durée déterminée; le contrat pour un travail nettement défini; le contrat de remplacement; le contrat d'intérim; une convention de premier emploi; le contrat de travail à temps partiel.* English sites<sup>(27)</sup> refer to: permanent full-time, permanent part-time, fixed-period, apprentice worker, agency workers, casual work, and 'zero-hours contracts'. This denotes the complexity of the world of work and the potential increasing difficulty in regulating / monitoring all forms of employment and contracts.

There are many different dimensions according to which one can classify / group the new forms of employment and new types of contracts (also called atypical or non-standard contracts) which differ from the standard employment relationship. Mandl (2014) on the basis of a study by the European Foundation for the Improvement of Living and Working Conditions classifies various new forms of employment according to three categories:

- employment relationships: these can involve either multiple employers for each employee, one employer and multiple employees or even multiple employer-multiple employee relationships;

<sup>(26)</sup> See e.g. [http://www.belgium.be/fr/emploi/contrats\\_de\\_travail/](http://www.belgium.be/fr/emploi/contrats_de_travail/) and <http://www.emploi.belgique.be/defaultTab.aspx?id=42172>.

<sup>(27)</sup> See e.g. <https://www.gov.uk/employment-contracts-and-conditions/overview> and <http://www.acas.org.uk/index.aspx?articleid=1577> and [http://www.legalcontracts.co.uk/contracts/employment-contract/?loc=GB&p\\_id=googleadwords-employ\\_gb-contractlq\\_c1&gclid=CK-4uY70h8gCFYhAGwodar4JFg](http://www.legalcontracts.co.uk/contracts/employment-contract/?loc=GB&p_id=googleadwords-employ_gb-contractlq_c1&gclid=CK-4uY70h8gCFYhAGwodar4JFg).

- work patterns: provision of work on a discontinuous/intermittent basis or for very limited periods of time or non-conventional fixed terms;
- networking and cooperation: networking and cooperation agreements involving self-employed persons, especially freelancers.

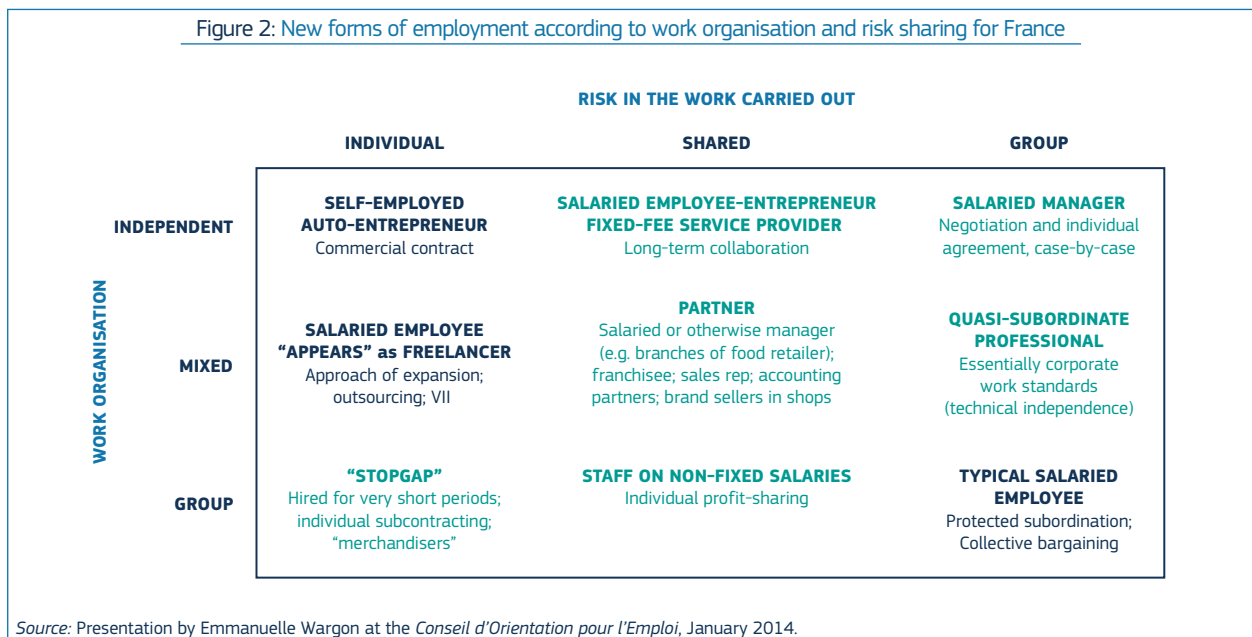
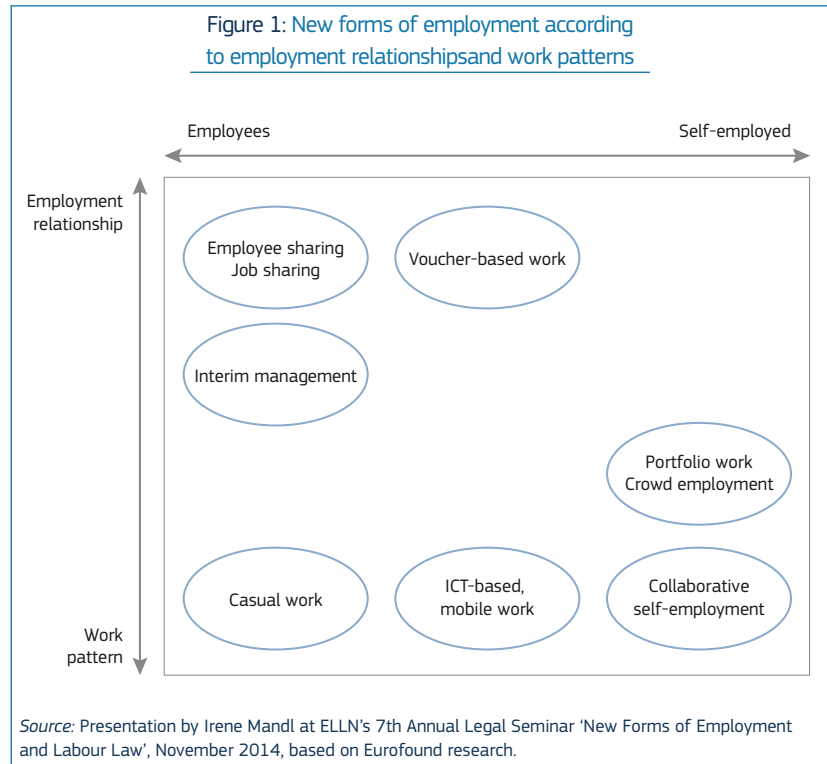
Different employment relationships, work patterns and networks can be found across virtually all sectors and occupations. They also involve non-conventional workplaces (various offices, office sharing, at home / own office,...) and are often supported by ICT tools (smartphones, tablets, computers...). Figure 1 shows some new forms of employment according to these categories.

Different non-standard forms of employment and employment contracts are associated with large differences in the flexibility of hiring and employment conditions as well as work security and access to benefits. New or atypical non-standard forms of employment and contracts provide more flexibility to the world of work, to both employers and workers, and may be welcomed as such. For workers, for example, life choices and work-life balance issues may make non-standard work desirable at certain points, for example in order to allow paid employment to be arranged around domestic work or participation in education. For employers, this can be a way towards a better skill match and to start cooperation while reducing costs.

Alternative forms of employment and contractual arrangements may nevertheless pose a cost to the individual and to society. Some of these new forms of employment and respective contracts may provide more limited or little coverage / access to social protection services (health care services, social assistance, pension rights...) as compared to the standard employment form and contract.

Wargon (2014) classifies contracts according to the type of work organisation and its autonomy and the sharing

of risks (Figure 2). In addition to the previous dimensions, Figure 2 shows the existing complexity of employment forms and contracts in terms of work autonomy and in terms of risk sharing, ranging from the genuine self-employed person who bears the risks individually but has full autonomy over his/her work to the standard employee who is not autonomous in his/her work decisions but whose risks are shared. In the bottom-left corner one can find those who bear the risks individually but whose work decisions do depend on others.



According to Wargon (2014), Mandl (2014 and the results of the Eurofound study) and Deakin (2014), some of these new forms of employment notably those involving labour pool arrangements (like employee sharing, job sharing and interim management) may provide flexibility but also new types of risk sharing for workers and therefore may have a win-win potential for all parts of the employer-employee relationship. Some other forms (like casual work or crowd employment) raise serious concerns as they provide work uncertainty and lower protection of the workers involved (Holtgrewe, Kiron and Ramioul, 2015).

While the standard model of regular and more secure work can increase workers' loyalty and motivation and their innovation and productivity (Acharya, Bhagdi-Whaji and Subramanian, 2014; Kleinknecht, van Schaik and Zhou, 2014), alternative and especially more precarious forms of employment can lead to: underinvestment in training for non-regular workers (Bauernschuster et al., 2008) with costs to the individual and the foregone productivity for the country; increased fiscal costs to the State, as this provides tax credits and subsidies to make up for wage insecurity and insures income replacement of precarious workers (Adams and Deakin, 2014); reduced social mobility, if these precarious jobs become 'traps' as opposed to 'bridges' into more regular and secure work (Cahuc and Kramarz, 2004; Gash, 2008); physical and psychological health costs associated with insecurity and precariousness (Burchell, 2009); and growing inequality associated with all of the above (Standing, 2011).

Contemporary legal developments regarding contracts (see also Deakin (2014) who reviews a number of studies) support the perspective that alternatives to the standard employment form and contract are valid and legitimate in that some workers and employers may prefer the flexibility associated with these non-standard forms of employment and contracts (see more in the next sub-section). Nevertheless, the standard form remains valid and it is often seen as the benchmark relative to which other forms are compared and in fact often the starting point for the definition of labour law rules. Non-standard forms of employment and contracts often offer relative under-protection as compared to the standard form and therefore, more

recently, the discussion has evolved towards providing for / allowing the transition from non-standard to the standard forms of employment.

At EU level recent work has aimed at increasing the regulation of atypical contractual forms, including measures to fight bogus self-employment or through implementing the EU Directives on part-time work, fixed-term work and temporary agency work which aim at ensuring decent working conditions and equal treatment to the increasing number of workers concerned by those contracts. These directives are based on a balanced approach which intends to prevent abuse while acknowledging the contribution of such flexible contracts to businesses' development.

### 3.3. The potential drivers of new forms of employment and respective contracts

This increasing variety of contracts is driven by the search for greater flexibility which is in turn associated with two main determinants. The first determinant is pressure to reduce costs, particularly hiring and firing costs<sup>(28)</sup>. In this respect, the recent crisis may have played a role in increasing the development of more atypical contracts. A second important and more structural determinant refers to the underlying socio-economic change represented by technological innovation, globalisation, greening of the economy, demographic change and population ageing, greater gender equality and other non-discrimination and greater emphasis on individual rights. Such changes will bring new opportunities and challenges to the world of employment through new production processes, new products and markets and new working structures.

Technology, for example, changes the way goods are produced: see the dramatic changes it has brought to all sectors, from primary activities (agriculture, mining), to manufacturing such as textiles and the car industry and now more recently to communication and liberal professions. Technological change can help mitigate physical or psychosocial barriers to labour market participation of women, including in sectors previously

closed to them by law, older workers, those with family responsibilities more generally and disabled workers (see ESDE 2014). It can allow for more flexible working arrangements (in terms of both time and place of work) for workers to perform tasks that best fit their abilities and preferences and for a better work life balance (shorter working days, working from home, flexitime work). However, technology also renders some production processes, tasks and professions obsolete and brings change to the way companies function.

Globalisation also brings along new job opportunities and creates new markets but it also implies adjustments to working times and what is normal and overtime. The greening of the economy while bringing along new job opportunities and new products may pose a gender challenge as women are less present in sectors and professions that involve engineering and technology. Population ageing calls for longer working lives but also the need to develop more flexible working arrangements that fit the abilities and preferences of older people. It also creates demand for a range of new goods and services associated with old-age support. In sum, the ICT 'revolution' combined with globalisation and the greening of the economy – i.e. the 'new economy' – has generated new activities, professions and sectors but has introduced the need for more flexibility in the world of work.

Innovation and changes in markets, as well as economic cycles, require more flexible ways of working and employment contracts to be more flexible than the permanent regular '9 to 5' contract, where tasks are performed in specific settings. Such employment contracts allow for more flexibility in labour markets so that companies can adjust hiring activities to new production processes and workers to explore employment opportunities which better meet their preferences. The economic crisis shows that companies using internal flexibility to adjust working patterns can temporarily help employers reduce costs but retain firm-specific knowledge and help workers to maintain their jobs and income and avoid human capital erosion associated with unemployment.

The important question, of course, is whether this wider range of contracts to allow for more flexibility may have come

<sup>(28)</sup> This is sometimes put forward as an explanation in countries where employment protection legislation for regular permanent contracts was considered restrictive.

at the expense of job quality (Kovacs, 2012). Workers with more atypical contracts may experience not only lower income security, higher in-work poverty and reduced access to social protection (e.g. health insurance, unemployment and redundancy pay, and pension rights) but also fewer career prospects and reduced investment in LLL with negative consequences for their skills, employability and productivity. Equally, high job turnover involves searching and training costs for the employer and may reduce firm productivity and output.

In some countries the dividing line between employment and commercial contracts has become blurred to the extent that commercial and other contracts are effectively regulating labour market relations. Contracts such as zero-hours contracts<sup>(29)</sup> or civil contracts – ‘civil law contracts’<sup>(30)</sup>, have been developed to cover the provision of tasks and services to a company. Development of civil law contracts is notably driven by the circumvention of labour law application. Bogus self-employment has also increased in the EU. These are workers who do not have a contract of employment, and although formally self-employed, they remain economically dependent on a single client or employer.

Criteria used to distinguish between being a worker and being self-employed (or a service provider) are also used to determine who is covered by employment legislation. Different countries have taken more or less sophisticated approaches to this question. The Court of Justice of the European Union has also, in specific cases, provided for an autonomous definition of worker. However, there is no such definition applicable to all EU directives in the field of labour law.

<sup>(29)</sup> Zero-hours contracts are in use in the UK, Ireland and the Netherlands, in various forms. The key concept is that the employer does not guarantee any hours to the worker and that in principle the worker is not obliged to accept the work offered. While this type of contractual arrangement is not permitted in some Member States (e.g. Germany, Austria), they are not so different from flexible, low-hours or on-call contracts, where only a very low amount of hours is guaranteed to the worker and the rest is granted on a short-term basis at the behest of the employer.

<sup>(30)</sup> Civil law contracts are in use in Poland and the Czech Republic. They are governed by the provisions of the Civil Code instead of the Labour Code, but are effectively employment contracts. There are estimated to be 1 million civil contracts in Poland.

In other words, on the one hand, the traditional ‘male-breadwinner model’ based on the full-time, permanent worker paying contributions which provide entitlement to social protection no longer matches all possible work relationships of today and tomorrow in view of the ongoing socio-economic and structural changes. On the other hand, non-standard work may be penalised with insecure employment and spells of (uncovered) unemployment, fewer hours of work and fewer social protection rights. This is a form of labour market segmentation. The next section indeed looks at certain forms of labour market segmentation.

In this context, the envisaged European Pillar of Social Rights initiative is ongoing and will take into account the changing realities of Europe’s societies and the world of work. It will seek a fairer balance between flexibility and security on the labour markets and look to modernise and address the gaps in existing legislation with a view to promoting upwards convergence of employment and social performance.

### 3.4. Contract segmentation: recent developments

Labour market segmentation refers to the existence of sub- and non-competing groups of workers who are different not only in terms of their working conditions but also in terms of their labour market outcomes – different in their rewards (wages, promotion, career opportunities) and the risks they run – and who also face barriers to mobility between the groups (Dolado, 2015). Reich et al. (1973) defined labour market segmentation as the ‘process whereby political-economic forces encourage the division of the labour market into separate sub-markets, distinguished by different labour market characteristics and behavioural rules. [...] Groups seem to operate in different labour markets with different working conditions, different promotional opportunities, different wages and different labour market institutions.’

Segmentation is usually analysed in terms of primary and secondary labour markets: the primary one has better terms and conditions of work, better-paid, higher-security jobs, higher status and career progression, and on-the-job training; the secondary one has

lower-paid, lower-security jobs, no career structure, high turnover, and less on-the-job training. (Doeringer and Piore, 1971; Piore, 1968; Reich et al., 1973; Piore and Berger, 1980; Ryan 1981; Williamson, 1985; Bulow and Summers, 1986; Pinfield, 1995)<sup>(31)</sup>. The literature also shows that women, young people and ethnic minority workers are more commonly found in the secondary market. In other words, there are ‘good and bad jobs’ along a scale of job quality (Piore, 1980)<sup>(32)</sup>.

The separation or duality between different types of contracts with a focus on temporary vs. permanent contracts and self-employment is one of many forms of segmentation that have recently been discussed in the literature. This type of segmentation is partly associated with the growth in various atypical employment contracts (non-permanent, non-full-time contracts) whose conditions differ from those of a permanent full-time job, notably in terms of EPL. The development of atypical contracts is often attributed to the circumvention of existing restrictions on regular permanent contracts either because of a real need for flexibility or for cost-reduction related reasons.

Segmentation of labour markets can indeed be observed. It is reflected in a large use of temporary contracts and involuntary temporary contracts (Chart 1 and Chart 2), short employment spells alternated with unemployment spells, low transitions from temporary to permanent regular contracts (Chart 3 and Chart 4), high shares of involuntary part-time contracts (Chart 5), low levels of on-the-job training, etc. In addition, there has been a recent rise in ‘economically dependent work’ or involuntary self-employment (also called bogus or dependent self-employment) whereby workers do not have a contract of employment but provide goods

<sup>(31)</sup> See e.g. [http://www.sfb580.uni-jena.de/typo3/uploads/tx\\_publicationlist/heft-16.pdf](http://www.sfb580.uni-jena.de/typo3/uploads/tx_publicationlist/heft-16.pdf) for a discussion of different models of labour market segmentation.

<sup>(32)</sup> Segmentation also occurs within the primary market between ‘subordinate’ and ‘independent’ jobs, the latter allowing for more creativity, problem solving and self-initiative. With technological progress and the development of the knowledge society this division may become more significant. Additional gender segmentation can be observed between occupations in both the primary and secondary markets. Other types of segmentation include internal and external labour market segmentation and pre-market and in-market segmentation (Lutz and Sengenberger, 1974).



and services to a main or single client on whom they depend for activity and source of income.

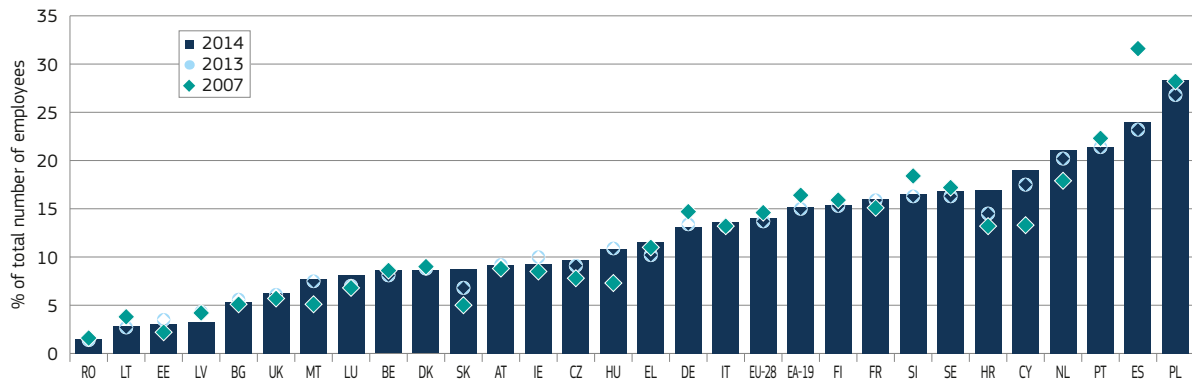
In the EU, the percentage of those who have a temporary contract was 14% in 2014 slightly down from 14.6% in 2007. This share varies substantially across the EU from 1.5% in Romania to

28.3% in Poland (Chart 1). The evolution is not the same for all Member States. In half of the Member States the percentage of those in temporary contracts has decreased since 2007 while for the other half it has increased.

The percentage of those who have an involuntary temporary contract varies

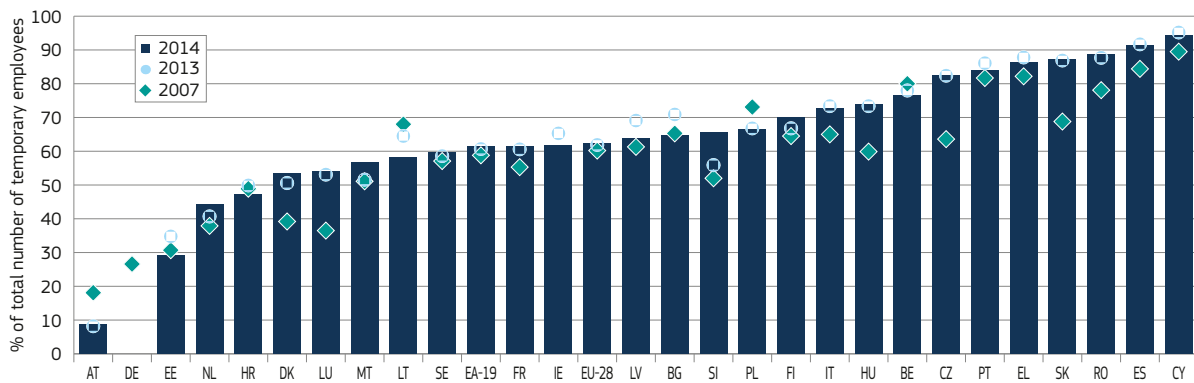
substantially across the EU from 8.8% in Austria to 94.3% in Cyprus (Chart 2). In many Member States the percentage of those in involuntary temporary contracts has increased since 2007 although it has declined in some.

Chart 1: The share of temporary employees in the total number of employees aged 15-64, 2007, 2013 and 2014



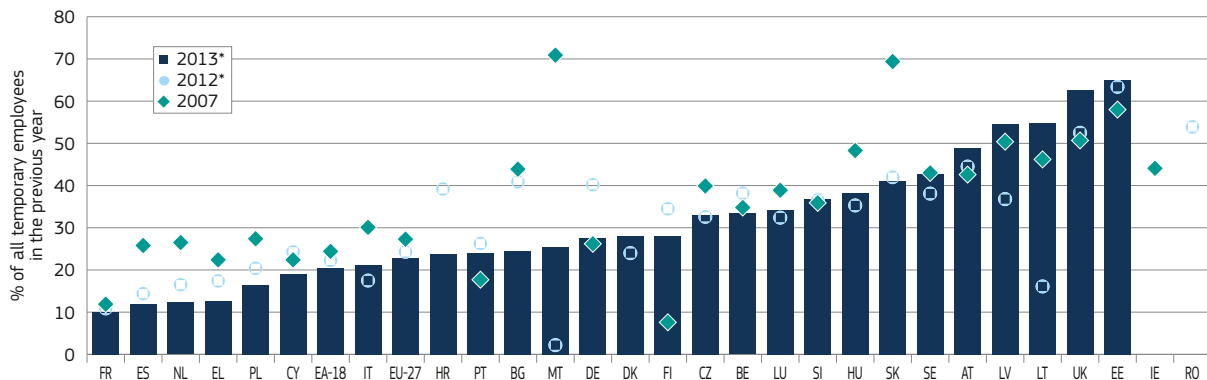
Source: Eurostat, LFS, lfsa\_etpga.

Chart 2: Share of involuntary temporary employment in total temporary employment, 2007, 2013 and 2014



Source: Eurostat, LFS, lfsa\_etgar.

Chart 3: Transitions from temporary employment to permanent employment: share of temporary employees in year t who transit to a permanent job in year t+1, 2007, 2012\* and 2013\*



Source: Eurostat, EU-SILC, ilc\_lvh132.

\*Notes: Data on transitions refers to 2013 for all Member States except for AT, BE, ES and FI for which data on transitions refers to 2014. For these countries, the comparison is made with 2013 while for all others 2012 is used; Data on transitions is not available for IE for 2012 or 2013 or 2014 and for RO for 2013 or 2014.

As important as the share of temporary employment is the opportunity for workers to move from temporary into permanent employment. Is temporary employment a stepping stone to permanent employment or a form of entrenchment? Looking at transitions from temporary to permanent employment, the annual transition rate varies considerably in the EU, from about 10% in France to more than 60% in Estonia (Chart 3). While transition rates overall have declined since 2007, they have increased in some countries.

In terms of whether countries with the highest shares of temporary employment have lower or higher rates of transition into permanent employment, the picture is mixed (Chart 4). Some countries (on the left) have lower shares of temporary employment and higher transition rates; some (on the right) have higher shares of temporary employment and lower transition rates, which indicates that temporary employment is more entrenched. Others have medium to fairly high shares of temporary employment and also higher

transitions, suggesting that in these countries temporary contracts do lead to permanent ones.

Involuntary part-time work indicates the existence of another type of segmentation (Chart 5). The share of part-time work varies substantially across the EU from less than 5% in Bulgaria to 50% in the Netherlands. However, the share of those working part-time on an involuntary basis is the reverse, suggesting that part-time work in the Netherlands or Germany is in large part

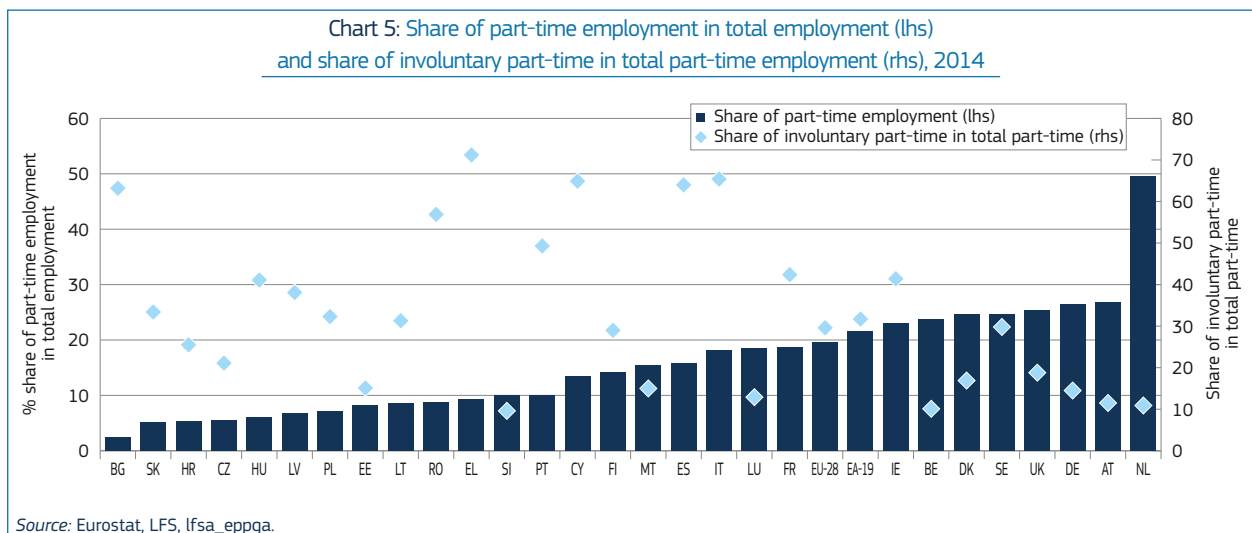
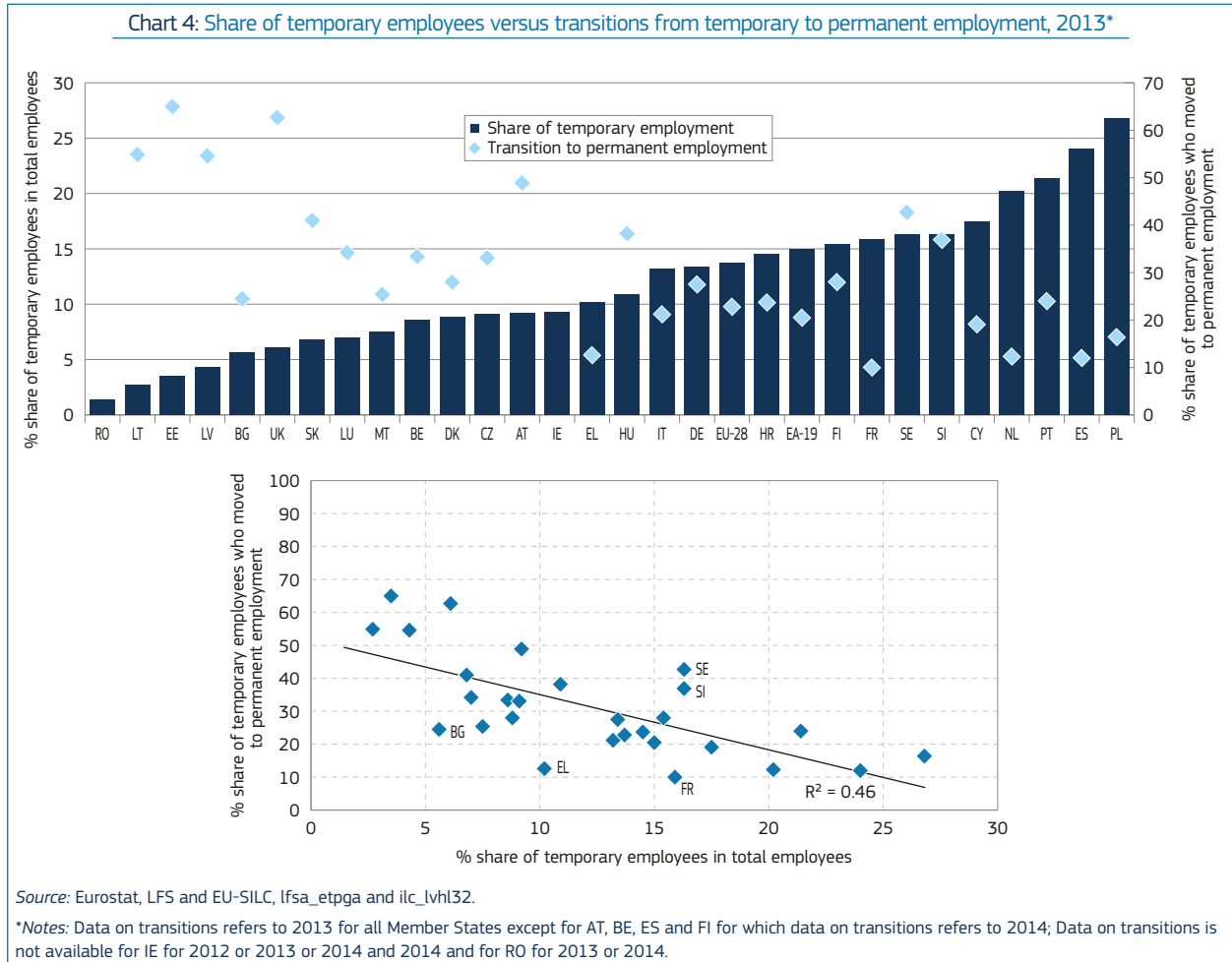
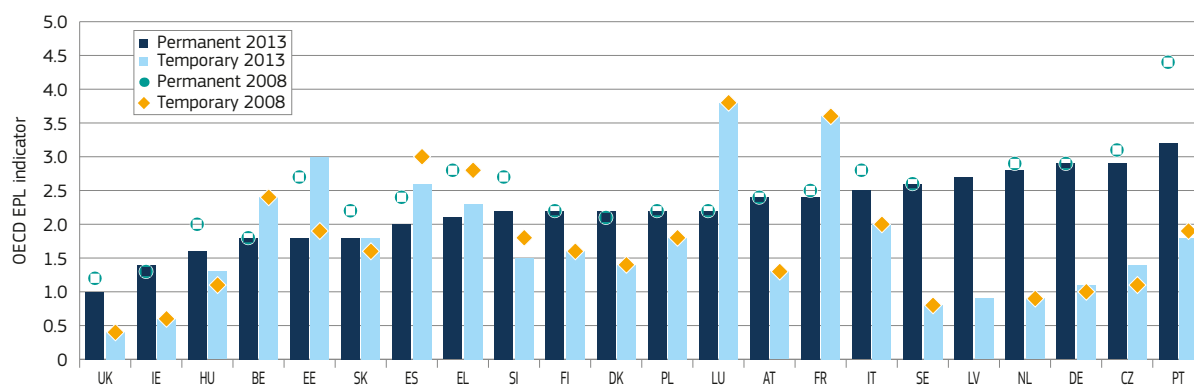




Chart 6: EPL index for permanent and temporary work contracts in 2013 and 2008



Source: OECD Employment Protection Database.

a personal choice while in other countries like Bulgaria, Portugal, Greece or Spain a large share of those working part-time would actually like to work more hours and have a full-time job.

Involuntary part-time has increased for the large majority of countries suggesting that the increase in part-time work is not only the result of individuals' choice for more flexible arrangements that allow for a better reconciliation between work and private life. Involuntary part-time can have implications for income and potentially increasing the risk of poverty or social exclusion.

High shares of self-employment may also indicate a degree of segmentation insofar as self-employment conceals partial abuses designed to mask dependent employment relationships and/or social security systems are not adapted to include the self-employed<sup>(33)</sup>. In 2014, about 16% of all employed people in the EU were self-employed, with the highest shares in Greece (32%) and Romania (30%) and the lowest in Sweden (5%) and Luxembourg (6%). Nevertheless, less than one third of the EU's self-employed engaged other workers to work for them i.e. a vast majority were solo self-employed though the share varies across Member States. The highest share of employers among the self-employed is found in Hungary (49%), followed by Germany (45%), Austria (42%) and Denmark (42%). The Romanian (6%) share is by far the lowest, followed by the United Kingdom (17%), the Czech Republic (20%) and Greece (20%) (see chapter I.1 on self-employment and entrepreneurship).

<sup>(33)</sup> Pedersini and Colletto 2010 <http://www.eurofound.europa.eu/docs/comparative/tn0801018s/tn0801018s.pdf>.

Increased labour market flexibility and segmentation are sometimes attributed to the design of labour legislation and notably EPL. It is argued that the need for flexibility combined with the design of EPL and the way it has been reformed partly explains increased segmentation. Nevertheless, the role played by EPL in shaping labour markets must be considered in the broader context of other labour market institutions (ALMPs, Unemployment Benefits, LLL).

EPL does differ between temporary and regular contracts in much of the EU and, despite recent developments, EPL for temporary contracts is still less strict than EPL for regular permanent contracts in the majority of countries (Chart 6). This may result in people in different contracts having different working conditions, different promotional opportunities, different wages and different labour market institutions. These forms of segmentation may potentially harm workers' working conditions and quality of jobs especially if temporary jobs are not a stepping stone to permanent jobs. Therefore the next section looks in more detail at EPL.

## 4. EMPLOYMENT PROTECTION LEGISLATION (EPL)

This section focuses on a particular aspect of labour legislation – EPL. It presents the commonly used definition and rationale for the existence of EPL and also presents existing measures of EPL. It discusses the main differences across Member States and presents recent developments. The section finishes with a discussion of EPL in relation to other labour market institutions.

### 4.1. Definition and rationale for EPL and challenges identified

EPL can be broadly defined as the subset of legal rules and procedures that define the limits to the ability of firms to hire and fire workers in private employment relationships. EPL features – an articulated set of institutions – are enshrined in the law and in collective and individual labour contracts. Protection against dismissal is recognised in ILO Conventions, the EU Charter of Fundamental Rights and EU labour law directives<sup>(34)</sup>.

EPL sets a series of requirements to be respected by the employer when dismissing workers and defines the lawfulness of the dismissal. These requirements relate to individual dismissals for regular contracts, collective dismissals and fixed-term contracts (see Annex 2 for more detail).

EPL covers a range of aspects relating to individual dismissals from regular contracts such as probationary periods, notice periods and procedural requirements to be followed, reasons for dismissal, the role of judges, consequences of unfair dismissal including sanctions and payments and the design of severance payments i.e. payments to workers for early contract termination. Regarding

<sup>(34)</sup> Informing and consulting employees is a fundamental right recognised by the Charter of Fundamental Rights of the EU (Art. 27). The protection against unjustified dismissal is a fundamental right recognised by the Charter of Fundamental Rights of the EU (Art. 30) and is subject to the ILO Termination of Employment Convention C 158. Art. 151 and 153 of the TFEU provide in particular that the Union shall have as its objectives the promotion of employment, improved working conditions, informing and consulting workers and the protection of workers when their employment contract is terminated.

collective dismissals, EPL covers the definition of collective dismissal, the procedural requirements to be followed in case of collective redundancies, the criteria for selecting employees to be dismissed and the implications of unfair collective dismissals, including severance payments. EPL also includes regulatory constraints on the use of mainly fixed-term work contracts and temporary agency work.

Non-respect of these conditions usually renders the dismissal unlawful or invalid, with implications in terms of obligations for the employer and rights to compensation for the worker. EPL and the consequences associated with unlawful dismissal vary across countries, reflecting different legal and institutional traditions.

Specific EPL features are the outcome of different legal and institutional traditions. Countries with civil and common law traditions provide employment protection in different ways. In the former, employment protection tends to be regulated by law, while in the latter it relies more on contracts and private litigation. In common law countries, courts have more ample judicial discretion as opposed to civil law where procedural codes play a greater role. The role of jurisprudence is relevant in both as it may create a wedge between *de jure* and *de facto* protection through enforcement of the legislation and how courts handle labour disputes in practice.

EPL is designed to address the risks for workers associated with being made redundant. It aims to protect workers from arbitrary action by employers and to protect workers and society from the costs and risks associated with job dismissal (including loss of earnings, financial distress, ill-health but also erosion of skills and work experience, i.e. human capital, that come with job loss) especially in a context of limited protection against unemployment risks. EPL can be conducive to job stability, potentially increasing workers' motivation and firm-specific human capital and productivity.

The economic rationale is that since unemployment risks cannot be fully covered by the insurance market, risk-averse, liquidity-constrained employees may demand employment protection to reduce income volatility and employers may agree to provide such protection in exchange for less conflictual

employment relations and lower wages (the so-called 'bonding argument'). With perfect information and competition, EPL would be voluntary and efficient, and there would be no need for minimum mandatory employment protection. With imperfect information, however, under-provision of employment protection may arise, which provides an economic justification for mandatory minimum EPL (see e.g. Blanchard and Tirole, 2003)<sup>(35)</sup>. EPL may also be needed to address the externalities associated with the rupture of employment relationships<sup>(36)</sup>.

EPL may also reflect wider social values. Dismissals motivated by discrimination (gender, race or sexual orientation) are considered illegal, while protection to employees is generally not provided when dismissals are justified by disciplinary issues.

An ongoing discussion (e.g. OECD, 2013 and OECD, 2014) is whether EPL, in some circumstances or in some combination or form, may restrict the ability of firms to adjust to structural changes such as technological change, or changes in consumer demand for the firm's products, or changes in the economic situation in general. Theory suggests that in some cases higher hiring and firing costs may reduce hiring and firing behaviour by companies and therefore the speed of adjustment of employment (job turnover) in case of shocks. In this case, EPL does not necessarily contribute to reducing unemployment or its duration and age composition. It may also affect the degree and type of innovation firms pursue. By reducing efficiency in the allocation of labour resources and innovation, it can have a negative effect on productivity and growth.

Theory suggests that differences in EPL for different types of contracts may generate a duality in the market by inducing firms to prefer the more flexible type of

<sup>(35)</sup> For example, when employers have incomplete knowledge about workers' ability, job applicants tend to ask for low job protection, to signal they are high-quality workers who do not expect to be easily dismissed (signalling problem). Similarly, firms tend to undersupply EPL, since offering a high degree of job security would attract the less qualified and motivated workers, difficult to fire once hired (adverse selection problem).

<sup>(36)</sup> Workers who are laid off, if not quickly re-employed, may lose skill and motivation, thus becoming less re-employable. Employers, when deciding about lay-offs do not take into account the fact that their decision may have implications in terms of effective labour inputs' availability for the whole economy.

contract. This has potentially negative implications for employment transitions into permanent employment: motivation; human capital; productivity and growth (see e.g. Jansen et al., 2015). Young people as newcomers to the labour market may stay trapped in a sequence of temporary contracts, though well-designed temporary contracts can also be a first step towards permanent contracts. Low-skilled workers may also stay in a sequence of fixed contracts in the face of technological change and global production chains.

Research (see OECD, 2013 for a review) suggests that, in some circumstances or combination (including the interaction with other labour market institutions), EPL may reduce job flows, have a negative impact on employment of outsiders, encourage labour market segmentation and hinder productivity and growth.

## 4.2. Measuring EPL across Member States

Using the OECD indicators of EPL (and the OECD Employment Protection Legislation Index as explained in Box 1)<sup>(37)</sup>, it can be seen that EPL regulations vary widely across the EU even within groups of countries reflecting similar socio-economic characteristics (Table 2; see Annex 2 for a detailed analysis of each of the EPL indicators). The biggest differences across Member States are for individual dismissals from regular contracts, not only in terms of stringency, but also in terms of instruments to protect workers against dismissal. The largest differences are in the definition of fair and unfair dismissal and related remedies.

In some countries, fair dismissal is not defined restrictively, and unfair dismissals are limited to cases which are not reasonably based on economic circumstances or on discrimination (e.g. Belgium, Czech Republic, Denmark, Greece, Hungary, Ireland, Italy, Poland, Slovakia, the United Kingdom). In the Anglo-Saxon countries there is no need to justify an economic dismissal as such. In other countries (e.g. Finland, France, Slovenia) dismissals are not justified if there is no effective and relevant reason, and further specific conditions apply in case of collective redundancy (e.g. Austria, Estonia, the Netherlands).

<sup>(37)</sup> <http://www.oecd.org/employment/emp/oecdindicatorsofemploymentprotection.htm>.

The protection of workers in case of unfair dismissal differs across the EU. In case of unfair dismissal, a worker is usually entitled either to a monetary compensation on top of what is normally required for a fair dismissal or to be reinstated, and employers may also have to pay any foregone wages ('back pay'). In some cases reinstatement is not foreseen (e.g. Belgium, Finland) while in others reinstatement is the rule (e.g. Austria, Estonia, Luxembourg, Czech Republic).

In some countries, firms may have to both reinstate a worker and provide 'back pay' (e.g. Italy, Portugal), if dismissals are based on discrimination. In others, instead of additional compensation only 'back pay' is required (e.g. Czech Republic, Ireland).

Severance payments also differ widely among countries. Severance payment entitlements may be enshrined in law (e.g. France, Hungary, Portugal,

Slovenia) or bargained in collective agreements (e.g. Sweden and Denmark for blue collars). In some countries severance pay does not exist at all (e.g. Belgium, Finland and Sweden). In Austria, employees have access to defined-contribution individual severance accounts. Where severance payments exist, depending on the reason for dismissal (justified or not justified) and other conditions, their amount varies greatly among Member States.

Table 2: Strictness of employment protection, OECD, 2013

	Protection of permanent workers against individual and collective dismissals	Protection of permanent workers against (individual) dismissal	Specific requirements for collective dismissal	Regulation on temporary forms of employment
	EPRC	EPR	EPC	EPT
Austria	2.44	2.12	3.25	2.17
Belgium	2.95	2.08	5.13	2.42
Czech Republic	2.66	2.87	2.13	2.13
Denmark	2.32	2.10	2.88	1.79
Estonia	2.07	1.74	2.88	3.04
Finland	2.17	2.38	1.63	1.88
France	2.82	2.60	3.38	3.75
Germany	2.98	2.72	3.63	1.75
Greece	2.41	2.07	3.25	2.92
Hungary	2.07	1.45	3.63	2.00
Ireland	2.07	1.50	3.50	1.21
Italy	2.79	2.41	3.75	2.71
Luxembourg	2.74	2.28	3.88	3.83
Netherlands	2.94	2.84	3.19	1.17
Poland	2.39	2.20	2.88	2.33
Portugal	2.69	3.01	1.88	2.33
Slovak Republic	2.26	1.81	3.38	2.42
Slovenia	2.67	2.39	3.38	2.50
Spain	2.28	1.95	3.13	3.17
Sweden	2.52	2.52	2.50	1.17
United Kingdom	1.62	1.12	2.88	0.54
United States	1.17	0.49	2.88	0.33
Latvia	2.91	2.57	3.75	1.79
OECD un-weighted average	2.29	2.04	2.91	2.08

Source: OECD Employment Protection Database, 2013 update [www.oecd.org/employment/protection](http://www.oecd.org/employment/protection)

Note: Data refers to 1 Jan 2013 for OECD countries and Latvia, 1 Jan 2012 for other countries. Only version 3 indicators are reported. Data updated to 1 May 2013 for Slovenia and the UK is available at: <http://www.oecd.org/els/emp/EPL-timeseries.xlsx>

Table 3 presents a correlation analysis of the various indicators. Various EPL dimensions tend to be positively correlated, so that the countries with a higher degree of strictness of EPL in one aspect also tend to be restrictive in other aspects. In contrast, a negative correlation is observed between the tightness of the regulation for individual dismissals and that for collective dismissals. This reflects the fact that the EPL indicator for collective dismissals refers to additional requirements on top of those for individual dismissals. Thus, strict legislation on individual dismissals is compensated by looser

regulation for collective ones. There is also generally a positive correlation between various sub-indices of the EPL for regular contracts.

The **World Bank Doing Business** database includes a set of other relevant qualitative and quantitative indicators. These indicators measure the regulation of employment, and more specifically how it relates to the hiring and firing of workers and the rigidity of working hours. As shown in Table 4, the indicators are grouped into 4 main areas and sub-areas (detailed indicators are presented in Annex 3).

The first area measures the **Rigidity of employment** and covers 3 areas: difficulty of hiring, rigidity of hours and difficulty of redundancy, which are subsequently divided into several sub-areas. Another area relates to the **Redundancy cost** and measures the cost of advance notice requirements, severance payments and penalties due when terminating a redundant worker, expressed in weeks of salary. The average value of notice requirements and severance payments applicable to a worker with 1 year of tenure, a worker with 5 years and a worker with 10 years is considered.

### Box 1: The OECD Employment Protection Legislation Index

The OECD synthetic indicators of EPL (and the so-called OECD Employment Protection Legislation Index) measure the procedures and costs involved in dismissing individuals or groups of workers and the procedures involved in hiring workers on fixed-term or temporary work or agency contracts<sup>(1)</sup>. The latest data covers legislation in force as of 2013 in the 22 European countries that are also members of the OECD<sup>(2)</sup>. The OECD regularly compiles such indicators for most OECD countries, codifying 21 elements of legislation, covering all three main aspects of employment protection: protection of permanent workers against individual dismissal; regulation of temporary employment; specific additional requirements for collective dismissals. The methodology has also been refined to take into account more systematically the interpretation of legislation, collective bargaining agreements and case law<sup>(3)</sup>.

OECD EPL indicators have to be interpreted with caution. First, not all changes in legislation on employment protection modify the EPL indicators. This may occur either because a change is insufficient to modify the scoring given to a particular indicator, or because specific aspects of the legislation are not considered in the calculation of the index (e.g. the length and the uncertainty of judicial procedures in the case of unfair dismissal, treatment of the self-employed). Moreover, aspects relating to EPL enforcement are also not fully captured by the indicators. EPL measures may not fully distinguish between temporary and permanent contracts, potentially ignoring the very real difference of no redundancy pay at the end of the temporary ones<sup>(4)</sup>.

(1) <http://www.oecd.org/employment/emp/oecdindicatorsofemploymentprotection.htm>.

(2) 1 May 2013 for Slovenia and the United Kingdom. The EPL database does not include Bulgaria, Croatia, Lithuania, Malta, Cyprus and Romania and they are not OECD Members.

(3) OECD, Employment Outlook 2013, Chapter 2.

(4) A third common critique relates to the inevitable degree of subjectivity affecting the codification of national legal features into a composite index (Venn 2009). Since codification may at times provide misleading interpretation of national rules and procedures, or ignore relevant non-legislative data, the OECD index should be handled with care or possibly integrated with an up-to-date and more comprehensive EU-28 database.

Table 3: Correlation between OECD EPL components

Correlation among OECD EPL sub-indices 2000-2013					
	Regular contracts		Temporary contracts		Additional requirements for collective dismissal
Regular contracts	1				
Temporary contracts	0.28		1		
Additional requirements for collective dismissal	-0.25		0.31		1

Correlation between sub-indices for EPL on regular contracts : 2000-2008					
	Notice and Severance payments	Definition of justified/unfair dismissal	Length of trial period	Compensation following unfair dismissal	Possibility of reinstatement following unfair dismissal
Notice and Severance payments	1				
Definition of justified/unfair dismissal	0.23	1			
Length of trial period	0.34	0.31	1		
Compensation following unfair dismissal	0.04	0.67	-0.08	1	
Possibility of reinstatement following unfair dismissal	0.24	0.05	0.32	-0.10	1

Correlation between sub-indices for EPL on regular contracts : 2009-2013					
	Notice and Severance payments	Definition of justified/unfair dismissal	Length of trial period	Compensation following unfair dismissal	Possibility of reinstatement following unfair dismissal
Notice and Severance payments	1				
Definition of justified/unfair dismissal	-0.019	1			
Length of trial period	0.12	0.22	1		
Compensation following unfair dismissal	-0.05	0.60	-0.09	1	
Possibility of reinstatement following unfair dismissal	0.12	-0.12	0.26	-0.02	1
Maximum time to claim unfair dismissal	-0.04	0.11	0	0.04	-0.49

Source: own calculations based on OECD data.

The World Bank Doing Business database also collects information on **Social protection schemes and benefits**, a third area of labour market regulation indicators, and more specifically data on the existence of unemployment protection schemes as well as data on whether employers are legally required to provide health insurance for employees with a permanent contract.

A fourth and final area pertains to **employment law cases** and assesses the mechanisms available to resolve them. More specifically, it collects data on what courts would be competent to hear such cases and whether they are specialised in resolving them. This will be analysed in a dedicated section further on.

In addition to the World Bank and using some of their indicators are three other international databases developed for measuring labour market regulation, competitiveness and efficiency. These are: the Labour Market Efficiency Index

developed by the World Economic Forum (WEF LME); the Government Efficiency Index and its labour regulation components developed by the International Institute for Management Development (IMD); and the Fraser Institute Labor Market Regulations Index (Fraser LMR) (see Aleksynska and Cazes, 2014).

### 4.3. Recent developments in EPL

Chart 7 provides an overview of the evolution of EPL stringency in EU countries while Chart 14 in Annex 2 shows the dimensions of EPL for regular contracts across EU countries for 2008 and 2013. Two periods can be clearly identified in Chart 7. Before the 2008 crisis, the regulation of fixed-term contracts was loosened in a number of countries, most notably those with relatively rigid EPL for open-ended contracts, including Greece, Italy and Portugal, as well as Germany, the Netherlands and Slovakia. Conversely, EPL for fixed-term

contracts became more stringent in some EU-12 Member States (Czech Republic, Hungary, Poland), albeit generally starting from a situation of high flexibility. In contrast, no major changes are observable in the tightness of EPL for open-ended contracts and collective dismissals (Chart 7 and Chart 14 in Annex 2).

After 2008, several countries carried out comprehensive and unprecedented reforms of their EPL for open-ended contracts and collective dismissals (Annex 2). To a large extent they provided for less stringent protection against dismissal for permanent workers by restricting reinstatement in the case of unfair dismissal, capping back-pay, reducing levels of severance pay and lengthening probationary periods. In some countries collective dismissal procedures were simplified and their cost reduced. Regulation of temporary contracts was adapted to discourage their excessive use, including through higher non-wage costs<sup>(39)</sup>.

Table 4: World Bank Doing Business indicators: labour market regulation indicators

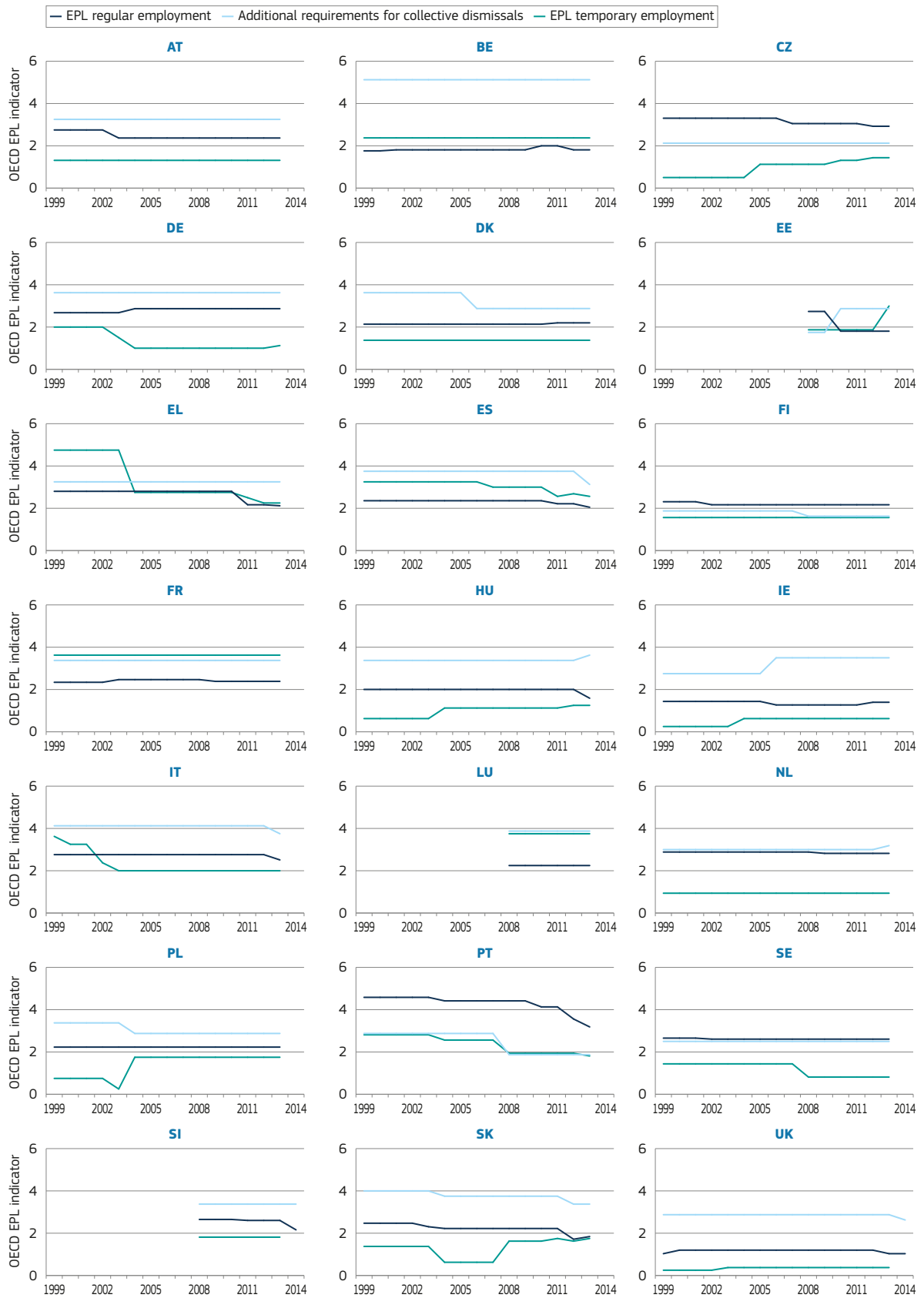
<b>Rigidity of employment</b>
<i>Difficulty of hiring</i>
Whether fixed-term contracts are prohibited for permanent tasks
Maximum duration of fixed-term contracts, including renewals
Minimum wage applicable to the worker assumed in the case study (USD/month)
Ratio of minimum wage to value added per worker
<i>Rigidity of hours</i>
Whether 50-hour workweeks are permitted for 2 months in a year due to an increase in workload
Allowed maximum length of the workweek in days and hours, including overtime
Premium for night work (% of hourly pay)
Premium for work on a weekly rest day (% of hourly pay)
Whether there are restrictions on night work and weekly holiday work
Paid annual vacation days for workers with 1 year of tenure, 5 years of tenure and 10 years of tenure
<i>Difficulty of redundancy</i>
Length of the maximum probationary period (in months) for permanent employees
Whether redundancy is allowed as grounds for termination
Whether third-party notification is required for termination of a redundant worker or group of workers
Whether third-party approval is required for termination of a redundant worker or a group of workers
Whether employer is obligated to reassign or retrain and to follow priority rules for redundancy and reemployment
<b>Redundancy cost (weeks of salary)</b>
Notice requirements, severance payments and penalties due to terminating a redundant worker, expressed in weeks of salary
<b>Social protection schemes and benefits</b>
Whether an unemployment protection scheme exists
Whether the law requires employers to provide health insurance for permanent employees
<b>Labour disputes</b>
Availability of courts or court sections specialising in labour disputes

Source: World Bank Doing Business database at <http://www.doingbusiness.org/methodology/labor-market-regulation>.

<sup>(39)</sup> For a first *ex ante* analysis of the potential effects of such reforms, see 'Labour Market Developments in Europe 2012', European Economy 5/2012, European Commission, 2012. In addition, Table 2 in the Statistical Annex provides an overview of EPL reforms adopted between 2008 and 2013, based on the European Commission LABREF database.



Chart 7: Evolution of OECD EPL indicators in EU countries



Source: OECD Employment Protection Database.

Reforms of EPL were intense in 2012 and 2013, especially in countries with both large accumulated macro-economic imbalances and stringent legislation before the crisis, including Croatia, Spain, Portugal, France, Italy and Slovenia. Belgium passed the single status law, essentially harmonising notice periods between blue and white collar workers and redefining unfair dismissals. Dismissal costs and the burden of collective dismissals were reduced in the United Kingdom.

In 2014 and 2015, while some Member States focused on the implementation of past reforms, new measures were adopted in Croatia, Italy and the Netherlands. With the adoption of the new Labour Act in August 2014, Croatia completed the labour law reform already started in 2013 by facilitating the use of some non-standard work contracts and simplifying dismissal procedures. In December 2014, Italy adopted the Jobs Act, a comprehensive labour market reform revising dismissal rules for open-ended contracts, simplifying and reducing non-standard contractual forms and increasing internal flexibility within firms, among other things. In April 2015, Lithuania presented a draft labour law reviewing dismissal protection rules. In August 2014, the Netherlands introduced a cap on severance payments or damages for unfair dismissal and increased protection for temporary workers.

While a number of countries have reinforced regulations on fixed-term contracts, and more specifically on the use of temporary agency work (e.g. Slovenia, France, Denmark, Slovakia, Italy), others have facilitated access to fixed-term contracts (e.g. Spain, Czech Republic) and temporary agency work (e.g. Greece, Lithuania, Spain) or increased their duration or renewal possibilities (e.g. Croatia, Portugal, Italy) with a view to fostering job creation.

The result of the reforms carried out in the post-crisis period (up to 2013) is that EPL of open-ended contracts either remained constant or markedly decreased in the majority of EU countries. The reduction in the EPL indicator appears to be particularly strong for Portugal but reductions are also visible for Estonia, Greece, Spain, Hungary, Italy, Slovakia, Slovenia and the United Kingdom.

The radar charts in Annex 2 provide information about procedural inconvenience

employers encounter if they intend to dismiss a worker (notification and notice period), trial period, notice and severance payments (for tenures up to 4 years and 20 years), definition of unfair dismissals and their consequences (monetary compensation and reinstatement). The main points can be summarised as follows:

- Major reforms reducing protection for individual dismissals were implemented in Spain, Estonia, Greece, Hungary and Italy after 2008. Individual dismissals are now less expensive in Southern countries due to longer probationary periods, more certain dismissal procedures, shorter notice and lower severance payments.
- In some of these countries, individual dismissals remain stricter than the EU average due to a stricter Difficulty of Dismissal (Estonia, Spain, Italy).
- On several non-monetary dimensions (consequences of unfair dismissals and difficulty of dismissals), regulation of individual dismissals tends to be stricter in Austria, Germany, Czech Republic, Finland and France. Ireland and the United Kingdom have in all respects the most flexible regulation of individual dismissals.

These developments suggest a different regulatory tendency from that observed in the previous decade. Between 2000 and 2008 EPL for individual regular contracts and collective dismissals was broadly stable in most EU Member States and the regulation of fixed-term contracts was relaxed in a number of countries. In contrast, since 2008 reform efforts have largely concentrated on reducing the stringency of job protection legislation for permanent contracts and/or increasing the protection of temporary workers. If reforms prior to 2008 had indeed contributed to the increase of labour market dualism between highly protected permanent workers and lowly protected temporary workers, the recent trend towards reducing the gap may lead to a reduction in segmentation especially in Southern European labour markets.

Before 2008 the regulation of individual dismissals was generally consistent, whereby the strictness of the regulation was reflected in all aspects of the legislation (Table 3). However, since 2008 this correlation has become weaker. The

EPL reforms enacted since 2008 have focussed on country-specific features of the legislation that appeared particularly onerous. In Italy, where severance payments for fair dismissal do not exist, the 2012 and 2014 reforms loosened the procedural requirements for individual dismissal and reduced their uncertainty; in contrast, in Spain and Portugal firing costs were relatively high and the reforms reduced the notice period and the severance payments (Dolado, 2015)<sup>(39)</sup>.

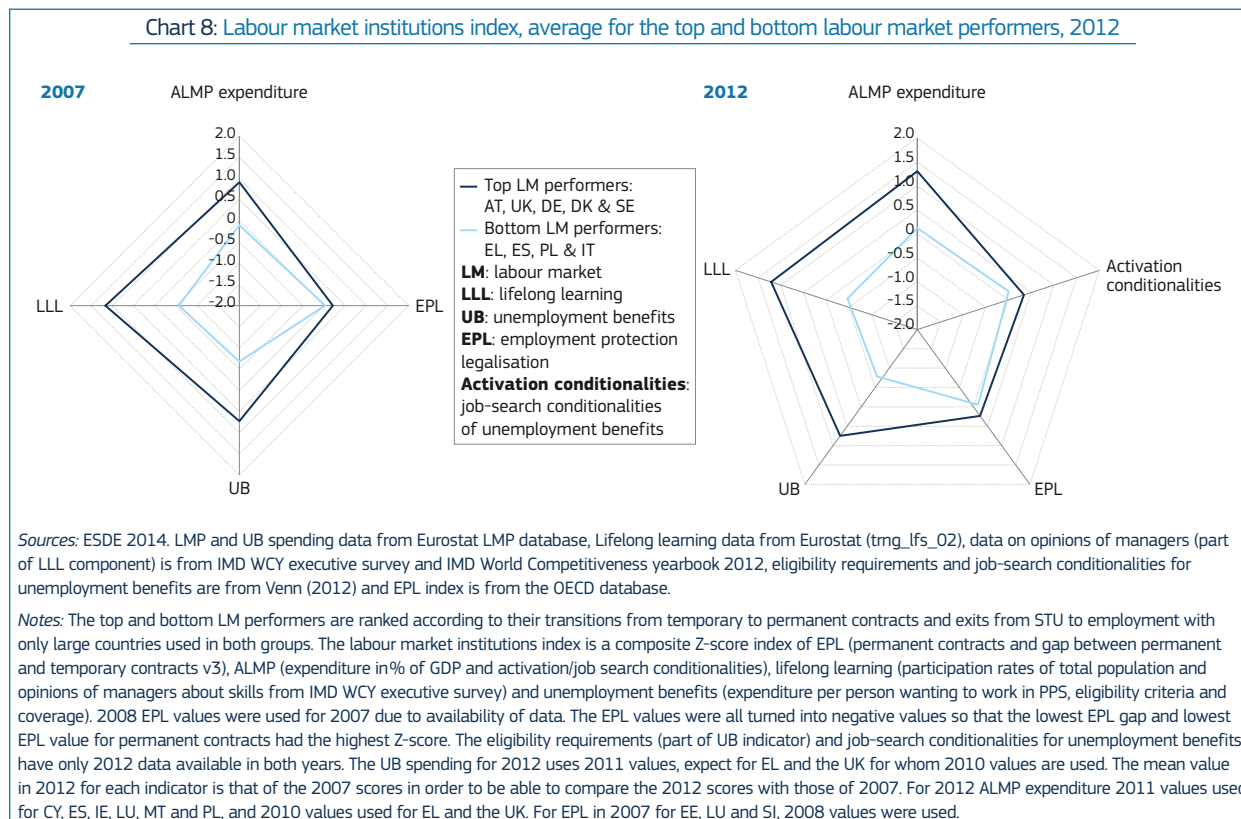
#### 4.4. EPL in a broader context: other labour market institutions

Note that employment protection refers to only one dimension of the complex set of factors that influence labour market flexibility and EPL is itself only a part of labour legislation. As highlighted in other reports (ESDE 2014) the impact of EPL and EPL reforms have to be seen in conjunction with other elements of labour legislation and labour institutions as well as the effective application of labour legislation. In addition, labour market reforms (including EPL) can complement other reforms such as on product markets and together can play a substantial role in supporting job creation.

Common labour market institutions include Active Labour Market Policies (ALMPs) such as employment subsidies, Unemployment Benefits (UB), Lifelong Learning (LLL) and Employment Protection Legislation (EPL). Chart 8 presents all those institutions together and matches them with labour market outcomes. The analysis suggests that many instruments are not only interrelated but sometimes more effective when combined with other policy instruments (e.g. think of combining UB and ALMPs). Indeed countries with the combined highest investment in activation, training and effective unemployment benefits were those that fared better in the crisis. Flexicurity is an important tool for achieving such performance, by building on four key components to be improved and combined, in order to achieve better labour market outcomes: a) employment legislation, b) ALMPs, c) LLL and d) social protection.

<sup>(39)</sup> The distinction between monetary and non-monetary aspects of the EPL is important for the effects of EPL on hiring decisions. See discussion on tax and non-tax components of EPL.

Chart 8: Labour market institutions index, average for the top and bottom labour market performers, 2012



## 5. THE ROLE OF CIVIL JUSTICE AND OTHER LITIGATION

This section looks at the effectiveness and efficiency of civil justice in ensuring the enforcement of labour law and *de facto* EPL. It looks at length of trials as an indicator of the efficiency of civil and commercial justice. It then tries to establish some correlations between EPL indicators and indicators of efficiency of civil justice. Using regression analysis it looks at the role EPL plays in job finding and separation (dismissal) controlling for the efficiency of civil justice.

The role of civil and administrative courts, labour courts and other judicial entities in settling civil and commercial disputes and employment law disputes in particular is an important aspect of the enforcement of legislation. Judicial effectiveness and efficiency can have an important role in ensuring the *de facto* flexibility and protection provided by labour law and contractual arrangements. They can contribute to job creation.

Specific EPL features are the outcome of different legal and institutional traditions. Countries with civil and common law traditions provide employment protection in different ways. In the former,

EPL tends to be regulated by law, while in the latter it relies more on contracts and private litigations. In common law countries, courts have ample judicial discretion as opposed to civil law where procedural codes play a greater role. The role of jurisprudence is relevant in both as it may create a wedge between *de jure* and *de facto* protection through enforcement of the legislation and how in practice tribunals handle labour disputes. Moreover, EPL is an articulated set of institutions enshrined not only in law but also in collective and individual labour contracts.

### 5.1. The efficiency of civil justice and the enforcement of EPL

The efficiency of civil courts is highly heterogeneous across Europe. As the 2015 EU Justice Scoreboard<sup>(40)</sup> and its accompanying CEPEJ study<sup>(41)</sup> show, the disposition time<sup>(42)</sup> of a litigious civil or

commercial lawsuit in first instance varied between 53 days in Luxembourg and 750 days in Malta in 2013 (Chart 9).

Similarly, the World Bank ‘time for enforcing contracts’ indicator swung between 300 days in Lithuania and 1 580 days in Greece in 2014<sup>(43)</sup> (Doing Business dataset; see Annex 4 for more detailed information on these indicators). Lorenzani and Lucidi (2014) present an analysis of the determinants of different trial lengths in Europe, including legal origin and structural characteristics of the legal systems.

Such heterogeneity has an impact on the resolution of employment law cases. In countries where EPL is strict and resolving such a case is lengthy, employers will *de facto* face higher uncertainty and costs than those foreseen in legislation.

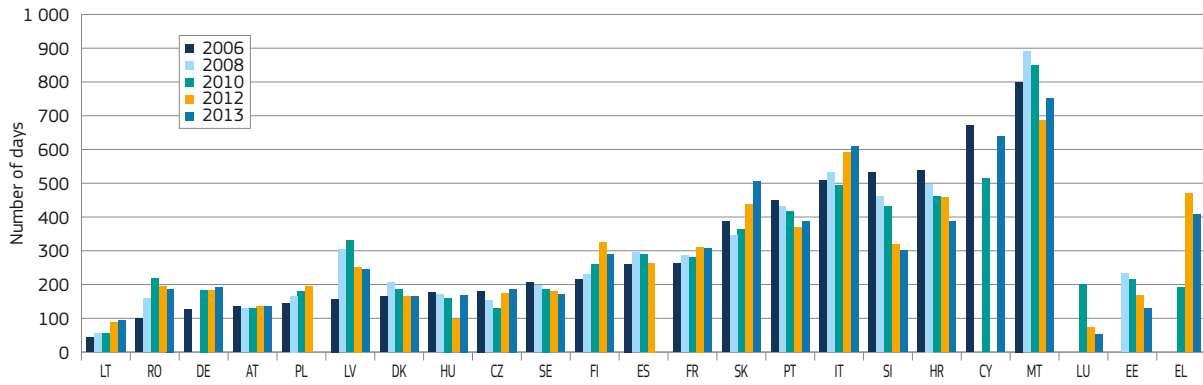
<sup>(40)</sup> COM(2015) 116 final.

<sup>(41)</sup> 2015 Study on the functioning of judicial systems in the EU Member States, carried out by the CEPEJ Secretariat for the Commission. Available at [http://ec.europa.eu/justice/effective-justice/index\\_en.htm](http://ec.europa.eu/justice/effective-justice/index_en.htm).

<sup>(42)</sup> The disposition time is an estimated indicator of average trial length in days. It is measured as the ratio between the number of pending cases at the end of a period and the number of resolved cases during the period, multiplied by 365. It is a proxy measure of the overall length of the proceedings.

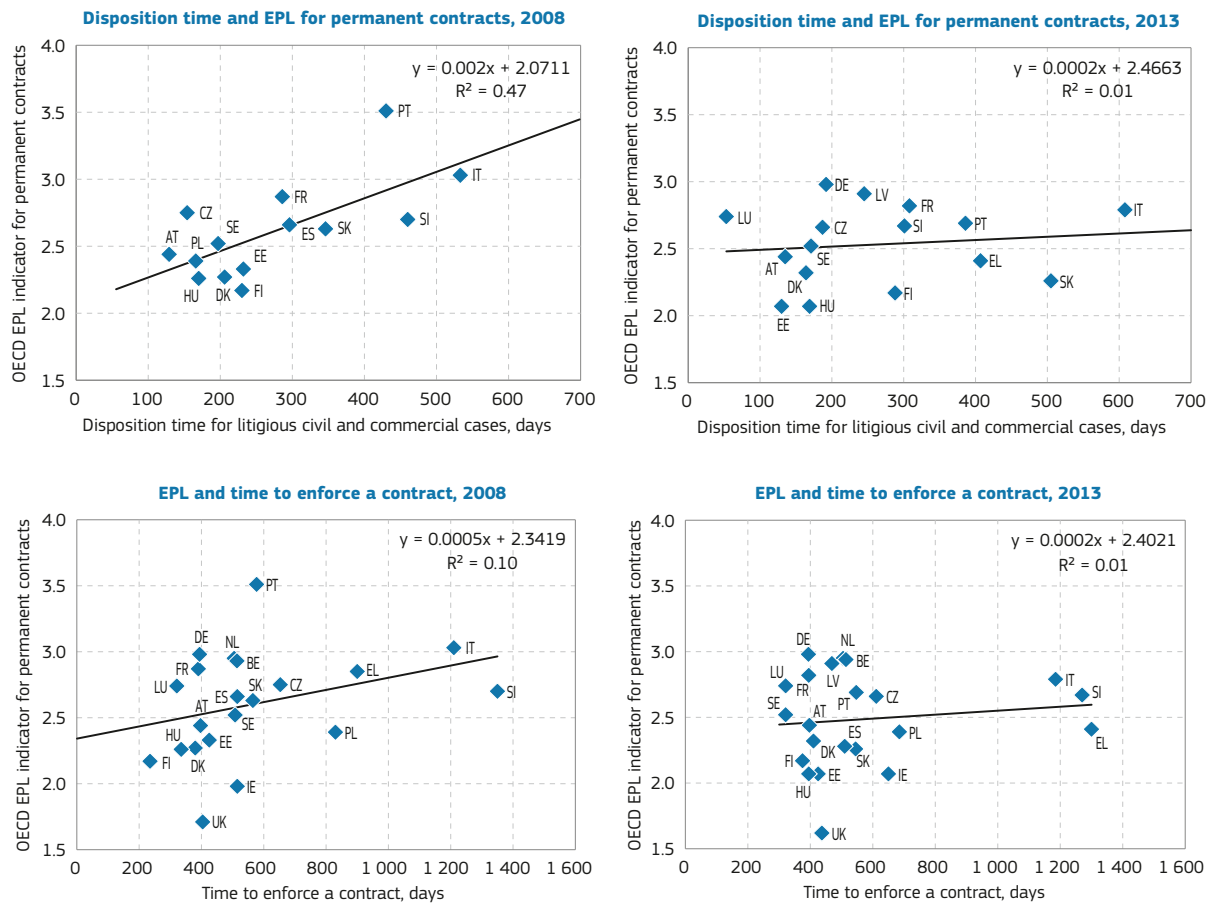
<sup>(43)</sup> While the disposition time is computed through actual data provided by Ministers of Justice, the World Bank indicator is based on a survey among professionals, who are asked to assess the time required for the resolution of a standard commercial case (in the capital city of each country – data is only available for multiple cities for a few countries). Accordingly, it only provides an approximation of the actual average disposition time (although the two indicators are significantly correlated). However, it has the advantage of a yearly update and enhanced coverage (all EU Member States are included). This indicator is computed through a different methodology which takes into account further instances beyond the first one, which explains the longer estimated trial length on average.

Chart 9: Disposition time for civil and commercial litigation



Source: CEPEJ and EU Justice Scoreboard.

Chart 10: EPL and civil justice efficiency indicators, 2008 and 2013



Sources: CEPEJ, World Bank and OECD.

Note: The EPL indicator measures protection against both individual and collective dismissals (OECD EPRC index, see Table 2).

This is especially the case for courts' decisions on unfair dismissal, namely in countries where the reinstatement of dismissed workers is possible (e.g. Boeri et al., 2013).

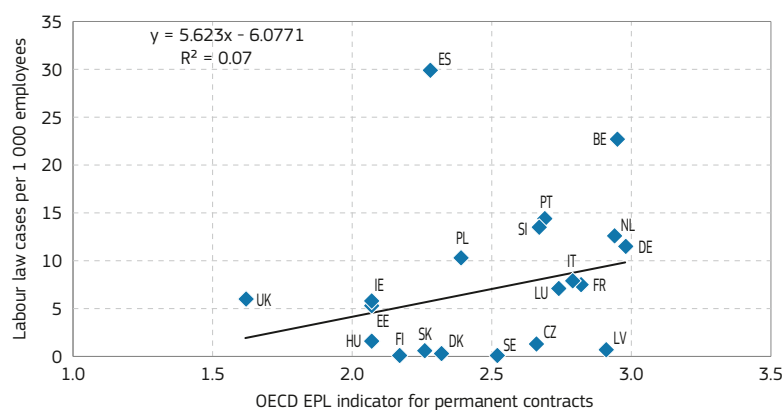
Exploring the correlation between EPL and civil justice efficiency indicators can provide interesting insights into the occurrence of these patterns. As comparable

cross-country information about the time needed to resolve employment cases is not available, the chapter uses the above-mentioned Commission/CEPEJ and World Bank indicators (referring to both civil and commercial lawsuits) as proxies. It is assumed that the duration of employment law cases is distributed similarly to the average duration of civil and commercial cases (of which they constitute a subset) in

a given country<sup>(44)</sup>. The stringency of EPL is measured with the OECD EPL indicator for permanent contracts, including additional

<sup>(44)</sup> Note that this chapter uses only information on time costs. Statistical information about the monetary cost of litigation is rather limited. The World Bank collects information on average court and attorney fees but for a standard commercial case, not employment law cases, and fees might be very different in the context of labour law. Therefore, the trial length or time cost is considered a better proxy for judicial efficiency in a given country.

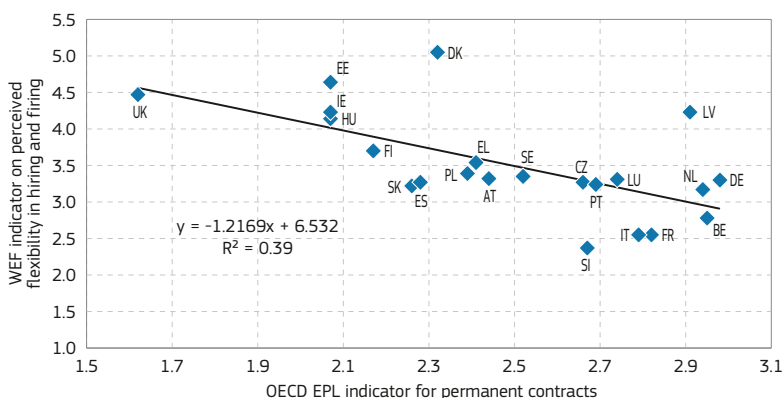
Chart 11: EPL and employment litigation, 2013



Sources: European Labour Law Network (ELLN) and OECD.

Note: No data available for AT, BG, CY, EL, HR, MT; DK: 2014; FR: 2012; HU: 2010; CZ, FI, LT, NL, SK: resolved cases. The EPL indicator measures protection against both individual and collective dismissals (OECD EPRC index, see Table 2).

Chart 12: EPL and WEF hiring and firing practices indicator, 2013



Sources: World Economic Forum and OECD.

Note: The EPL indicator measures protection against both individual and collective dismissals (OECD EPRC index, see Table 2).

requirements for collective dismissals (temporary contracts being less susceptible, by nature, to litigation).

A positive and statistically significant correlation between EPL stringency and trial length (measured using both available indicators) emerged in 2008 (Chart 10). This suggests that, at the beginning of the crisis, higher stringency of EPL went hand in hand with a longer time to resolve disputes, causing extra costs stemming from the judicial system in countries with already strict dismissal regulation.

By 2013 the relation between EPL and trial length becomes much weaker. Labour market reforms reducing the stringency of EPL for permanent workers have been implemented in several countries with a trial length above the average. By contrast, trial length has generally increased during the crisis,

including in some countries with low EPL such as Finland and Ireland.

Several countries with efficient civil justice systems present an EPL index above the average, most notably Germany. Whether this combination of high EPL and efficient resolution of disputes can lead to favourable labour market outcomes is a relevant question, as it would suggest that lengthy and uncertain judicial procedure creates a wedge between *de jure* and *de facto* EPL. An econometric preliminary analysis will be done in the next section.

Structural factors such as legal origin might jointly influence both EPL and the efficiency of resolving disputes. According to some literature on the economic outcomes of different legal systems (e.g. La Porta et al., 2008), common law regimes are more business-friendly and less prone to rent-seeking behaviour

than civil law regimes, based on detailed civil codes. As such, they would result in quicker enforcement of contracts and less burdensome legal procedures.

Similar reasoning applies to EPL. According to Venn (2009) who looks at OECD countries, the EPL index is lower on average in common law countries than in civil law ones, with countries based on German or Scandinavian systems in between. However, this is likely to become less relevant over time as there is an ongoing convergence process. Since the 1990s civil law countries have reduced the strictness of EPL, while common law countries have remained generally stable (if not slightly increasing).

## 5.2. EPL and employment litigation

There is a positive relationship between the stringency of EPL and the number of incoming labour cases as a proportion of total employees (Chart 11, based on employment cases data from the European Labour Law Network of experts<sup>(45)</sup>). On average, countries with a more rigid and complex set of labour rules are characterised by a higher propensity to bring employment cases to court (similar results are presented in Venn, 2009). However, there are a non-negligible number of countries where, in spite of strict EPL, bringing employment cases to court is quite rare. This is typically the case of Member States where alternative dispute resolution mechanisms (e.g. mediation) effectively reduce litigation, and/or where employment law cases are resolved within the framework of collective agreements (typically in Scandinavian countries).

## 5.3. Civil justice efficiency and perceived EPL

The efficiency in resolving employment law cases might influence the perception stakeholders have about the stringency of labour legislation in a given country. That is, countries with a relatively low stringency of EPL but with inefficient resolution of such cases might be perceived as characterised by more rigid labour

<sup>(45)</sup> The European Labour Law Network (ELLN), composed of 31 labour law experts, is the European Commission's official advisory board on issues relating to individual and collective employment and labour law. Experts were requested to provide recent statistical data on labour litigation at national level. As an outcome of the request, figures on incoming labour cases (or, alternatively, for resolved cases) are available for all Member States but 6 (AT, BG, CY, EL, HR, MT).



markets than countries with relatively high EPL but more efficient resolution of cases.

The World Economic Forum provides an indicator of perceived EPL. This indicator, based on a survey of business leaders in the framework of the Global Competitiveness Report, ranks employers' perception about flexibility in hiring and firing practices on a scale between 1 (more rigid) and 7 (less rigid). This indicator negatively correlates with the OECD EPL index for permanent contracts (including additional requirements for collective dismissals) in 2013 (Chart 12). Nonetheless, there are some cases where employers' perception differs from what could be expected by looking at the actual stringency of labour market regulation, as measured by the OECD. Efficiency in resolving employment law cases may be one reason for this discrepancy.

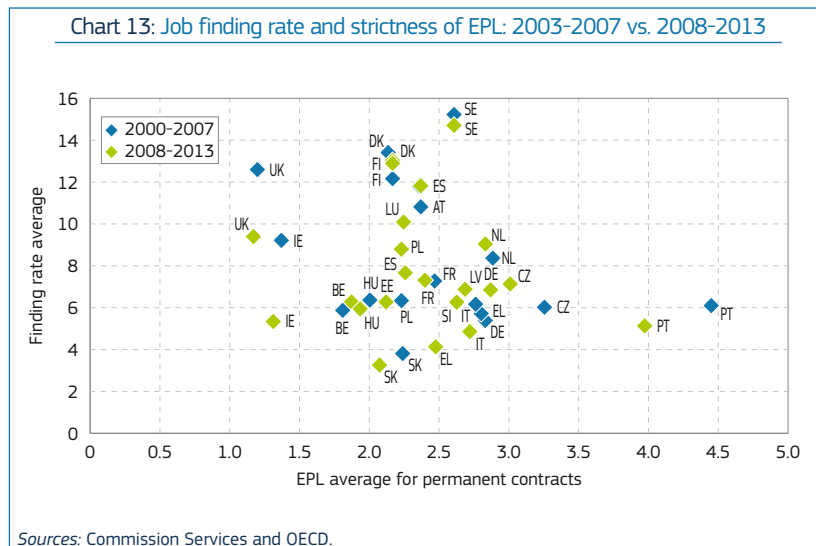
In order to test this hypothesis, a simple regression is done which regresses the WEF 'hiring and firing practices' indicator on the OECD EPL indicator for permanent contracts, the World Bank 'time for enforcing contracts' indicator, and year dummies, over the 2008-2013 period. The time needed for enforcing contracts entails a negative and statistically significant (though small in magnitude) effect on the perceived flexibility of hiring and firing (Table 5). Taking Italy as an example, the estimated coefficient would imply that halving the time for resolving civil disputes (from 1 185 to 593 days) would be related to an increase in the WEF indicator by 0.32 (i.e. by 12 %, considering an average level of 2.66 over the period).

Table 5: Determinants of WEF 'hiring and firing practices' indicator

EPL for permanent workers	-1.250*
	(0.136)
Time for enforcing a contract	-0.00054*
	(0.000186)
Constant	6.838*
	(0.366)
Year dummies	Yes
Obs.	128
R-squared	0.489

Notes: OLS regression. Standard errors in parentheses.

\* All coefficients significant at 5 % level.



Sources: Commission Services and OECD.

### 5.4. Impact of EPL on job finding and separation rates: the effectiveness of the judicial system

EPL generally comprises both a transfer (e.g. severance payments from the employer to the employee) and a deadweight loss (notably procedural costs, long disputes in courts). While the deadweight loss component inevitably raises effective labour costs, thereby weighing not only on dismissal decisions but also on hiring<sup>(46)</sup>, the transfer component of EPL may be neutral provided that real wages are sufficiently flexible to compensate for the insurance element involved (e.g. Bertola and Rogerson, 1997).

Strict employment protection affects the adjustment capacity of labour markets, and may hamper structural change. EPL reduces the likelihood that jobs are destroyed in the presence of shocks, but, by raising the effective cost of employment, it also dampens job creation. Lower job destruction coupled with reduced creation (lower flows in and out of firms) is likely to translate into longer unemployment spells or into greater labour market segmentation, resulting from a high share of fixed-term jobs. In countries with strict EPL, unemployment can become permanent after a deep recession. Moreover, the design of employment protection, with notice and severance pay that usually rises with tenure, can also influence the composition of the employed and unemployed at given employment and unemployment levels (Bertola et al., 2007).

<sup>(46)</sup> The latter is due to the fact that the firm incorporates potential future dismissal costs in the hiring decisions.

### Job market flows

Economic theory suggests that employment protection reduces both job separations and hiring. By increasing the firing costs borne by firms, EPL also reduces the present value of a filled job for the employer, thereby leading to lower job creation (Mortensen and Pissarides, 1994; Bertola, 1999; Garibaldi, 1999).

Chart 13 provides a visual description of the relation between the EPL index for regular contracts and the job finding rate. A similar relation is also observed for the separation rate. The job finding and separation rates are also positively related with the index for temporary contracts.

Table 6 shows cross-country regressions of the job finding and separation rates on various components of the overall EPL index, controlling for common aggregate shocks. As suggested by theoretical models, restrictive legislation for individual and collective dismissals (i.e. stricter additional requirements in case of collective dismissals) reduces both job finding and separation rates and leads to longer spells of unemployment. Strict legislation on temporary contracts is associated with higher finding and separation rates, but the effect is imprecisely estimated and it cannot be excluded that it is zero. The disposition time and the time to enforce contracts are alternative measures of the effectiveness of settling employment law cases.

Countries are distributed according to whether the disposition time (columns 2-3) or the time to enforce contracts (columns 4-5) is above or below the respective median times. The estimate suggests that EPL has a stronger negative effect on job finding rates in countries where it takes a long time to resolve a case. It also means

Table 6

Effect of EPL on job finding rates: EU countries, 1997-2013					
	Full sample (1)	Disposition time below median (2)	Disposition time above median (3)	Time to enforce contracts below median (4)	Time to enforce contracts above median (5)
Explanatory variables					
Overall EPL sub-indicators					
EPL on regular contracts	-1.57*** [0.45]	-1.89 [2.63]	-2.33** [0.87]	-0.38 [1.21]	-1.53* [0.87]
EPL on temporary contracts	0.19 [0.49]	-0.41 [1.42]	1.38 [1.03]	0.31 [0.68]	0.83 [1.11]
EPL on collective dismissals	-1.96*** [0.52]	-1.48 [1.63]	-2.63** [0.93]	-1.91*** [0.53]	-2.03* [1.11]
R-squared	0.27	0.13	0.58	0.36	0.31
Observations	276	72	54	106	110

Estimation method: cross-section regression including year effects. Unbalanced panel; heteroscedastic and cluster robust standard errors in brackets.  
\* Statistically significant at 10% level \*\* Statistically significant at 5% level \*\*\* Statistically significant at 10% level

Effect of EPL on job separation rates: EU countries, 1997-2013					
	Full sample (1)	Disposition time below median (2)	Disposition time above median (3)	Time to enforce contracts below median (4)	Time to enforce contracts above median (5)
Dependent variables					
Explanatory variables					
Overall EPL sub-indicators					
EPL on regular contracts	-0.13*** [0.05]	-0.23 [0.18]	-0.19 [0.13]	0.007 [0.11]	-0.26** [0.11]
EPL on temporary contracts	0.11 [0.07]	-0.03 [0.06]	0.25 [0.25]	0.01 [0.04]	0.30** [0.15]
EPL on collective dismissals	-0.16*** [0.045]	-0.21* [0.11]	-0.16* [0.08]	-0.19*** [0.05]	-0.16 [0.11]
R-squared	0.21	0.35	0.27	0.58	0.38
Observations	276	72	54	106	110

Estimation method: cross-section regression including year effects. Unbalanced panel; heteroscedastic and cluster robust standard errors in brackets.  
\* Statistically significant at 10% level \*\* Statistically significant at 5% level \*\*\* Statistically significant at 10% level

that reforms to reduce firing costs have a stronger positive impact on job finding rates in countries where the effectiveness of the judicial system is relatively low.

For example, the EPL index for Sweden and Slovenia was about 2.6 (slightly above the median of 2.4 and the average of 2.5) in 2013. In Sweden, however, the time to enforce contracts (disposition time) is one quarter (about half) that of Slovenia, which implies *ceteris paribus* that the job finding rate is at least between 1 and 2 percentage points above that of Slovenia. Conversely a reduction in the EPL indicator for both countries of a magnitude comparable to that observed for Slovenia in 2014 (i.e. from 2.6 to 2.2) would be accompanied by an increase in the finding rate in Slovenia by 0.6 percentage points but no major change in Sweden. Job separation rates give similar findings.

These results provide initial evidence in favour of the hypothesis that inefficient

civil justice adds up to strict EPL as a reason for subdued employment flows in a given country. Increasing EPL on regular contracts (e.g. by strengthening dismissals regulation) would imply a reduction in both job finding and separation rates (the latter only statistically significant when using World Bank data) in countries with excessive trial length, which in turn is related to higher uncertainty in the resolution of employment law cases.

Further analysis would be needed to investigate more in-depth the magnitude of the interaction effect between EPL and trial length, as well as to check the impact of further explanatory variables such as the monetary cost (for employers and employees) of bringing an employment case to court. Moreover, it is important to note that while EPL reforms are expected to increase labour market dynamics, i.e. entry and exit into and from employment, in the presence of weak labour demand the entry dynamics

may be more modest. More generally, this points to the importance of distinguishing between the short and long-term effects of EPL reforms, as in the short-term the outcomes may be influenced strongly by the current economic and labour market situation.

## 6. HEALTH AND SAFETY AT WORK – HOW IT CAN SUPPORT BETTER JOBS, PRODUCTIVITY AND GROWTH

This section provides a general overview of the recent developments in the EU in area of occupational safety and health (OSH), in particular concerning the implementation of the EU Strategic Framework on Health and Safety at Work 2014-2020, the ex-post evaluation of 24 EU OSH directives, tackling demographic change and protection of workers from the risks to chemicals.

Health and safety at work is one of the EU's longest standing priorities in the social field. As a result, a broad strategic policy framework has been developed in this area including a comprehensive body of EU legislation<sup>(47)</sup> and a series of action plans and strategies contributing to safer and healthier work environment for over 217 million workers across Europe. Risk prevention and health protection at the workplace benefits not only workers but also contributes to Member States' productivity and competitiveness, and improves the sustainability of their social protection systems. These economic and social benefits of public policy on health and safety at work are well documented in terms of positive impact on growths and productivity, and reduction of accidents and illnesses. Investment in improving health and safety at work contributes to better jobs and hence workers' wellbeing, and is also cost effective producing high ratios of return, averaging 2.2, and in a range between 1.29 and 2.89.

Despite the significant reduction in accidents and better prevention in the EU there is no time to rest on laurels as new challenges caused by, for example, the changing world of work and the use of new technologies, and existing OSH issues need to be dealt with.

<sup>(47)</sup> A non-exhaustive list of examples includes:  
 – Regulation No 561/2006 of the European Parliament and of the Council of 15 March 2006 on the harmonisation of certain social legislation relating to road transport and amending Council Regulations (EEC) No 3821/85 and (EC) No 2135/98 and repealing Council Regulation (EEC) No 3820/85 (*on rest periods*).  
 – Regulation 1899/2006 of the European Parliament and of the Council of 12 December 2006 amending Council Regulation (EEC) No 3922/91 on the harmonisation of technical requirements and administrative procedures in the field of civil aviation (*dealing with rest requirements, fatigue*).  
 – Council Directive 92/29/EEC of 31 March 1992 on the minimum safety and health requirements for improved medical treatment on board vessels.  
 – Directive 2002/44/EC of the European Parliament and of the Council of 25 June 2002 on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (vibration) (16<sup>th</sup> individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC).  
 – Directive 2003/10/EC of the European Parliament and of the Council of 6 February 2003 on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (noise) (17<sup>th</sup> individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC activities).

## 6.1. Implementation of the EU Strategic Framework on Health and Safety at Work 2014-2020

The recent Strategic Framework for Health and Safety at Work 2014-2020<sup>(48)</sup> aims at ensuring that the EU continues to play a leading role in the promotion of high standards for working conditions both within the European Union and internationally. In line with the Europe 2020 Strategy, it contributes to improving job quality and job satisfaction, while improving the competitiveness and productivity of European companies.

In particular, the Strategic Framework identifies key challenges and strategic objectives for health and safety at work, together with actions and instruments to address and achieve them.

The three major challenges are: 1) to improve implementation of existing health and safety rules, in particular by enhancing the capacity of micro and small enterprises to put in place effective and efficient risk prevention measures; 2) to improve the prevention of work-related diseases by tackling new and emerging risks without neglecting existing risks; 3) to take account of the ageing of the EU's workforce.

The Strategic Framework sets out a foundation for action, cooperation and exchange of good practice to improve health and safety at work in the EU. The commitment of all relevant stakeholders such as national authorities, social partners and EU institutions is vital for successful implementation of this Framework, the adoption of which has already triggered a very constructive and positive dynamics as regards OSH.

Some Member States are already reviewing their own national strategies in light of the EU Strategic Framework, in consultation with relevant stakeholders, including their national social partners. Other EU institutions, such as the Council, the European Economic and Social Committee and the Committee of the Regions have adopted conclusions and opinions on it. The European Parliament is currently working on its feedback to the Strategic Framework. Specialised

<sup>(48)</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014DC0332>.

committees such as the Advisory Committee on Safety and Health at Work and Senior Labour Inspectors Committee, as well as European Agency for Safety and Health at Work have aligned their work plans to target their actions in support of the implementation of the Strategic Framework. At the same time, the Commission is taking actions such as developing an EU OSH information system and providing tools to support OSH risks management. All these joint efforts will contribute to EU workers health, safety and wellbeing and also will boost its growth, productivity and competitiveness.

The Strategic Framework will be reviewed in 2016 in the light of the results of the ex-post evaluation of EU OSH directives and progress on its implementation.

## 6.2. Ex-post evaluation of 24 EU health and safety at work directives

In line with the objectives of the EU OSH Strategic Framework the Commission is currently carrying out a full ex-post evaluation of EU health and safety legislation, which includes specific consultations with social partners.

Pursuant to Framework Directive 89/391/EEC, the Commission is committed to evaluating virtually the entire body of the EU OSH legislation (24 Directives). The evaluation is listed in the REFIT programme and it covers relevance, effectiveness and coherence of the legislation as well as administrative burdens. Due to its broader scope and specific regulatory regime under the Framework Directive, the ex-post evaluation aims at a wider evaluation of the legislation including in terms of benefits, of research and new scientific knowledge.

The Commission will present the results of the evaluation and provide, where appropriate, suggestions on how to improve the functioning of the EU OSH regulatory framework. The Commission document will be based, on the one hand, on national implementation reports provided by Member States, and on the other hand on the outcomes of a preliminary report set out by an independent external contractor. In addition, the Commission will use the experience it has gained from monitoring the transposition and application of the directives in the Member States.

### 6.3. Addressing the ageing of the EU workforce

Europe is facing a demographic change with working-age population shrinking and a number of older people rising. In this context, health and safety at work of the ageing workers has been identified by the EU OSH Strategic Framework 2014-2020 as one of the key challenges in this area.

An opinion poll carried out by the European Agency for Safety and Health at Work (EU-OSHA)<sup>(49)</sup> shows that a large majority of EU citizens think that good health and safety practices are very important to help people work for longer before they retire. On the other hand, the results of Eurobarometer survey indicates that only three in ten workers (31%) say there are measures to adapt their workplace for older people<sup>(50)</sup>. Thereby, there is a clear need for action.

In this respect, the EU OSH Strategic Framework sets the improving health and safety of older workers as one of its key strategic objectives and proposes concrete actions to address this issue including: identification and exchange of good practice on ways to improve OSH conditions for older workers; promotion of rehabilitation and reintegration measures and; raising awareness and sharing information and tools through the Healthy Workplaces Campaigns<sup>(51)</sup> coordinated by EU-OSHA.

Furthermore, EU-OSHA carries out, on behalf of the Commission, the European Parliament's pilot project on health and safety of older workers running from 2013 until the end of 2015. It is investigating OSH policies and initiatives taken and tools available at the EU, national, intermediaries and company level. It aims to assess the prerequisites for OSH strategies and systems to take account of an ageing workforce and ensure better prevention for all throughout working life. The project will provide and share examples of successful and innovative practices. In doing so, the work aims to highlight what works well, what needs to be done or prioritised and to identify the main drivers and obstacles to

effective implementation of policy initiatives in this area. A great deal of the produced information will be used by the next Healthy Workplaces Campaign 2016-2017 on ageing workers in its awareness raising activities and when sharing good practice.

Joint efforts are needed to better protect each and every worker in Europe and to make sure that ageing people not only work in healthy and safe conditions, but also enjoy their retirement afterwards in good health.

### 6.4. Protection of workers from the risks related to chemicals: new term of office of the Scientific Committee on Occupational Exposure Limits (SCOEL)

A new term of office has commenced on 14 April 2015 with a new membership of the Scientific Committee on Occupational Exposure Limit Values to Chemical Agents (SCOEL). 21 members from the EU were selected solely on the basis of their scientific excellence and experience on the subject. The Committee will be of key importance to providing the European Commission on request with dedicated recommendations and opinions regarding occupational exposure limits and related issues.

The prevention of occupational risks related to chemicals is covered by two key Directives among the group of 24 mentioned above: the Chemical Agents Directive (CAD)<sup>(52)</sup> and the Carcinogens and Mutagens Directive (CMD)<sup>(53)</sup>.

Both Directives establish Occupational Exposure Limit values, which are airborne concentrations of chemicals that should not be exceeded in the workplace in order to protect the health of workers. They constitute to be an important and specific tool for risk assessment and risk control in the workplace, and therefore, they facilitate the compliance with the provisions contained in the Directives.

Occupational limit values should be based in the latest available scientific data by means of an independent scientific assessment. For this purpose, the Commission has established and has been operating over the last two

decades the SCOEL. On the basis of this evaluation and after having consulted the relevant stakeholders, the Commission proposes limit values at European level that are further transposed into national limit values at Member States level. The process of setting up occupational limit values at EU level constitutes a good example of evidence-based policy making, and how scientific knowledge is used to improve the health protection of European workers.

The mandate of SCOEL is to examine available information on toxicological and other relevant properties of chemical agents, evaluate the relationship between the health effects of the agents and the level of occupational exposure, and when possible recommend values for occupational exposure limits which it believes will protect workers from chemical risks. SCOEL was first set up in 1995 and its members were selected following an invitation from the European Commission to the Member States that requested the nomination of suitable candidates in their countries, although they acted as independent experts and not as representatives of their Member States. The Commission Decision 2014/113/EU<sup>(54)</sup> establishes a new selection procedure based in an open call for expression of interest. This ensures transparency and equal opportunities for highly qualified and specialised scientific experts across all the EU countries.

Following an open call for expressions of interest<sup>(55)</sup>, members of SCOEL have been selected and appointed in 2015 for a new term of office of three years. All SCOEL members act as independent experts and provide scientific knowledge in the areas, inter alia, of chemistry, toxicology, epidemiology, occupational medicine and industrial hygiene.

## 7. SUMMARY AND CONCLUSIONS

Labour legislation is seen as a key determinant of job creation together with other institutional, public administration and product market conditions. Labour legislation in the EU today is the result of more than two centuries of history which have shaped many of its dimensions,

<sup>(49)</sup> EU-OSHA, Opinion poll, 2012, [https://osha.europa.eu/en/priority\\_groups/ageingworkers](https://osha.europa.eu/en/priority_groups/ageingworkers).

<sup>(50)</sup> Eurobarometer, 2014 [http://ec.europa.eu/public\\_opinion/flash/fl\\_398\\_sum\\_en.pdf](http://ec.europa.eu/public_opinion/flash/fl_398_sum_en.pdf).

<sup>(51)</sup> EU-OSHA Healthy Workplaces Campaigns <https://osha.europa.eu/en/healthy-workplaces-campaigns>.

<sup>(52)</sup> OJ L 131, 5.5.1998, p. 11.

<sup>(53)</sup> OJ L 229, 29.6.2004, p. 23.

<sup>(54)</sup> OJ L 62, 4.3.2014, p. 18.

<sup>(55)</sup> OJ C 373, 21.10.2014, p. 14.



with country differences in rules and procedures that reflect different legal and institutional traditions (e.g. civil law vs. common law differences). EU legislation sets minimum standards in a number of important areas, while promoting an overall improvement in working conditions and avoiding social dumping across the EU.

Two theories for the existence of labour law have been put forward. One explains the existence of labour legislation in relation to society's goals of fairness and ensuring a more equal distribution of wealth, power and goods. The other puts forward that labour legislation exists to address market failures caused by transaction costs and asymmetric information, potential coercion and opportunism by employers given the potential incompleteness of contracts, and the wish to promote efficiency and competitiveness through a well-coordinated and flexible division of labour. In addition to these a theoretical justification based on rights, i.e. that labour law in market economies is justified by some more 'forceful' type of rights, has been developed.

Labour legislation as a means to support job creation must be analysed in conjunction with the other determinants and in view of continuous socio-economic change. Socio-economic and structural change (associated with technology, globalisation, population ageing, greening of the economy, equal opportunities...) is changing the world of work. Technology and globalisation can create opportunities with new products and markets but also new working structures.

Technological innovation has the potential for developing safer production processes and can help mitigate physical or psychosocial barriers to labour market participation of women, older workers, those with family responsibilities and disabled workers. It can allow for more flexible working arrangements (in terms of both time and place of work) allowing a better fit between abilities and preferences and a better work life balance. The more globalised world where even micro companies have gone global requires some additional flexibility in terms of time and place of work for example.

Labour legislation often defines normal working hours, rest days and place of work. The question is whether more flexibility in these aspects is needed in order to allow for better reconciliation between work, family and private life and encourage labour market participation of various population groups, when the figure of the employee working 9 to 5 for one employer at the employer premises is becoming less of a norm. The employment contract has indeed become ever more varied to adjust to new realities and various other types of contracts cover what is in fact the provision of work services. Ongoing socio-economic and structural changes can make a case for labour legislation to be revisited and, as appropriate, updated, clarified or just consolidated in view of the new socio-economic realities.

The important question, of course, is whether this wider range of contracts may come at the expense of job quality. Stable and predictable work relationships and in particular more permanent types of contracts induce employers

and employees to invest more in skills and lifelong learning. They allow individuals to plan for their future by providing sustainable prospects of career and earnings progression. In contrast, more temporary contracts, especially when unwanted by the worker, can lead to low levels of training, low motivation, low productivity, poor access to social protection and in-work poverty.

As indicated in the 2016 AGS, the more general move towards more flexible labour markets should facilitate employment creation but should also be combined with transitions towards more permanent contracts. It should not result in more precarious jobs but rather in a fair balance between flexibility and security.

Does more employment protection reduce job creation? The answer is: it all depends. The chapter suggests that EPL must be seen in relation to other dimensions and notably the effectiveness of judicial systems. While EPL can have an impact on the job finding and separation rates, the analysis suggests this can be mediated by the effectiveness of the judicial system. Initial analysis indicates that an inefficient civil justice system can add up to strict employment protection legislation as a reason for subdued employment flows in a given country. Excessive trial length, which in turn is related to higher uncertainty in the resolution of employment law cases, combined with strict employment protection for regular contracts can reduce job finding and separation rates. In other words, less efficient civil justice puts a wedge between the de jure legislation and the de-facto.



## ANNEX 1: OVERVIEW OF EU LABOUR LAW

Table 7: Overview of EU labour law

Short summary	Directive Title	
<b>Working conditions – Individual rights</b>		
Information on individual employment conditions	<b>Council Directive 91/533/EEC of 14 October 1991 on an employer's obligation to inform employees of the conditions applicable to the contract or employment relationship.</b>	This Directive establishes the employer's obligation to inform employees of the conditions applicable to the contract or employment relationship. It aims to provide employees with improved protection, to avoid uncertainty and insecurity about the terms of the employment relationship and to create greater transparency on the labour market. The Directive states that every employee must be provided with a document containing information on the essential elements of his/her contract or employment relationship.
Health and safety in fixed term and temporary employment	<b>Council Directive 91/383/EEC of 25 June 1991 supplementing the measures to encourage improvements in the safety and health at work of workers with a fixed-duration employment relationship or a temporary employment relationship.</b>	This Directive aims to ensure that workers on fixed-term and temporary contracts are afforded the same level of protection, including in the area of health and safety, as that of other workers. In particular, Member States may prohibit the use of temporary workers to perform tasks that are particularly dangerous, especially work requiring special medical surveillance. Where Member States do not use this option, they must ensure that all workers who are called on to perform work requiring special medical surveillance have access to this.
Young people at work	<b>Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.</b>	The Directive on the protection of young people at work is partly a health and safety measure and partly a human rights measure, prohibiting child labour and protecting young people's education and development. The main points of the Directive are as follows. <ul style="list-style-type: none"> <li>• The minimum working age must not be lower than the age when compulsory schooling ends, or 15 years in any event. Exemptions are possible, for example for children aged at least 14 on work-experience schemes, and for those aged at least 13 performing light work.</li> <li>• Employers must take special measures to protect the safety and health of young people (those under the age of 18), in areas such as the physical work environment, work organisation, training, and health monitoring.</li> <li>• Young people must be protected from risks to their safety, health and development arising from their lack of experience, risk-awareness or maturity. They must not do work that is harmful or beyond their capacity.</li> <li>• Adolescents aged 15 to 17 must not generally work more than 8 hours a day and 40 hours a week. Stricter limits apply to under-15s, where they are allowed to work.</li> <li>• Young people must not generally perform night work.</li> <li>• Adolescents must have a daily rest period of at least 12 consecutive hours. Where under-15s work, their daily rest period must be at least 14 consecutive hours.</li> <li>• Young people must generally have a minimum weekly rest period of 2 days, consecutive if possible.</li> <li>• Where their daily working time exceeds 4.5 hours, young people are entitled to a rest break of at least 30 minutes.</li> </ul>
Posting of workers	<b>Directive 96/71/EC of the European Parliament and of the Council of 16 December 1996 concerning the posting of workers in the framework of the provision of services.</b>	The Directive seeks to ensure that transnational service provision occurs in a fair competitive environment and respects workers' rights. It aims both to protect businesses' basic internal market freedom to provide services in other Member States and to prevent social dumping. Therefore, when companies send their employees temporarily to other EU countries to provide services, the directive gives these workers the basic employment rights that apply in the country to which they are posted. These relate to: <ul style="list-style-type: none"> <li>• maximum work periods and minimum rest periods;</li> <li>• minimum paid annual holidays;</li> <li>• minimum rates of pay – though it should be noted that the Directive does not oblige Member States to set minimum wages if they do not already exist in the country in question;</li> <li>• the conditions for hiring out workers, in particular by temporary work agencies;</li> <li>• health and safety;</li> <li>• protection for pregnant women, women who have recently given birth, and minors;</li> <li>• equal treatment and non-discrimination.</li> </ul>
Posting of workers	<b>Directive 2014/67/EU of the European Parliament and of the Council of 15 May 2014 on the enforcement of Directive 96/71/EC concerning the posting of workers in the framework of the provision of services and amending Regulation (EU) No 1024/2012 on administrative cooperation through the Internal Market Information System ('the IMI Regulation') (Text with EEA relevance).</b>	The Posting of Workers Enforcement Directive aims to safeguard respect for posted workers' rights in practice and strengthen the legal framework for service providers. In particular, the Enforcement Directive: <ul style="list-style-type: none"> <li>• increases the awareness of workers and companies about their rights and obligations as regards the terms and conditions of employment;</li> <li>• improves cooperation between national authorities in charge of posting (obligation to respond to requests for assistance from competent authorities of other Member States – a 2 working day time limit to respond to urgent requests for information and a 25 working day time limit for non-urgent requests);</li> <li>• clarifies the definition of posting so as to increase legal certainty for posted workers and service providers, while at the same time tackling 'letter-box' companies that use posting to circumvent the law;</li> <li>• defines Member States responsibilities to verify compliance with the rules laid down in the 1996 Directive (Member States designate specific enforcement authorities responsible for verifying compliance; and Member States where service providers are established need to take necessary supervisory and enforcement measures).</li> </ul>

Short summary	Directive Title	
Part-time work	<b>Council Directive 97/81/EC of 15 December 1997 concerning the Framework Agreement on part-time work concluded by UNICE, CEEP and the ETUC. Council Directive 98/23/EC of 7 April 1998 on the extension of Directive 97/81/EC on the framework agreement on part-time work concluded by UNICE, CEEP and the ETUC to the United Kingdom of Great Britain and Northern Ireland. Note: based on EU social partner agreement</b>	The Directives prohibit discrimination against workers in non-standard forms of employment: Part-time workers must not be treated, in terms of their employment conditions, less favourably than comparable full-time workers solely because they work part time, unless different treatment is justified on objective grounds. Directive 98/23/EC is an extension of Directive 97/81/EC on the framework agreement on part-time work concluded by UNICE, CEEP and the ETUC to the United Kingdom of Great Britain and Northern Ireland.
Fixed-term work	<b>Council Directive 1999/70/EC of 28 June 1999 concerning the framework agreement on fixed-term work concluded by the ETUC, UNICE and CEEP. Note: based on EU social partner agreement</b>	The Directives prohibit discrimination against workers in non-standard forms of employment: fixed-term workers must not be treated, in terms of their employment conditions, less favourably than comparable 'permanent' workers solely because they have a fixed-term contract or relationship, unless different treatment is justified on objective grounds.
Working time	<b>Directive 2003/88/EC of the European Parliament and of the Council of 4 November 2003 concerning certain aspects of the organisation of working time.</b>	<p>The EU working time Directive was primarily conceived as a health and safety measure, because factors such as excessive working hours, inadequate rest and unregulated night work have damaging health effects. The Directive's main points are as follows.</p> <ul style="list-style-type: none"> <li>• Workers' average weekly working time (including overtime) must not exceed 48 hours. Weekly hours may be averaged over a period of 4 to 12 months.</li> <li>• Countries have the option of exempting workers from the 48-hour maximum working week, if workers agree to this individually.</li> <li>• If their working day is longer than 6 hours, workers are entitled to a rest break.</li> <li>• Workers must have a minimum daily rest period of 11 consecutive hours, and a minimum weekly rest period of 35 hours.</li> <li>• Workers have a right to paid annual leave of at least 4 weeks.</li> <li>• Night workers must not generally work for more than 8 hours per shift on average, and must be subject to special health and safety protection.</li> </ul> <p>This Directive consolidates Directives 2000/34/EC and 93/104/EC.</p>
Temporary agency work	<b>Directive 2008/104/EC of the European Parliament and of the Council of 19 November 2008 on temporary agency work.</b>	The Directives prohibit discrimination against workers in non-standard forms of employment. Temporary agency workers' basic working and employment conditions (those relating to pay, working time and holidays) must, during their assignment at a user undertaking, be at least those that would apply if they had been recruited directly by that undertaking to do the same job.
Employer insolvency	<b>Directive 2008/94/EC of the European Parliament and of the Council of 22 October 2008 on the protection of employees in the event of the insolvency of their employer (Text with EEA relevance).</b>	This Directive ensures payment of employees' outstanding claims in the event of employer insolvency. It requires Member States to set up an institution to guarantee the payments. If an insolvent employer had activities in at least two EU Member States, an employee's outstanding claims must be met by the institution in the Member State where the employee worked.
<b>Working conditions – Sectorial</b>		
Maritime transport	<b>Council Directive 1999/63/EC of 21 June 1999 concerning the Agreement on the organisation of working time of seafarers concluded by the European Community Ship owners' Associations (ECSA) and the Federation of Transport Workers' Unions in the European Union (FST). Council Directive 2009/13/EC of 16 February 2009 implementing the Agreement concluded by the European Community Ship owners' Associations (ECSA) and the European Transport Workers' Federation (ETF) on the Maritime Labour Convention, 2006, and amending Directive 1999/63/EC. Note: based on EU social partner agreement</b>	<p>Directive 2009/13 set up specific rules on working conditions for seafarers notably defining either a maximum working time of 14 hours per day and 72 hours per week, or a minimum rest time of 10 hours per day and 72 hours per week.</p> <p>Directive 2009/13/EC amends Directive 1999/63/EC.</p>

Short summary	Directive Title	
Civil aviation	<b>Council Directive 2000/79/EC of 27 November 2000 concerning the European Agreement on the Organisation of Working Time of Mobile Workers in Civil Aviation concluded by AEA, ETF, ECA, ERA and IACA (Text with EEA relevance). Note: based on EU social partner agreement</b>	This Directive set up specific rules in civil aviation such as a maximum annual working time of 2 000 hours, including maximum flying time of 900 hours (from when the aircraft first moves from its parking position until it comes to rest in the designated parking position and engines are stopped).
Road transport	<b>Directive 2002/15/EC of the European Parliament and of the Council of 11 March 2002 on the organisation of the working time of persons performing mobile road transport activities.</b>	This Directive establishes minimum requirements in relation to the organisation of working time in order to improve the health and safety protection of persons performing mobile road transport activities and to improve road safety and align conditions of competition.
Rail transport	<b>Council Directive 2005/47/EC of 18 July 2005 on the Agreement between the Community of European Railways (CER) and the European Transport Workers' Federation (ETF) on certain aspects of the working conditions of mobile workers engaged in interoperable cross-border services in the railway sector. Note: based on EU social partner agreement</b>	This Directive set up specific rules in cross-border rail services such as a maximum daily driving time of 9 hours on day shifts and 8 hours on night shifts, subject to a maximum of 80 hours' driving time within 2 weeks.
Inland waterway transport	<b>Council Directive 2014/112/EU of 19 December 2014 implementing the European Agreement concerning certain aspects of the organisation of working time in inland waterway transport, concluded by the European Barge Union (EBU), the European Skippers Organisation (ESO) and the European Transport Workers' Federation (ETF). Note: based on an EU social partner agreement)</b>	The Directive sets minimum rules on working time for passenger or cargo transport ships in inland navigation across the EU.
<b>Working conditions – Collective rights</b>		
Collective redundancies	<b>Council Directive 98/59/EC of 20 July 1998 on the approximation of the laws of the Member States relating to collective redundancies.</b>	Collective redundancies are defined as a certain number of dismissals for reasons not related to the individual workers concerned over a certain period. EU countries may choose between applying the Directive to: <ul style="list-style-type: none"> <li>• over a period of 30 days, at least 10 redundancies in establishments employing 21-99 workers, redundancies affecting at least 10% of the workforce in establishments employing 100-299 workers, and at least 30 redundancies in establishments employing 300 or more workers; or</li> <li>• over a period of 90 days, at least 20 redundancies, whatever the number of workers employed in the establishment.</li> </ul> An employer envisaging collective redundancies must consult representatives of the workers in good time with a view to reaching an agreement. These consultations must, at least, cover ways of avoiding or reducing the redundancies, and of mitigating the consequences. Directive 98/59 consolidates Directives 75/129/EEC and 92/56/EEC.
European Company Statute	<b>Council Regulation (EC) No 2157/2001 of 8 October 2001 on the Statute for a European company (SE).</b>	This Statute allows companies incorporated in different Member States to establish themselves as a company under EU law by merging or converting into an SE, or forming an SE holding company or an SE joint subsidiary, and to operate throughout the EU according to some unified rules.
European Company Statute	<b>Council Directive 2001/86/EC of 8 October 2001 supplementing the Statute for a European company with regard to the involvement of employees.</b>	The legislative framework also provides for the involvement of employees – information and consultation, plus board-level employee participation in some circumstances – in European companies. This Directive sets out to ensure that the establishment of an SE does not entail the disappearance or reduction of practices of employee involvement existing within the companies participating in the establishment of an SE. Companies participating in the formation of a European company must negotiate with the employees via a special negotiating body (SNB) made up of employee representatives. The negotiations are expected to result in a written agreement on the employee involvement arrangements.

Short summary	Directive Title	
Transfer of undertakings	<b>Council Directive 2001/23/EC of 12 March 2001 on the approximation of the laws of the Member States relating to the safeguarding of employees' rights in the event of transfers of undertakings, businesses or parts of businesses.</b>	<p>The transfer of undertakings Directive protects employees' rights in case of business transfers. The key employment-protection provisions are as follows.</p> <ul style="list-style-type: none"> <li>• When an undertaking is transferred to another employer, the rights and obligations arising from employment contracts or relationships must be transferred from the 'old' employer (the transferor) to the 'new' employer (the transferee).</li> <li>• A transfer must not in itself constitute grounds for an employee's dismissal by the transferor or the transferee. However, this does not prevent dismissals for economic, technical or organisational reasons.</li> <li>• After a transfer, the transferee must observe the terms of any collective agreement that applied to the transferor, until the agreement expires or a new one comes into force.</li> </ul> <p>This Directive consolidates Directives 77/187/EC.</p>
Information and Consultation of employees	<b>Directive 2002/14/EC of the European Parliament and of the Council of 11 March 2002 establishing a general framework for informing and consulting employees in the European Community.</b>	<p>It establishes a general framework setting out minimum requirements for the right to inform and consult employees in undertakings or establishments within the European Community. Information and consultation are required on the following.</p> <ul style="list-style-type: none"> <li>• The recent and probable development of the undertaking's or the establishment's activities and economic situation.</li> <li>• The situation, structure and probable development of employment within the undertaking or establishment and any anticipatory measures envisaged, in particular where there is a threat to employment.</li> <li>• Decisions likely to lead to substantial changes in work organisation or in contractual relations. To avoid undue burdens on small and medium-sized enterprises, the Directive applies only to undertakings employing at least 50 employees, or to establishments employing at least 20 employees, according to the choice made by the Member State.</li> </ul>
European Cooperative Society (SCE)	<b>Council Regulation (EC) No 1435/2003 of 22 July 2003 on the Statute for a European Cooperative Society (SCE).</b>	<p>Cooperatives wishing to engage in cross-border business may make use of the Statute of European Cooperative Society (SCE) established by the Regulation. This Regulation establishes a legal statute for a European Cooperative Society (SCE) and guarantees equal terms of competition between cooperative societies and capital companies. It contributes to the development of the cross-border activities of cooperative societies.</p> <p>The establishment of an SCE statute aims to encourage the development of the internal market by facilitating the activity of this type of company at European level. With the same aim, the Council adopted Regulation (EEC) No 2137/85 relating to European Economic Interest Grouping and Regulation (EC) No 2157/2001 (see above) relating to a Statute for a European Company, and Directive 2005/56/EC (see below) on cross-border mergers of limited liability companies.</p>
European Cooperative Society (SCE)	<b>Council Directive 2003/72/EC of 22 July 2003 supplementing the Statute for a European Cooperative Society with regard to the involvement of employees.</b>	<p>This special supplementary Directive provides for the involvement of employees in European Cooperatives. Information, consultation and in some cases, participation procedures at transnational level are to be used whenever a European Cooperative is created. These procedures are established as a priority through an agreement. The arrangements for the involvement of employees (information, consultation and participation) shall be established in every SCE.</p>
Cross-Border Mergers	<b>Directive 2005/56/EC of the European Parliament and of the Council of 26 October 2005 on cross-border mergers of limited liability companies (Text with EEA relevance).</b>	<p>This Directive regulates cross-border mergers of limited-liability companies. It fills an important gap in the European company law by setting up a simple framework in which as a general rule each merging company is governed by the provisions of its national law applicable to domestic mergers. The Directive responded to strong demand from businesses to facilitate cross-border mergers in the EU which had previously been impossible or very difficult and expensive; it aimed to reduce costs and guarantee legal certainty for companies taking part in these procedures.</p>
European Works Council	<b>Directive 2009/38 of the European Parliament and of the Council of 6 May 2009 on the establishment of a European works council or a procedure in a community scale group of undertakings for the purposes of informing and consulting employees.</b>	<p>European Works Councils are bodies representing the European employees of a company. Through them, workers are informed and consulted by management on the progress of the business and any significant decision at European level that could affect their employment or working conditions. Member States are to provide for the right to establish European Works Councils in companies or groups of companies with at least 1 000 employees in the EU and the other countries of the European Economic Area (Norway, Iceland and Liechtenstein), when there are at least 150 employees in each of two Member States.</p> <p>This Directive recasts Directives 94/45/EC and 97/74/EC.</p>



## ANNEX 2: EMPLOYMENT PROTECTION LEGISLATION

### Components of EPL

EPL consists of rules and procedures that impose limits on the adjustment of the workforce. It refers to provisions defining the lawfulness of dismissal, formal and procedural requirements to be followed in case of individual or collective dismissals, payments to workers for early contract termination and penalties imposed on unfair dismissal, hiring restrictions (e.g. favouring specific groups of disadvantaged workers or limiting specific types of contracts).

#### *Individual dismissals, regular contracts*

EPL legislation generally contains a number of conditions to be respected by employers for dismissing workers. Otherwise the dismissal is unfair, with implications in terms of obligations for the employer and rights to compensation for the worker. The main aspects of EPL for individual dismissals from regular contracts are as follows.

- *Probationary period.* During the trial period both parties can terminate the employment relationship at no cost. Employers may favour long probationary periods as it is cheaper to discourage less qualified applicants from seeking jobs than to renegotiate the contracts of workers who are found to be unsuitable. However, to avoid the risk of employers abusing long trial periods, legislation may establish maximum trial periods. In some countries, temporary derogations from the maximum trial period are allowed, most notably for work-related training. In some cases, trial periods include lower dismissal costs at the beginning of the employment relationship.
- *Procedural requirements and notice periods.* Written notice may need to be given prior to dismissal. Long notice periods may have monetary implications as they imply involuntary and possibly unproductive employment. Failure to comply with the notice period may give the worker rights to compensation for lost earnings. Notification time usually increases with job tenure. The

dismissal procedure may need to be authorised or discussed with third parties, such as unions or administrative authorities.

- *Reasons for individual dismissal.* Most regulations dealing with employment termination impose an obligation on the employer to justify the dismissal. Dismissal may be justified: (i) on disciplinary grounds or for personal reasons, other than discrimination; (ii) on economic grounds (redundancy, technological change, unsuitability of the worker). While dismissals on disciplinary grounds do not imply compensation for the worker, dismissals on economic grounds may imply compensation.
- *Role of judges.* Valid reasons for dismissal and the discretion of judges in questioning employers' decisions vary in national legislations. Valid reasons for dismissal can be broadly defined, allowing for a disparate range of situations. Alternatively, they may be very detailed, reducing the oversight of judges over employers' decisions.
- *Consequences of unfair dismissal.* In common law countries the law or collective agreements often provide for severance payments for employees in case of dismissals without necessarily requiring a justified economic reason for the dismissal. In civil law countries, the legislation often prescribes justified economic reasons. If such reasons are not justified the employer may have to reinstate the employee. Similarly, a dismissal can be declared without just cause and the court may order the employer to reinstate the worker. Monetary compensation as an alternative to reinstatement may exist, or either the employer or the employee may choose the type of sanction. In addition to reinstatement, employers may have to pay damages to employees for wage losses and the unpaid social security contributions for the period between the dismissal and the judgment.
- *Design of severance payments.* Severance pay consists of a lump sum payment to a worker who has been involuntarily laid-off. Entitlement may be enshrined in law or in collective agreements. The payment may differ according to the reason for dismissal (justified or not justified). Severance payments for justified dismissals do not exist in all countries, while for unjustified dismissals they are usually an alternative to reinstatement. The size of severance payments is often linked to length of tenure and the wage at the moment of dismissal, and may be subject to a maximum cap. The amount is negatively linked to the length of notice given to the dismissed employee.

#### *Collective dismissals*

Collective dismissal procedures are triggered by the simultaneous dismissal for economic reasons of a certain number of employees. The legislation often defines additional requirements for the employers in case of collective dismissals, in view of the social implications arising from the lay-off of a large number of employees in a short period of time and/or in a specific geographical area. Compared with individual dismissals, collective dismissals generally have to fulfil additional procedural requirements for the dismissal to be valid. Rules on collective dismissals include the following elements.

- *Definition of collective dismissal.* The legislation sets the minimum number of workers (usually linked to the plant size) to be dismissed in a given lapse of time and location for the dismissal to be considered as collective.
- *Procedural and notification requirements.* Employers are required to consult workers' representatives when contemplating collective dismissals to find alternative solutions to dismissals whenever possible. Employers are also asked to notify public authorities of the intention to make collective dismissals.
- *Criteria for selecting employees to be dismissed.* Transparent and non-discriminatory criteria may be indicated by law, in collective agreements, or announced by the employer at the moment of dismissal.
- *Implications of unfair collective dismissals.* In most cases, severance payments provided irrespective of the specific reason for individual economic dismissal are also due in case of collective dismissal. Additional monetary compensation (e.g. co-financing of unemployment benefits)



may have to be paid by the employer. National legislation may provide for other consequences for the non-respect of procedural and notification requirements for collective dismissal.

### Legislation on fixed-term contracts

EPL legislation also provides for the conditions under which fixed-term contracts can be used and the main features of such contracts. Employers may have an incentive to use a series of fixed-term contracts rather than regular contracts to save on dismissal costs. The legislation places constraints on the use of such contracts with a view to preventing discrimination against fixed-term workers and possible abuse of fixed-term contracts. Requirements generally consist of pre-defined cases justifying the use of fixed-term contracts and limits on the number of renewals or the total duration of accumulated contracts. The most frequent reasons given in legislation for justifying the use of fixed-term contracts are: coping with unexpected fluctuations of demand; replacing permanent staff on holiday, maternity leave or sick leave; hiring workers with specialised skills to carry out specific projects; and start-up ventures implying risky and uncertain returns.

Different types of contract reflect different needs for the use of temporary labour. While permanent contracts usually have similar features within each country, different types of temporary work contract may exist to match conditions for their use to the specific needs. In the case of a very short-term need to replace temporarily absent permanent workers, interim work is often chosen because of relatively low procedural costs.

### Main features of EPL regulations across EU countries<sup>(56)</sup>

Where EPL differs most is in the arrangements for individual dismissals from regular contracts. It differs not only in terms of the degree of stringency but also in the instruments used to protect workers against dismissal. The main issues are:

- *Individual notice and dismissal.* Normally, procedures depend on whether the reason for dismissal is personal, due to the worker's incapacity or for disciplinary reasons, or economic. Procedures may depend on the type of worker, company size, and trade union membership. In general, personal dismissal procedures tend to be lighter. In some countries employers have to notify one or more third parties (normally workers' representatives, the public employment service, labour inspectorate or other government authorities), perhaps at the request of the employee, if they intend to dismiss an employee. Apart from notification, employers may also have to justify dismissals to third parties. Delays before notice can start may exceed 1 month.
- *Definition of justified or unfair dismissals.* In some countries fair dismissal is not defined restrictively and unfair dismissals are limited to cases which are not reasonably based on economic circumstances or on discrimination (e.g. Belgium, Czech Republic, Denmark, Greece, Hungary, Ireland, Italy, Poland, Slovakia, Slovenia, the United Kingdom). In some countries, dismissals are not justified if they are not based on an effective and relevant reason (e.g. Finland, France). In addition, in case of redundancy, dismissals are considered as unfair if the employer fails to take into account the specific circumstances of dismissed workers such as the social dimension (e.g. France, Germany, Austria), tenure (e.g. Estonia, Sweden) and family responsibilities (e.g. Slovenia), or if the dismissal aims to improve profits at the expense of stable profits (France) or because the employee wants to make use of his/her rights to parental leave (the Netherlands). In some countries, fair dismissal requires specific alternatives to redundancy to be considered. These alternatives may include retraining, rehabilitation and/or a transfer of a worker to another position in a firm (e.g. Austria, Finland, Estonia, France, Germany, Sweden).
- *Trial period, notice period and severance pay.* Monetary costs related to dismissal depend on both the length of the notice period and severance payments. In some countries employers do not have to pay any severance payments but notice periods can be very long (e.g. Belgium, Denmark, Finland, Sweden). In others, severance pay is the main cost of dismissal (e.g. Spain). Notice and severance pay generally do not apply during the trial period. The maximum trial period in the EU spans from less than 1 month to 12 months; in the majority of countries it is between 3 and 6 months. Severance payments are usually financed wholly by the dismissing employer, but in some countries severance payments are shared among several employers. In Austria for instance, severance payments are financed via a fund in the name of the employee, which is portable across employers until it is used up (dismissal or retirement) and to which all employers in the career history of the employee contribute.
- *Compensation and reinstatement if dismissal is unfair.* In the case of unfair dismissal, firms have additional obligations to an employee. Normally, a worker is entitled either to a monetary compensation on top of what is normally required for fair dismissals or to be reinstated, and employers may also have to pay the worker's foregone wages ('back pay'). The regime for reinstatement differs widely across EU countries. In some cases reinstatement is not foreseen (e.g. Belgium, Finland) while in others the decision about reinstatement is left to the worker (e.g. Austria, Czech Republic). Firms may have to bear additional compensation in the absence of reinstatement (e.g. Luxembourg, United Kingdom). In some countries, firms have to both reinstate a worker and provide the salary due from the date of dismissal to the date of reinstatement – with back pay usually capped (e.g. Italy, Portugal).

There is less variation in terms of legislation to deal with collective dismissals across EU countries. There is a series of common elements linked to the existence of common EU principles to be followed in case of collective dismissals enshrined in EU Council Directives 75/129 and 98/59/EC.

- *Definition of collective dismissal.* National laws generally refer to the minimum number of workers dismissed in a given period of time, most often linked to firm or plant size.

<sup>(56)</sup> Information in this section is mostly based on OECD <http://www.oecd.org/employment/emp/oecdindicatorsofemploymentprotection.htm> or ILO <http://www.ilo.org/dyn/eplex/termmain.home>. Further information can be found on the website of the European Labour Law Network at [http://www.labourlawnetwork.eu/home/prm/52/%20size\\_\\_1/index.html](http://www.labourlawnetwork.eu/home/prm/52/%20size__1/index.html).

- *Notification and consultation procedures.* In all EU countries, employers are required to inform and consult with workers' representatives when planning collective dismissals. Consultation usually covers alternatives to redundancy and ways to mitigate its effects. In many countries, the employer is also obliged to draw up a social plan that may comprise both passive (subsidies to alleviate financial hardship) and ALMP (re-training). All EU countries also oblige employers to notify planned collective dismissals to competent public authorities.
- *Dismissal selection and re-employment criteria.* EU directives require that employers notify workers' representatives of the criteria to be followed for selecting employees to be dismissed. Various countries have also introduced mandatory criteria to be followed as a protective measure for workers (e.g. Estonia, France, Germany). In some countries, rules must be followed for the reinstatement of collectively dismissed workers when employers begin hiring again (e.g. Cyprus, Finland, Luxembourg, Slovakia, Slovenia). In some countries legally binding selection criteria for dismissals coexist with priority rules for re-employment (e.g. France, Italy, Lithuania, the Netherlands, Romania, Spain, Sweden).
- *Monetary costs.* In most cases, the same severance payments provided for individual economic dismissal are also due in case of collective

dismissal. In some countries, additional monetary compensation has to be provided by the employer (e.g. Belgium, Italy, Poland). In others, specific provisions are contained in the social plan (e.g. Austria, Germany, Luxembourg, the Netherlands).

The regulation of fixed-term employment differs considerably across the EU, in spite of the presence of common EU principles. Following Council Directive 1990/70/EC on fixed term contracts, at least one of three aspects of temporary contracts are legally regulated: (i) reasons justifying their use; (ii) maximum number of renewals (i.e. contracts with the same firm); (iii) maximum duration of successive fixed-term contracts. Different combinations of these elements are regulated differently across countries.

- *Reasons justifying fixed-term employment.* There is no requirement to use fixed-term contracts only in pre-defined cases in Belgium, Germany, Greece, Italy, the Netherlands, Poland or the United Kingdom, while others define only an objective for the extension of the first contract (e.g. Austria, Hungary). In some countries specific reasons for hiring on fixed-term contracts are defined (e.g. Finland, France, Romania).
- *Renewal of fixed-term contracts.* Some countries define a maximum number of renewals of fixed-term contracts (generally between 2 and 4) while in others there is no limit to

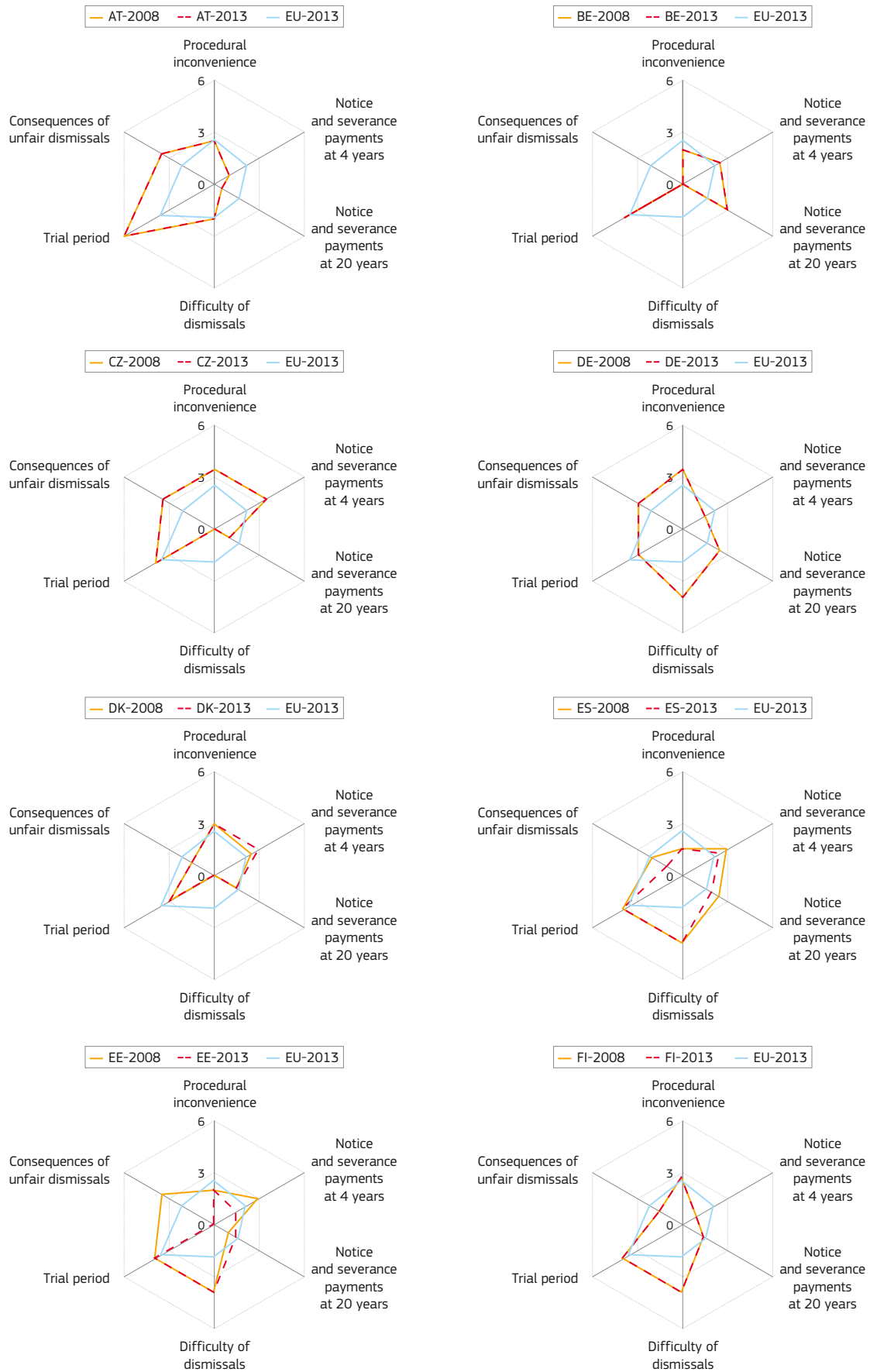
how many times the same worker can be offered a fixed-term contract. In those cases, subsequent renewals generally imply a conversion to a permanent contract except where there are objective reasons (e.g. Austria, Denmark, Hungary, Ireland). In some countries, limits on renewal and the maximum cumulative period of fixed-term contracts depend on whether the use matches pre-specified cases.

- *Maximum cumulative number of fixed-term contracts.* The cap on cumulative maximum duration may be either absent or very long (e.g. Austria, Denmark, Finland, Poland, Estonia) or rather short (between 2 and 3 years, e.g. France, Luxembourg, or Belgium if successive contracts are justified by the nature of the work). Finally, in Spain the maximum duration depends on the type of temporary contracts and may reach up to 4 years.

### EPL index cross-country comparisons for 2008 and 2013

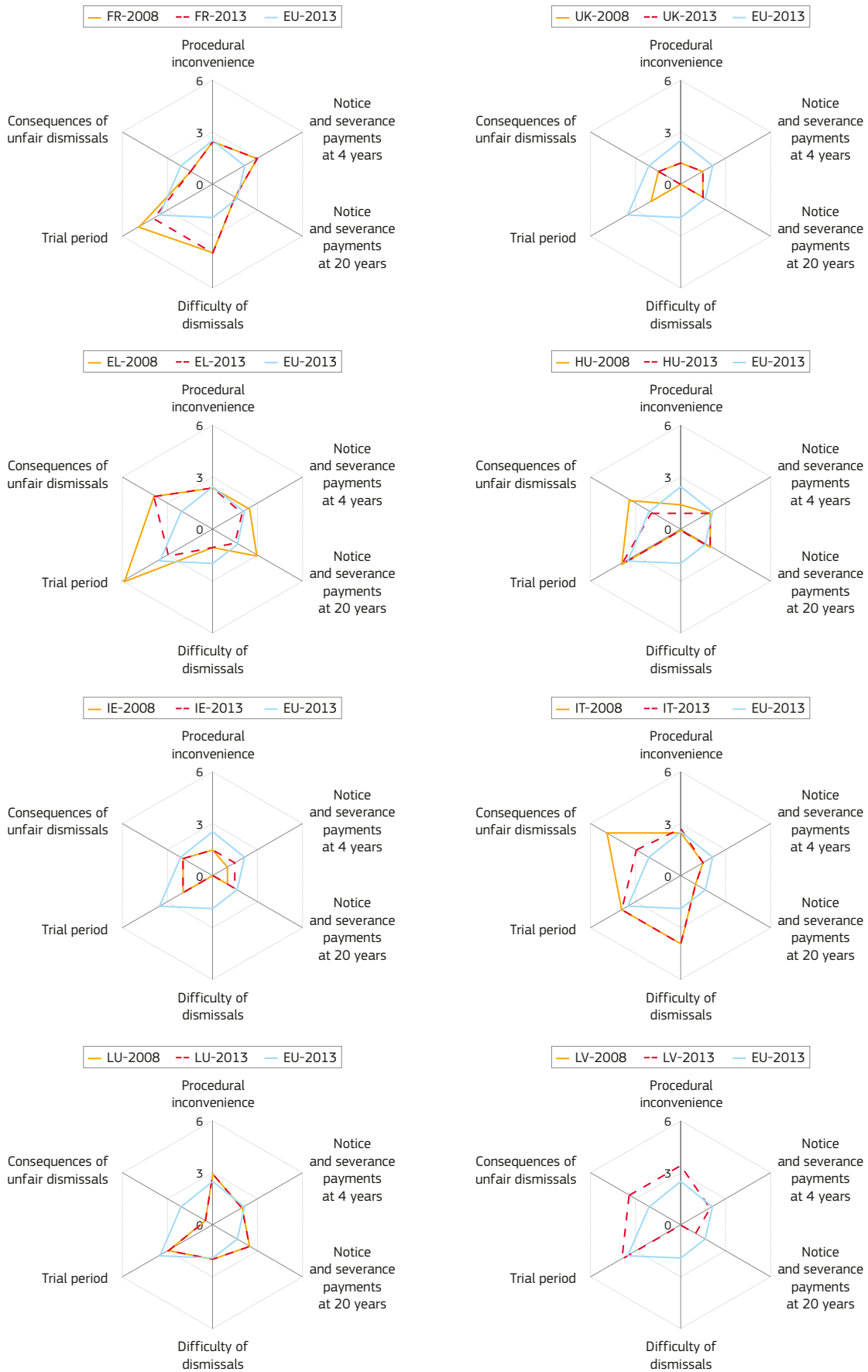
Chart 14 below shows the dimensions of EPL for regular contracts across EU countries for 2013 and 2008. The radar charts provide information about procedural inconvenience employers encounter if they intend to dismiss a worker (notification and notice period), trial period, notice and severance payments (for tenures up to 4 years and 20 years), definition of unfair dismissals and their consequences (monetary compensation and reinstatement).

Chart 14: Components of EPL index cross-country comparisons for 2008 and 2013



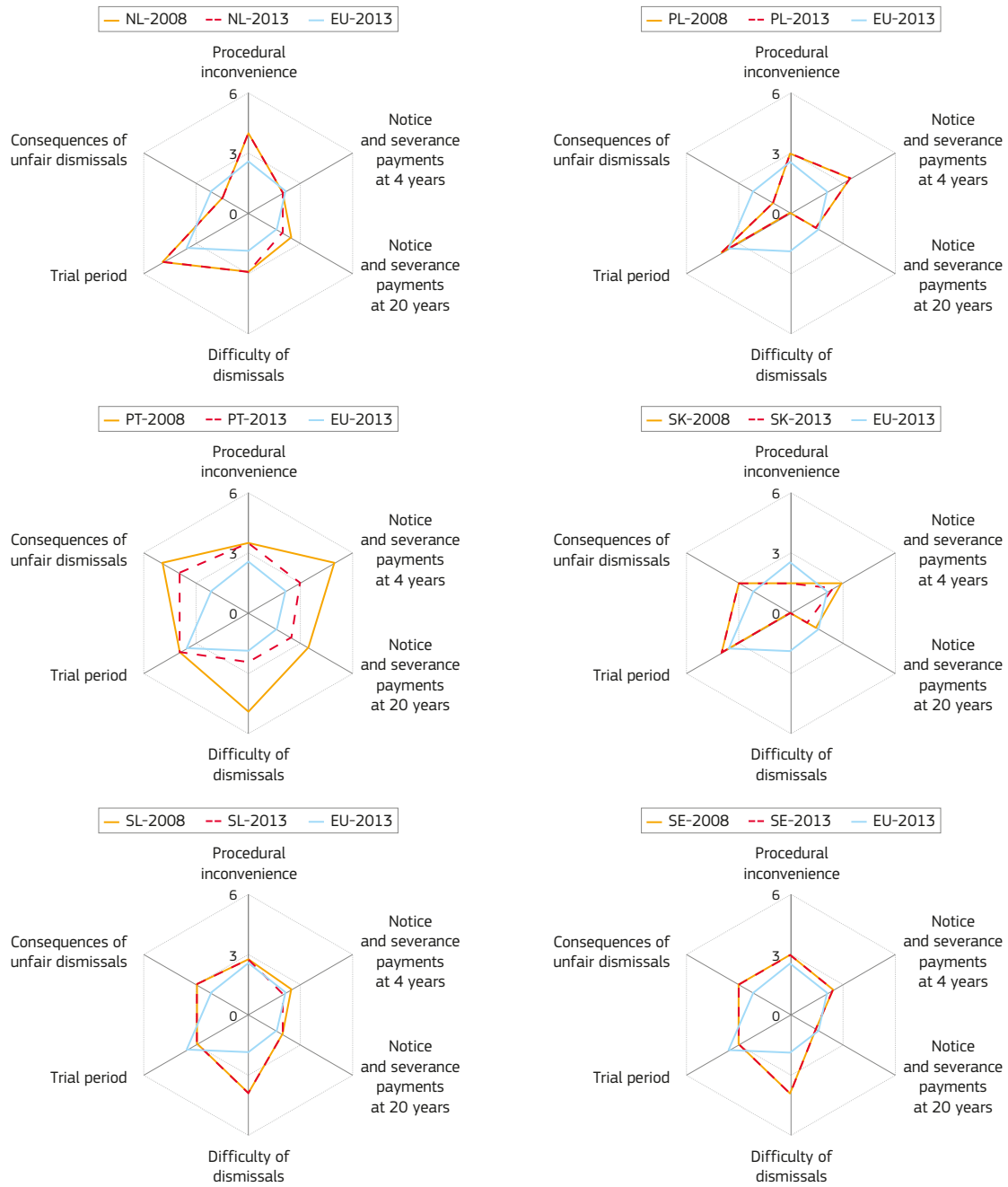
Source: OECD Employment Protection Database.

Chart 14: Components of EPL index cross-country comparisons for 2008 and 2013



Source: OECD Employment Protection Database.

Chart 14: Components of EPL index cross-country comparisons for 2008 and 2013



Source: OECD Employment Protection Database.



## ANNEX 3: WORLD BANK 'DOING BUSINESS' INDICATORS OF LABOUR MARKET REGULATION

Table 8: Difficulty of Hiring – World Bank Doing Business indicators

Member State	Fixed-term contracts prohibited for permanent tasks?	Maximum length of a single fixed-term contract (months)	Maximum length of fixed-term contracts, including renewals (months)	Minimum wage applicable to the worker assumed in the case study (USD/month)	Ratio of minimum wage to value added per worker
Austria	No	No limit	No limit	1 555.92	0.26
Belgium	No	No limit	No limit	2 368.12	0.41
Bulgaria	No	36 - Art. 68 of the Labour Code	36	233.18	0.27
Croatia	Yes	Labor Law on July 1 <sup>st</sup> , 2013 (OG 73 / 13) - No maximum duration on first time fixed term contract	No limit	534.87	0.32
Cyprus	No	There are No specific requirements for renewing a fixed-term contract but if a contract for a permanent task is for a period of more than 30 months, it may be considered as an indefinite - term contract. - Art.7 of Employees of Fixed Term (Prohibition of Unfair Treatment) Law 98(I)/2003.	30	1 250.12	0.42
Czech Republic	No	36 months - Sec. 39 of Act No 262/2006 Coll., Labor Code, as amended.	108	544.8	0.25
Denmark	No	No limit	No limit	0	0
Estonia	Yes	60 months - Art. 9 (1) New ECA	120	457.92	0.21
Finland	Yes	There is no specific maximum duration for fixed-term employment contracts. (Chap. 1 Sect. 3 - ECA) However, after 60 months a fixed-term contract is subject to the same requirements for termination as an indefinite term contract. (Chap. 6 Sect. 1 - ECA).	60	2 287.55	0.38
France	Yes	18 months; can be extended to 24 months for work abroad or in certain other specific circumstances listed at article L.1242-8 of the Labor Code	18	1 922.57	0.35
Germany	No	No maximum duration for fixed-term contract with objective cause; 24 months for fixed-term contract without objective cause (Sect. 14 para. 2 TzBfG)	24	0	0
Greece	Yes	36 months	No limit	814.75	0.29
Hungary	No	60 months with a derogation if the contract is subject to official approval, in which case the term is that which was officially approved, which may exceed 5 years, § 192 of the Act I of 2012 on the Labour Code	60	453.74	0.3
Ireland	No	No limit (PEFTWA 2003)	No limit	1 809.66	0.37
Italy	No	36 months- After this period a fixed term worker acquires the right to a permanent position in the same firm (Art.1 of the Law No 368/2001)	36	2 035.74	0.46
Latvia	Yes	36 (Sec. 45(1))	36	602.77	0.32
Lithuania	No	60 (5 years x 12 months) (Art. 109(1))	60	382.61	0.21

Member State	Fixed-term contracts prohibited for permanent tasks?	Maximum length of a single fixed-term contract (months)	Maximum length of fixed-term contracts, including renewals (months)	Minimum wage applicable to the worker assumed in the case study (USD/month)	Ratio of minimum wage to value added per worker
Luxembourg	Yes	24 months - Art. L. 122-4 (1)	24	3 000.18	0.34
Malta	No	No limit. However, the law states that a temporary worker shall be considered permanent if (i) the employee has been continuously employed under one or several fixed-term contracts for more than 4 years, and (ii) if the employer cannot provide objective reasons to justify the renewal of such a contract for a fixed term.	48	952.98	0.38
Netherlands	No	36	36	1 036.47	0.17
Poland	No	No limit. However, if a fixed-term contract is signed for extensive period not justified by objective reason, it may be considered as a breach of the so-called rules of social cohabitation. In consequence, the court may consider the contract as a contract for indefinite period. Art. 25(1) of the Polish Labour Code.	No limit	535.52	0.35
Portugal	Yes	66 months, according to Law No 76/2013, of November 7 <sup>th</sup> . Under this law, fixed-term contracts expected to terminate before November 8 <sup>th</sup> of 2015 (included those renewed under Law No 3/2012, of January 10 <sup>th</sup> ) can be renewed two more times.	66	754.09	0.29
Romania	Yes	36	60	251.28	0.23
Slovak Republic	No	24 months (Art. 48(2))	24	470.54	0.23
Slovenia	Yes	24 months (Art. 55(2))	24	1 054.91	0.38
Spain	Yes	It depends on the type of fixed-term contract: (i) for a particular task or service, the contract terminates when the service or task is completed with a maximum duration of 36 months (that can be extended up to 12 months if provided in the relevant collective bargaining agreement); (ii) due to productivity needs, the maximum duration is 12 months - Art. 15(1) (a) and (b), Workers' Statute	12	1 140.02	0.31
Sweden	No	Fixed term contracts are allowed for permanent and temporary tasks up to 2 years (24 months)	24	0	0
United Kingdom	No	No limit, but employees who have worked successive fixed term contracts for a period of four years or more will become permanent employees unless the employer can objectively justify the continued use of a fixed term arrangements.	No limit	1 371.67	0.27

Source: World Bank Doing Business indicators.

Table 9: Rigidity of hours – World Bank Doing Business indicators

Member State	50-hour workweek allowed for 2 months a year in case of a seasonal increase in workload?	Maximum working days per week	Premium for night work (% of hourly pay)	Premium for work on weekly rest day (% of hourly pay)	Major restrictions on night work?	Major restrictions on weekly holiday?	Paid annual leave for a worker with 1 year of tenure (in working days)	Paid annual leave for a worker with 5 years of tenure (in working days)	Paid annual leave for a worker with 10 years of tenure (in working days)	Paid annual leave (average for workers with 1, 5 and 10 years of tenure, in working days)
Austria	Yes	5.5	17%	100%	No	No	25	25	25	25
Belgium	Yes	6	0%	0%	Yes	Yes	20	20	20	20
Bulgaria	Yes	6	3%	0%	Yes	No	20	20	20	20
Croatia	Yes	6	10%	35%	Yes	Yes	20	20	20	20
Cyprus	Yes	5.5	0%	0%	No	No	20	20	20	20
Czech Republic	Yes	6	10%	10%	No	No	20	20	20	20
Denmark	Yes	6	0%	0%	No	No	25	25	25	25
Estonia	Yes	5	25%	0%	Yes	No	24	24	24	24
Finland	Yes	6	23%	100%	No	No	30	30	30	30
France	No	6	20%	20%	Yes	Yes	30	30	30	30
Germany	Yes	6	0%	0%	No	No	24	24	24	24
Greece	Yes	5	25%	75%	No	Yes	20	22	25	22.3
Ireland	Yes	6	0%	0%	No	No	20	20	20	20
Italy	Yes	6	15%	30%	No	No	26	26	26	26
Latvia	Yes	5.5	50%	0%	Yes	No	20	20	20	20
Lithuania	No	5.5	50%	100%	No	No	20	20	22	20.7
Luxembourg	No	5.5	0%	70%	No	Yes	25	25	25	25
Malta	No	6	0%	0%	No	No	24	24	24	24
Netherlands	Yes	5.5	0%	0%	Yes	No	20	20	20	20
Poland	Yes	5.5	20%	100%	No	No	20	20	26	22
Portugal	Yes	6	25%	50%	No	Yes	22	22	22	22
Romania	Yes	5	25%	100%	No	No	20	20	20	20
Slovak Republic	Yes	6	20%	0%	No	No	25	25	25	25
Slovenia	Yes	6	75%	50%	No	No	20	21	22	21
Spain	Yes	5.5	25%	0%	Yes	No	22	22	22	22
Sweden	Yes	5.5	0%	0%	No	Yes	25	25	25	25
United Kingdom	Yes	6	0%	0%	No	No	28	28	28	28

Source: World Bank Doing Business indicators.

Table 10: Difficulty of redundancy – World Bank Doing Business indicators

Member State	Maximum length of probationary period (months)	Dismissal due to redundancy allowed by law?	Third-party notification if 1 worker is dismissed?	Third-party approval if 1 worker is dismissed?	Third-party notification if 9 workers are dismissed?	Third-party approval if 9 workers are dismissed?	Retraining or reassignment obligation before redundancy?	Priority rules for redundancies?	Priority rules for reemployment?
Austria	1	Yes	Yes	No	Yes	No	No	Yes	Yes
Belgium	0	Yes	No	No	No	No	No	No	No
Bulgaria	6	Yes	No	No	No	No	No	No	No
Croatia	6	Yes	Yes	No	Yes	No	Yes	Yes	Yes
Cyprus	24	Yes	Yes	No	Yes	No	Yes	No	Yes
Czech Republic	3	Yes	No	No	No	No	No	No	No
Denmark	3	Yes	No	No	No	No	No	No	No
Estonia	4	Yes	No	No	No	No	Yes	Yes	No
Finland	6	Yes	No	No	No	No	Yes	No	Yes
France	4	Yes	No	No	Yes	No	Yes	Yes	Yes
Germany	6	Yes	Yes	No	Yes	No	Yes	Yes	No
Greece	12	Yes	No	No	Yes	Yes	No	Yes	No
Hungary	3	Yes	No	No	No	No	No	No	No
Ireland	12	Yes	No	No	Yes	No	No	No	No
Italy	2	Yes	Yes	No	Yes	No	Yes	Yes	Yes
Latvia	3	Yes	No	No	No	No	Yes	Yes	No
Lithuania	3	Yes	No	No	No	No	Yes	Yes	No
Luxembourg	6	Yes	Yes	No	Yes	No	No	No	Yes
Malta	6	Yes	No	No	No	No	No	Yes	Yes
Netherlands	2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Poland	3	Yes	No	No	No	No	Yes	Yes	Yes
Portugal	3	Yes	Yes	No	Yes	No	Yes	Yes	Yes
Romania	3	Yes	No	No	No	No	Yes	Yes	Yes
Slovak Republic	3	Yes	Yes	No	Yes	No	Yes	No	No
Slovenia	6	Yes	No	No	No	No	Yes	Yes	No
Spain	2	Yes	Yes	No	Yes	No	No	No	No
Sweden	6	Yes	No	No	Yes	No	Yes	Yes	Yes
United Kingdom	6	Yes	No	No	No	No	No	No	No

Source: World Bank Doing Business indicators.

Table 11: Redundancy costs indicators (weeks) – World Bank Doing Business indicators

Member State	Notice period for redundancy dismissal for a worker with 1 year of tenure	Notice period for redundancy dismissal for a worker with 5 years of tenure	Notice period for redundancy dismissal for a worker with 10 years of tenure	Notice period for redundancy dismissal (average for workers with 1, 5 and 10 years of tenure)	Severance pay for redundancy dismissal for a worker with 1 year of tenure	Severance pay for redundancy dismissal for a worker with 5 years of tenure	Severance pay for redundancy dismissal for a worker with 10 years of tenure	Severance pay for redundancy dismissal (average for workers with 1, 5 and 10 years of tenure)
Austria	2	2	2	2	0	0	0	0
Belgium	8	18	33	19.7	0	0	0	0
Bulgaria	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Croatia	4.3	8.7	10.7	7.9	0	7.2	14.4	7.2
Cyprus	2	7	8	5.7	0	0	0	0
Czech Republic	8.7	8.7	8.7	8.7	8.7	13	13	11.6
Denmark	0	0	0	0	0	0	0	0
Estonia	4.3	8.6	12.9	8.6	4.3	4.3	4.3	4.3
Finland	4.3	8.7	17.3	10.1	0	0	0	0
France	4.3	8.7	8.7	7.2	0.9	4.3	8.7	4.6
Germany	4	8.7	17.3	10	2.2	10.8	21.7	11.6
Greece	0	0	0	0	8.7	13	26	15.9
Hungary	4.3	6.4	7.9	6.2	0	8.7	13	7.2
Ireland	1	4	6	3.7	0	11	21	10.7
Italy	2.9	4.3	6.4	4.5	0	0	0	0
Latvia	4.3	4.3	4.3	4.3	4.3	8.7	13	8.7
Lithuania	8.7	8.7	8.7	8.7	8.7	17.3	21.7	15.9
Luxembourg	8.7	17.3	26	17.3	0	4.3	8.7	4.3
Malta	2	8	12	7.3	0	0	0	0
Netherlands	4.3	8.7	13	8.7	0	0	0	0
Poland	4.3	13	13	10.1	4.3	8.7	13	8.7
Portugal	4.3	8.6	10.7	7.9	1.7	8.6	17.1	9.1
Romania	4	4	4	4	0	0	0	0
Slovak Republic	8.7	13	13	11.6	0	8.7	13	7.2
Slovenia	4.3	5.1	6.6	5.3	0.9	4.3	10.8	5.3
Spain	2.1	2.1	2.1	2.1	2.9	14.3	28.6	15.2
Sweden	4.3	13	26	14.4	0	0	0	0
United Kingdom	1	5	10	5.3	0	3.5	8.5	4

Source: World Bank Doing Business indicators.



Table 12: Social protection schemes and benefits – World Bank Doing Business indicators

Member State	Availability of unemployment protection scheme?	Health insurance existing for permanent employees?
Austria	Yes	Yes
Belgium	Yes	Yes
Bulgaria	Yes	Yes
Croatia	Yes	Yes
Cyprus	Yes	No
Czech Republic	Yes	No
Denmark	Yes	No
Estonia	Yes	No
Finland	Yes	Yes
France	Yes	Yes
Germany	Yes	Yes
Greece	Yes	Yes
Hungary	Yes	Yes
Ireland	Yes	No
Italy	Yes	Yes
Latvia	Yes	No
Lithuania	Yes	No
Luxembourg	Yes	Yes
Malta	Yes	No
Netherlands	Yes	No
Poland	Yes	No
Portugal	Yes	No
Romania	Yes	Yes
Slovak Republic	Yes	Yes
Slovenia	Yes	Yes
Spain	Yes	Yes
Sweden	Yes	Yes
United Kingdom	Yes	Yes

Source: World Bank Doing Business indicators.

## ANNEX 4: WORLD BANK DOING BUSINESS INDICATORS ON CONTRACT ENFORCEMENT

The World Bank Doing Business indicators on enforcing contracts measure the efficiency of a country's judicial system in resolving a commercial dispute. They assess the efficiency of the judicial system by following the evolution of a commercial sale dispute over the quality of goods and tracking the time, cost and number of procedures involved from the moment the plaintiff files the lawsuit until payment is received (Table 13). The data is built by following the step-by-step evolution of a commercial sale dispute

before local courts. The data is collected through study of the codes of civil procedure and other court regulations as well as questionnaires completed by local litigation lawyers and judges. The ranking of economies on the ease of enforcing contracts is determined by sorting their distance to frontier scores for enforcing contracts. These scores are the simple average of the distance to frontier scores for each of the component indicators. The most recent round of data collection was completed in June 2014.

Effective commercial dispute resolution has many benefits for businesses, as efficient and transparent courts protect economic rights and can encourage new business relationships. Speedy trials are

essential for small enterprises, which may lack the resources to stay in business while awaiting the outcome of a long court dispute. Studies have shown that in countries with slower courts, on average, firms tend to have less bank financing for new investments while in countries with good contract enforcement firms tend to produce and export relatively more customised products, especially in industries where the continuation of the relationship is most important. Other research suggests that foreign direct investment tends to be greater where the cost of contract enforcement in debt collection and property eviction cases is lower, particularly when the host economy is more indebted.

Table 13: What do the enforcing contracts indicators measure?

Procedures to enforce a contract through the courts (number)
Steps to file and serve the case
Steps for trial and judgment
Steps to enforce the judgment
Time required to complete procedures (calendar days)
Time to file and serve the case
Time for trial and to obtain the judgment
Time to enforce the judgment
Cost required to complete procedures (% of claim)
Average attorney fees
Court costs
Enforcement costs

Table 14: World Bank – Enforcing contracts rank

Member State	WB enforcing contracts rank	DTF	Time (days)	Cost (% of claim)	Procedures (number)
Luxembourg	2	85.7	321	9.7	26
Austria	5	81.55	397	18	25
France	10	77.67	395	17.4	29
Belgium	10	77.67	505	17.7	26
Germany	13	76.74	394	14.4	31
Lithuania	14	75.85	300	23.6	31
Latvia	16	75.59	469	23.1	27
Finland	17	75.58	375	13.3	33
Ireland	18	75.47	650	26.9	21
Netherlands	19	75.1	514	23.9	26
Hungary	20	73.36	395	15	34
Sweden	21	72.43	321	31.2	31
Portugal	27	69.65	547	13.8	34
Estonia	32	68.91	425	21.9	35
Denmark	34	68.79	410	23.3	35
United Kingdom	36	68.08	437	39.9	29
Czech Republic	37	68	611	33	27
Romania	51	64.95	512	28.9	34
Poland	52	64.83	685	19.4	33
Croatia	54	64.81	572	13.8	38
Slovak Republic	55	64.68	545	30	33
Spain	69	62.65	510	18.5	40
Bulgaria	75	61.27	564	23.8	38
Malta	107	56.27	505	35.9	40
Cyprus	113	54.17	735	16.4	43
Slovenia	122	52.4	12 700	12.7	32
Italy	147	45.61	11 850	23.1	37
Greece	155	43.6	15 800	14.4	38

Source: World Bank Doing Business.

Table 15: World Bank – Availability of specialised courts

Member State	Availability of courts or court sections specializing in labor disputes?
Austria	Yes
Belgium	Yes
Bulgaria	No
Croatia	No
Cyprus	Yes
Czech Republic	No
Denmark	No
Estonia	No
Finland	No
France	Yes
Germany	Yes
Greece	Yes
Hungary	No
Ireland	Yes
Italy	Yes
Latvia	No
Lithuania	No
Luxembourg	Yes
Malta	Yes
Netherlands	Yes
Poland	Yes
Portugal	Yes
Romania	Yes
Slovak Republic	No
Slovenia	Yes
Spain	Yes
Sweden	Yes
United Kingdom	Yes

Source: World Bank Doing Business.

Table 16: World Bank assessment of the overall judicial system, the level of automation in the court system, the availability of alternative dispute resolution mechanisms and the availability of case management

Member State	"In the measured city, is there a small claims court or a fast-track procedure for small claims? A small claims court is a court with limited jurisdiction to hear cases with relatively small amounts of money. These courts usually have relaxed rules of civil procedure, relaxed rules of evidence and are characterized by the use of plain language."	"Is voluntary post-filing mediation available? Voluntary post-filing mediation is a type of mediation that originates from the court after the case is filed. Voluntary refers to the possibility for the parties to opt out."	"Is case management available within the competent court? Case management refers to a set of principles or techniques for controlling the movement of cases through the court, enhancing procedural efficiency and facilitating the day-to-day activities of judges, court users and court staff. Commonly used techniques in case management include setting tight timelines for key steps in processing cases, setting firm and credible hearing dates, arranging pretrial and scheduling conferences and requiring early disclosure."	"If case management is available within the competent court, are any of its components automated? Automated case management techniques could offer: (i) the ability for lawyers and judges to effectively track the status of cases and their position in the court process from the moment a case is filed until the moment the case is resolved; (ii) detailed workload statistics and management reports; (iii) the ability to monitor case processes."	"Is a pre-trial conference part of the case management system before the competent court? A pre-trial conference is a meeting designed to narrow down contentious issues and evidentiary questions before the trial. Its purpose is to expedite the trial process while discouraging unnecessary pretrial motions or other delay tactics."	Are Supreme Court and Appellate Court judgments published online or in official gazettes?	Fearing that the defendant may dissipate assets, the jurisdiction or become insolvent, would the plaintiff be allowed to request and obtain attachment of the defendant's movable assets prior to obtaining a judgment?	Is it possible to carry out service of process electronically (by e-mail, SMS, fax, etc.)?
Austria	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Belgium	Yes	Yes	Yes	No	No	No	Yes	No
Bulgaria	No	Yes	Yes	Yes	No	No	Yes	No
Croatia	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Cyprus	No	Yes	No	No	Yes	Yes	Yes	No
Czech Republic	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Denmark	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Estonia	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Finland	No	Yes	Yes	Yes	Yes	Yes	Yes	No
France	Yes	Yes	Yes	No	No	Yes	Yes	No
Germany	Yes	Yes	Yes	No	No	No	Yes	No
Greece	Yes	Yes	No	No	No	No	Yes	No
Hungary	Yes	No	Yes	No	No	No	Yes	No
Ireland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Italy	Yes	Yes	Yes	Yes	No	No	Yes	No
Latvia	Yes	No	Yes	Yes	No	No	Yes	Yes
Lithuania	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Luxembourg	Yes	No	Yes	No	No	No	Yes	No
Malta	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Netherlands	Yes	Yes	Yes	Yes	No	No	Yes	No
Poland	Yes	Yes	Yes	Yes	No	No	Yes	No
Portugal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Romania	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Slovak Republic	Yes	Yes	No	No	No	No	Yes	No
Slovenia	Yes	Yes	Yes	No	No	No	Yes	No
Spain	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Sweden	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
United Kingdom	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

## REFERENCES

- Acharya, V. V., Baghai, R. P. and Subramanian, K. V., 'Wrongful Discharge Laws and Innovation', *The Review of Financial Studies*, 27(1), pp. 301-346, Oxford University Press, 2014.
- Adams, Z., and Deakin, S., 'Re-regulating Zero hours Contracts', Institute of Employment Rights, London, 2014.
- Aleksynska, M. and Cazes, S., 'Comparing indicators of labour market regulations across databases: A post-scriptum to the employing workers debate', Conditions of work and employment series No. 50, ILO, 2014.
- Bauernschuster, S., Falck, O., and Heblich, S., 'The Impact of Continuous Training on a Firm's Innovations, Swiss Leading House, Working paper No 24, 2008.
- Bertola, G. and Rogerson, R., 'Institutions and labor reallocation', *European Economic Review*, Elsevier, vol. 41(6), pp. 1147-1171, June 1997.
- Bertola, G., 'Labor Markets in the European Union', mimeo, 1999.
- Bertola, G., Blau F. and Kahn L., 'Labor market institutions and demographic employment patterns', *Journal of Population Economics*, Springer, vol. 20(4), pp. 833-867, October 2007.
- Blanchard, O. J. and Tirole, J., 'Contours of Employment Protection Reform', MIT Department of Economics Working Paper No. 03-35, 2003.
- Boeri, T., Garibaldi, P. and Moen, E. R., 'The economics of severance pay', IZA Discussion Paper No. 7455, IZA, 2013.
- Bulow, J. and Summers, L., 'A Theory of Dual Labor Markets with Application to Industrial Policy, Discrimination, and Keynesian Unemployment', *Journal of Labor Economics*, vol. 4(3), pp. 376-414, 1986.
- Burchell, B., 'Flexicurity as a moderator of the relationship between job insecurity and psychological well-being', *Cambridge Journal of Regions Economy and Society*, 2(3), pp. 365-378, 2009.
- Cahuc, P. and Kramarz, F. 'De la precarité vers la mobilité: vers une sécurité sociale professionnelle', La Documentation Française, 2004.
- Collins, H., 'Theories of Rights as Justifications for Labour Law', in Guy Davidov and Brian Langille (eds), *The Idea of Labour Law*, Oxford, Oxford University Press, 2011.
- Davies, A. C. L., 'A brief history of labour law', Perspectives on Labour Law, Cambridge University Press, pp. 3-18, 2004.
- Deakin, S., 'New forms of employment: implications for EU Law – the law as it stands', Keynote paper, 7<sup>th</sup> Annual Legal Seminar, European Labour Law Network (ELLN), The Hague, 27-28 November 2014.
- Djankov, S., La Porta, R., Lopez-de-Silanes, F., and Shleifer, A., 'Courts', *Quarterly Journal of Economics*, 118(2), pp. 453-517, 2003.
- Doeringer, P. B. and Piore, M. J., *Internal Labor Markets and Manpower Analysis*, D.C. Heath and Company, Massachusetts, 1971.
- Dolado, J., *EU Dual Labour Markets: Consequences and Potential Reforms*, Survey Report FP7 Project COEURE, 2015, available at <http://www.coeure.eu/wp-content/uploads/EU-Dual-Labour-Markets.pdf>.
- Eurofound, *Changes to Wage-Setting Mechanisms in the Context of the Crisis and the EU's New Economic Governance Regime*, Dublin, 2014.
- European Commission, 'Agenda for New Skills and Jobs', COM(2010)682 final, 2010 at <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52010DC0682>.
- European Commission, *Industrial Relations in Europe 2014*, Publications Office of the European Union, Luxembourg, 2015.
- Garibaldi, P., 'Search unemployment with advance notice', CEPR Discussion Papers 2164, C.E.P.R. 1999.
- Gash, V., 'Bridge or trap? Temporary workers' transitions to unemployment and to the standard employment contract' *European Sociological Review*, 24, pp. 651-668, 2008.
- Hardin, G., 'The Tragedy of the Commons', *Science, New Series*, Vol. 162, No. 3859, pp. 1243-1248, 1968.
- Holtgrewe, U., Kiron, V. and Ramioul, M., (eds) *Hard Work in New Jobs: The Quality of Work and Life in European Growth Sectors*, FP7 Project Work and Life Quality in New and Growing Jobs (WALQING), Palgrave Macmillan, 2015.
- Jansen, A., Strupler Leiser, M., Wenzelmann, F. and Wolter, S. C., 'Labour market deregulation and apprenticeship training: A comparison of German and Swiss employers', *European Journal of Industrial Relations*, 2015.
- Kleinknecht, A., van Schaik, F. N., and Zhou, H., 'Is flexible labour good for innovation? Evidence from firm-level data', *Cambridge Journal of Economics*, 38(5), pp. 1207-1219, 2014.
- Kovacs, J., 'Jobs First? In Search of Quality', Working Paper FP7 Project NEUJOBS, 2012.
- La Porta R., Lopez-De-Silanes F. and Shleifer A., 'The economic consequences of legal origins', *Journal of Economic Literature*, 46, 2, pp. 285-332, 2008.
- Lewis, R., 'The historical development of labour law', *British Journal of Industrial Relations*, Vol. 14, Issue 1, pp. 1-17, March 1976.
- Lorenzani D. and Lucidi, F., 'The economic impact of civil justice reforms', European Economy, Economic Papers No. 530, European Commission, 2014.
- Lutz, B. and Sengenberger, W., 'Arbeitsmarktstrukturen und öffentliche Arbeitsmarktpolitik', Institut für sozialwissenschaftliche Forschung, München, Institut für sozialwissenschaftliche Forschung, München, 1974.
- MacLeod, W. B., 'Great expectations: Law, employment contracts, and labor market performance', IZA Discussion Paper No. 5357, IZA, 2010.
- Mandl, I., 'New forms for employment', Eurofound, 7<sup>th</sup> Annual Legal Seminar, European Labour Law Network (ELLN), The Hague, 27-28 November 2014.
- Morin, M. L., Dupuy, Y. and Larré, F., 'Prestation de service et activité de travail', *Cahier Travail Emploi*, La documentation française, 1999.
- Mortensen, D. T. and Pissarides, C. A., 'Job creation and job destruction in the



- Theory of Unemployment', *The Review of Economic Studies*, Vol. 61, No. 3, pp. 397-415, July 1994.
- Nozick, R., *Anarchy, State, and Utopia*, Basic Books, US, 1974.
- OECD, OECD Synthetic Indicators of Employment Protection, <http://www.oecd.org/els/emp/oecdindicatorsofemploymentprotection.htm>.
- OECD, 'Non-regular employment, job security and the labour market divide' *OECD Employment Outlook*, 2014, at [http://www.oecd-ilibrary.org/employment/oecd-employment-outlook-2014/non-regular-employment-job-security-and-the-labour-market-divide\\_empl\\_outlook-2014-7-en](http://www.oecd-ilibrary.org/employment/oecd-employment-outlook-2014/non-regular-employment-job-security-and-the-labour-market-divide_empl_outlook-2014-7-en).
- OECD, 'Protecting jobs, enhancing flexibility: A new look at employment protection legislation', *OECD Employment Outlook*, 2013, at [http://www.oecd-ilibrary.org/employment/oecd-employment-outlook-2013\\_empl\\_outlook-2013-en](http://www.oecd-ilibrary.org/employment/oecd-employment-outlook-2013_empl_outlook-2013-en).
- OECD, 'Employment Protection regulation and Labour Market Performance', *OECD Employment Outlook*, 2004, at <http://www.oecd.org/els/emp/34846856.pdf>.
- OECD, 'Employment Protection regulation and Labour Market Performance', *OECD Employment Outlook*, 1999, at <http://www.oecd.org/els/emp/2079974.pdf>.
- Ostrom, E., 'Collective Action and the Evolution of Social Norms', *The Journal of Economic Perspectives*, Vol. 14, No. 3, pp. 137-158, Summer 2000.
- Pinfield, L., *The Operation of Internal Labor Markets*, Plenum Press, New York, 1995.
- Piore, M. J., 'The Impact of the Labor Market upon the Design and Selection of Productive Techniques within the Manufacturing Plant,' *Quarterly Journal of Economics*, Vol. 82, pp. 602-20, November 1968.
- Piore, M. J. and Berger, S. *Dualism and Discontinuity in Industrial Society*, UK: Cambridge University Press, 1980.
- Posner, R., *Economic Analysis of Law*, 6<sup>th</sup> Edition, Little, Brown and Company, Boston, US, 6<sup>th</sup> edition ed., 2003.
- Rawls, J., *A Theory of Justice*, Cambridge, Massachusetts: Harvard University Press, 1971.
- Reich, M., Gordon, D. M. and Edwards, R. C., 'A Theory of Labor Market Segmentation', *The American Economic Review*, Vol. 63, No 2, Papers and Proceedings of the Eighty-fifth Annual Meeting of the American Economic Association, May 1973, pp. 359-365.
- Ryan, P., 'Segmentation, duality and the internal labour market' in Wilkinson, F. (ed.), *The Dynamics of Labour Market Segmentation*, 1981.
- Seweryński, M., *Collective Agreements and Individual Contracts of Employment*, Michal Sewerynski (ed.). Kluwer Law International, 2003.
- Simon, H. A., 'A Formal Theory of the Employment Relationship', *Econometrica*, 19, 293-305, 1951.
- Smith, A., *An Inquiry into the Nature and Causes of the Wealth of Nations*, 1776.
- Standing, G., *The Precariat: The New Dangerous Class*, Bloomsbury, 2011.
- Venn, D., 'Legislation, Collective Bargaining and Enforcement: Updating the OECD Employment Protection Indicators', *OECD Social, Employment and Migration Working Papers*, No 89, OECD Publishing, 2009.
- Visser, J., 'Wage bargaining institutions – from crisis to crisis', European Commission Directorate-General for Economic and Financial Affairs, Economic Papers, 488, Brussels, 2013.
- Wargon, E., 'Evolution des formes d'emploi, et politiques publiques', Conseil d'Orientation pour l'Emploi, January 2014, available at [http://www.coe.gouv.fr/IMG/pdf/COE\\_Evolution\\_des\\_formes\\_d\\_emploi\\_23\\_01\\_2014\\_Mode\\_de\\_compatibilite\\_.pdf](http://www.coe.gouv.fr/IMG/pdf/COE_Evolution_des_formes_d_emploi_23_01_2014_Mode_de_compatibilite_.pdf).
- Williamson, O., *The Economic Institutions of Capitalism*, New York, Free Press, 1985.
- World Bank Group, 'Doing Business 2015: Going Beyond Efficiency' and previous reports at <http://www.doing-business.org/reports/global-reports/doing-business-2015>.
- World Economic Forum, 'World Competitiveness Report 2014-2015' and previous reports <http://www.weforum.org/reports/global-competitiveness-report-2014-2015>.



# PART II

Improving labour  
markets' efficiency



# Preventing and fighting long-term unemployment<sup>(1)</sup>

## 1. INTRODUCTION AND SUMMARY

Six years after a double dip recession and a long period of low growth and low job demand, the EU is confronted by high levels of long-term unemployment and youth unemployment, with more than half the unemployed having been out of work for more than 12 months.

Long-term unemployment (LTU) now affects some 12.4 million people (almost 5% of the active EU population), with more than 6 million having been jobless for at least two consecutive years (European Commission, 2015a). Overall rates of unemployment began to decline somewhat in 2013, but long-term unemployment rates have only now ceased rising, with a great deal of variation both between Member States and between regions within them.

LTU has been identified by both the Council (ECOFIN and EPSCO) and the ECB<sup>(2)</sup> as a serious impediment to growth, and highlighted as a key policy challenge in the 2016 Annual Growth Survey. Within the European Employment Strategy, the Guidelines for Member State employment policies propose a significant reduction in the number of LTU 'by means of

comprehensive and mutually reinforcing strategies, including the provision of specific active support to long-term unemployed to return to the labour market'<sup>(3)</sup>.

Policy actions at Member State level are seen as uneven and fragmented, with too great a focus on coverage and not enough on addressing the problems of discontinuity and activation design<sup>(4)</sup>. Insufficient activation support, discontinuities in service delivery and the limited effectiveness of activation programme designs are seen as major explanations for the sluggish improvement of LTU labour market performance.

Recognising the importance of an EU level policy response, the Council invited the Commission 'to develop proposals to help support the long-term unemployed'. As a result, a Commission proposal for a Council Recommendation<sup>(5)</sup> was adopted on September 17, 2015 with the aim of engaging all Member States in actions that support a general improvement in the efficiency and modernisation of the

LTU integration process. The objective is to draw on the positive lessons from cooperative processes of mutual learning at EU level and to turn this into an action framework that can raise levels of service delivery performance in all Member States, and contribute to overall upward EU convergence.

The EU LTU initiative aims to support Member State activity in three specific areas:

- increasing the scale and effectiveness of active support for the long-term unemployed;
- ensuring greater continuity in the services provided by relevant public or outsourced services;
- increasing the effectiveness of interventions targeted on both the long term unemployed and potential employers.

This chapter begins with an overview of the current situation of the long-term unemployed in the EU and the main characteristics of those affected. It also makes an assessment of the policies that are currently in place to tackle the LTU problem. Building on existing analytical work (e.g. ESDE 2012 and 2014)<sup>(6)</sup> it seeks to identify the mix of policies that appear to have had the most positive

<sup>(1)</sup> By Lina Salanauskaitė, Filip Tanay and Isabelle Maquet and with contributions from Petrica Badea, David Arranz, Alphametrics (Andy Fuller & Duncan Coughtrie) and CEDEFOP (Konstantinos Pouliakas).

<sup>(2)</sup> <http://www.ecb.europa.eu/press/keyword/date/2014/html/sp140822.en.html>

<sup>(3)</sup> European Commission (2015). *Integrated guidelines to the Proposal for a COUNCIL DECISION on guidelines for the employment policies of the Member States*, COM (2015) 98 final.

<sup>(4)</sup> Proposal for a Council Recommendation on the integration of the long-term unemployed into the labour market COM(2015) 462 - Commission Staff Working Document - Analytical Supporting Document.

<sup>(5)</sup> Commission Proposal for a Council Recommendation on the integration of the long-term unemployed into the labour market COM(2015) 462.

<sup>(6)</sup> ESDE refers to Employment and Social Developments in Europe, in particular European Commission, 2012a and 2014f.



impact in terms of both an increase in the number of LTU returning to employment and minimising the transitions from short-term unemployment (STU) to long-term unemployment (LTU).

The current analysis builds on past work but looks in greater depth at the evidence:

- firstly it focuses on those groups (in terms of age, gender, education, country of origin) that have been most affected by the crisis and become LTU or inactive;
- secondly it explores the difference between the characteristics of the LTU compared to the short term unemployed (STU);
- thirdly it improves the Labour Market Institutions Index (LMII) developed in ESDE 2014 in ways that enable it to focus on performance relating to combatting and preventing LTU;
- fourthly it improves the analysis of the policy interventions that have helped combat LTU most effectively across Member States by controlling for a range of country-specific socio-economic developments as well as personal characteristics like age, gender, or prior work experience.

Overall these analyses demonstrate that the Member States that have made the greatest investment in labour market activation and support measures have achieved the best results in terms of preventing LTU, combatting existing LTU, or preventing the LTU from falling into inactivity even when taking into account the different macroeconomic context of each Member State. Moreover, in Member States with the highest ALMP expenditure, the best labour market performance outcomes are observed when high levels of participation in lifelong learning/training and strong job search requirements are included as part of their unemployment benefit schemes, combined with widespread coverage and relatively low eligibility criteria.

In this respect the analysis shows that many of the policy interventions made in 2014 failed to cover the different segments of the LTU population equally or adequately. The young, the low-skilled and third-country migrants faced the

highest risk of being LTU before the crisis and were then the hardest hit during the crisis, while the old and low-skilled now have the least chance of returning to work.

The policy interventions that are seen to have a major positive impact in aiding the long-term unemployed back to stable jobs are three-fold: lifelong learning/training, PES registration and receiving unemployment benefits<sup>(?)</sup>. The impact of the last two policy interventions depends, however, on the quality of their delivery and design, and can vary across target groups. For example, low education levels are more of a hindrance to entering employment for young people than they are for older LTU.

The chapter concludes that a comprehensive policy action is needed, combining activation and support that is linked to the economic cycle, extending both expenditure on, and coverage of, support (e.g. unemployment benefits) and activation measures (e.g. ALMPs and lifelong learning/training) during economic downturns. In that respect, however, the analysis also highlights the fact that group-specific and country-specific policy interventions remain key factors that influence the extent to which the long-term unemployed can be helped back into stable jobs.

## 2. LONG-TERM UNEMPLOYMENT IN THE EU: SNAPSHOT OF PEOPLE AND POLICIES

### 2.1. The challenge of long-term unemployment

The consequences of long-term unemployment (LTU) vary over time and between Member States and can likewise differ in terms of both its duration and in terms of the education, age, gender and nationality of those who are most affected.

(?) While it would have been very desirable to see if the LTU are not only covered by unemployment benefits but also by social assistance, due to most unemployment benefit eligibility expiring after the first year of unemployment, this was unfortunately not possible as the EU-LFS does not provide this data and EU-SILC does not measure durations of unemployment and hence does not distinguish between STU and LTU.

Levels of long-term unemployment are at record highs and, even when growth picks up, the current prospects are not particularly encouraging. This is due to the fact that exit rates from LTU tend to be less sensitive to upturns in the economic cycle than those of the short-term unemployed (STU) (Krueger et al., 2014), highlighting the scale of the challenge in reintegrating the EU's 12.4 million LTU back into employment.

People who have been unemployed for a long time are more likely to suffer from skills atrophy and obsolescence (combined with a failure to acquire new on-the-job skills). They are also likely to suffer more general adverse long-term consequences, such as negative signalling effects for potential employers, low self-esteem, discouragement and other 'scarring' effects (e.g. lower employment and earnings potential, inhibited professional development, poor health and well-being outcomes) (Cedefop, 2013; European Commission, 2014; Box 1). Over time, this can lead to the permanent alienation or departure from the labour market of those who become LTU with consequent risks of poverty, social exclusion and material deprivation (European Commission, 2012a).

The economic and welfare costs of persistent unemployment are large for the economy as a whole, as well as for those directly affected, since social assistance systems generally 'kick in' when the long-term unemployed exhaust their rights to unemployment benefits (UB). This is further exacerbated by the fact that for example older LTU may be associated with increased social security costs, insofar as they make premature exits from the labour force by going into early retirement or via disability schemes.

Thus, while positive developments in the economy have the potential to reduce the number of LTU (as indicated by the econometric analysis in Section 4), there is clearly a high risk that the LTU benefit only slowly due to their unfavourable labour market characteristics and their lower employability compared to the STU. This then turns LTU into a structural rather than just a cyclical challenge, with the risk of those affected becoming discouraged and falling into inactivity just at a time when projected demographic developments over the coming years and decades suggest that the EU economy needs to make the

maximum use of all its potential labour resources (Peschner and Fotakis, 2013; Peschner, 2012).

## 2.2. The size and dynamics of the LTU challenge: reaching historical highs

While unemployment in the EU-28 as a whole began to decline somewhat in 2013, this was largely due to the most employable workers, rather than the long-term unemployed, finding jobs. In fact, long-term unemployment (LTU) has increased steadily since the beginning of the recession (Chart 1) with the very long-term unemployed (VLTU – those unemployed for more than two consecutive years) having closely followed the LTU trend, and now accounting for more than 30% of the unemployed and over 60% of those who were long-term unemployed at the end of 2014 (European Commission, 2015a).

In the first phase of the economic downturn, unemployment was mainly the result of a strong increase in (cyclically adjusted) dismissal rates (e.g. Spain, Lithuania, Romania, Greece, Portugal, Slovenia, Cyprus) (Arpaia, Kiss and Turrini, 2014). Over time, however, while inflows into unemployment have reduced and returned to near their pre-crisis level, the job finding rates have remained low for both the short and long-term unemployed.

As a result of these developments, the likelihood of remaining unemployed after one year has increased in the post-crisis years, leaving 38% of those who became jobless in 2012 still looking for a job in 2013, compared to 27% between 2007/08. This persistence rate of unemployment also increased for the LTU, but at much higher levels (63% between 2012/13, compared

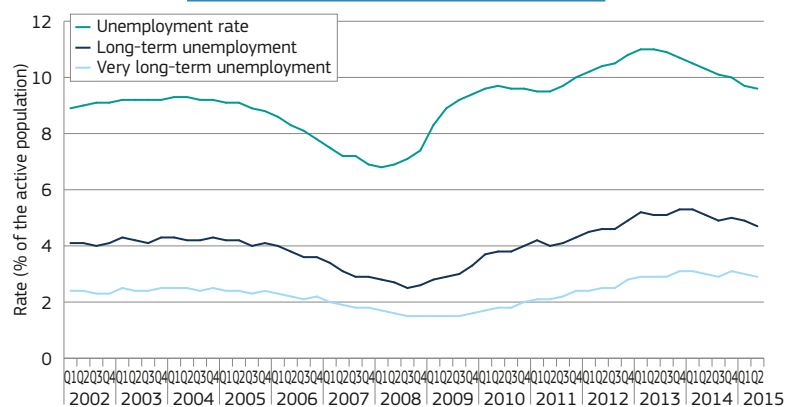
### Box 1: LTU and Health: The longer the duration of unemployment, the worse one's (self-reported) health gets

A forthcoming study (Brenner, 2015) analyses the impact of long-term unemployment on self-perceived health in EU Member States.

The analysis used a regression model to examine the relationship between the duration of unemployment and self-perceived health (the sum of respondents who indicated that their health was either “bad” or “very bad”) at the national level. It controlled for socio-economic indicators (GDP per capita, level of economic development) and for lifestyle variables classically influencing health (smoking prevalence, prevalence of obese (BMI > 30) population, and alcohol beverage supply) as well as the age-standardised HIV prevalence were included in the model.

The principal findings were that the total unemployment rate, LTU rate and VLTU rate were all strongly related to increased reports of bad and very bad self-perceived health. In fact, the impact of unemployment (i.e. effects based on the coefficients) increased in a ‘dose-response’ manner with the total unemployment rate showing the smallest coefficient, the LTU rate showing a greater coefficient, and the VLTU rate showing the strongest impact in terms of increasingly bad and very bad self-reported health. The findings complement existing evidence that identified unemployment as an important risk factor for heart disease mortality at the start of the 2008/2009 recession (Brenner, 2013).

Chart 1: Evolution of long-term unemployment rate and share in the EU-28, 2002Q1-2015Q2



Source: EU-LFS [une\_ltu\_q] and [une\_rt\_q].

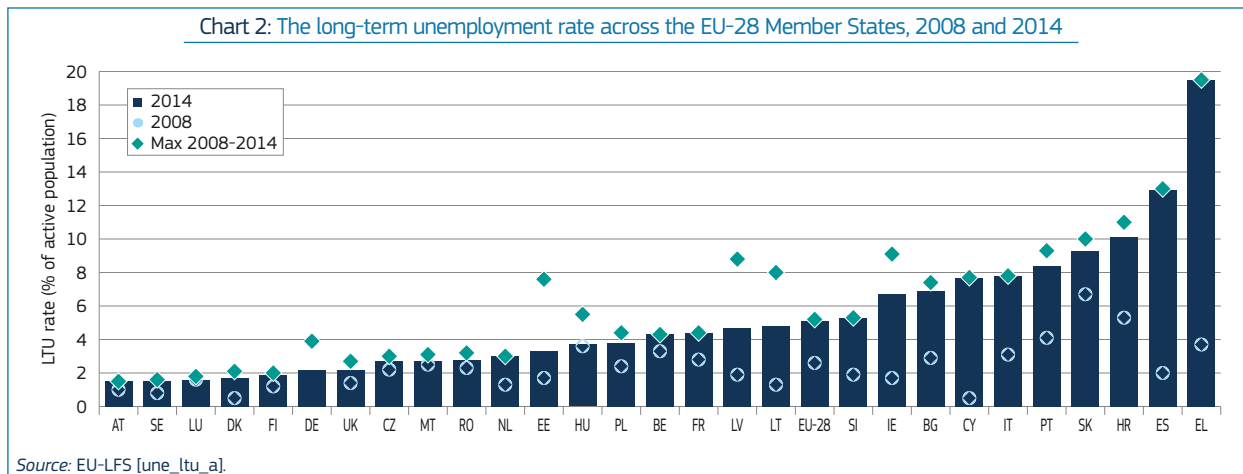
to 50% between 2007/08) (European Commission, 2014f).

Despite the fact that 2014 saw both the unemployment rate and the LTU rate reaching 1995 record levels (in the EU-15), several factors indicate that the impact of the latest crisis differs from that of previous recessions (Chart 1). The evidence shows that the sharp increase in

LTU in the post 2008 crisis is partly due to the fact that more workers remained in the labour market compared with the 1990s when much larger proportions of the unemployed became inactive (European Commission, 2014f). At the same time, the share of the VLTU within overall LTU has increased this time reaching historic highs in 2014 (64.2%)<sup>(6)</sup>.

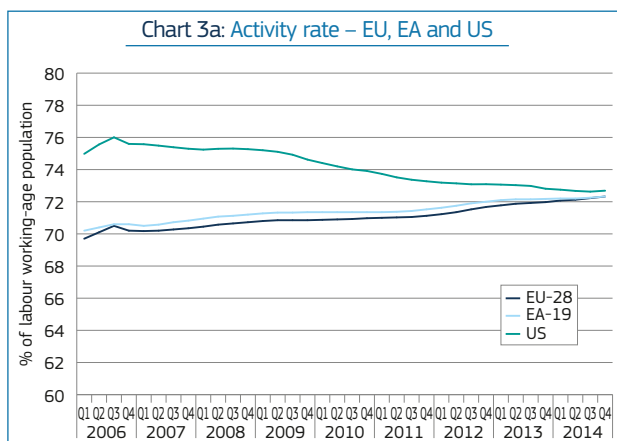
<sup>(6)</sup> The highest level of VLTU as a share of LTU in this period was recorded in the third quarter of 2000 (64.7%).

Chart 2: The long-term unemployment rate across the EU-28 Member States, 2008 and 2014



Source: EU-LFS [une\_ltu\_a].

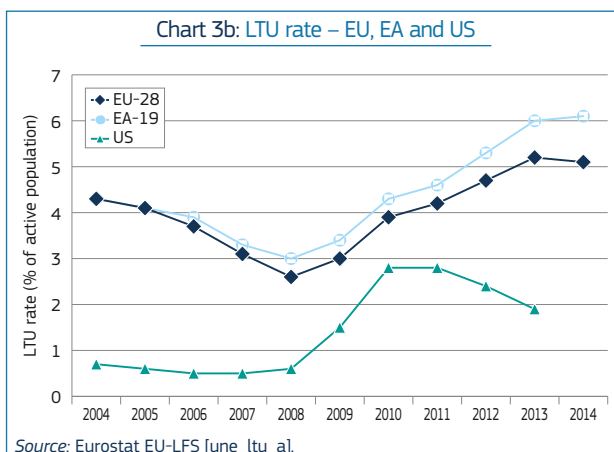
Chart 3a: Activity rate – EU, EA and US



Sources: European Commission, 2015a; the US Current Population Survey (CPS); Eurostat, EU-LFS [lfsi\_act\_q]; data non-seasonally adjusted.

Notes: Age 15-64 for EU, EA and 16-64 for the US. Average of the current and 3 previous quarters.

Chart 3b: LTU rate – EU, EA and US



Source: Eurostat EU-LFS [une\_ltu\_a].

The distribution of the EU's 12.4 million long-term unemployed varies greatly between Member States (Chart 2) with the LTU rate ranging from very low (1.5%) in Austria and Sweden to almost a fifth of the total labour force in Greece (19.5%). Since the onset of the crisis, only Germany has managed to reduce the long-term unemployment rate (-1.7pps) with the greatest increases being seen in Greece (+15.8pps) and Spain (+10.9pps). In total, 21 Member States have experienced higher LTU rates in the last few years than they had in previous decades.

The EU currently has a considerably higher LTU rate than the United States (5.2% as against 1.9% in 2013) and the difference is even greater with regard to Euro Area Member States (EA-19) where the rate is 6.0%<sup>(9)</sup>. While the difference between Europe and the United States is a reason for concern, it is notably a result of the fact that fewer people in the EU have halted their job-search activity compared with their United States

counterparts. Thus, while United States activity rates declined after 2008, they have increased consistently in the EU during the past decade, even during the crisis years (Chart 3a and 3b)<sup>(10)</sup>.

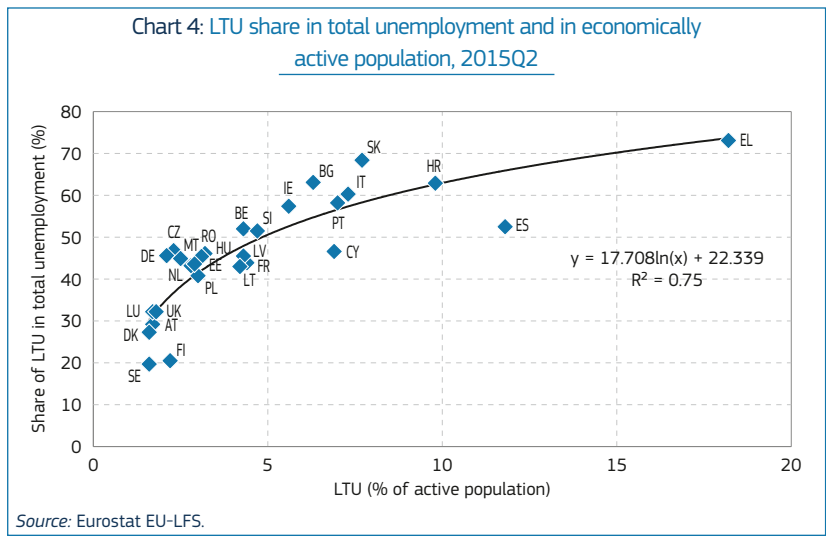
The Member States with the highest unemployment rates tend also to have a high share of LTU among their unemployed (e.g. Greece, Croatia, Cyprus and Portugal). However there are also important structural differences between Member States, with, for example, Sweden and Germany having similar unemployment rates, but with Germany having a much higher share of long-term unemployed (Chart 4). This suggests that Sweden has a better ability to tackle and prevent people from falling into LTU than Germany. Judging by the transition data this is due to Sweden being more effective at both preventing the STU from becoming LTU (Chart 9) and in getting the LTU back to employment (Chart 10). Among

other reasons, this could also be due to the fact that a higher proportion of the LTU are highly educated in Sweden compared to Germany (+11 ppts) but this is to an extent counterbalanced by Sweden having also more low-educated people among those who are LTU (+5 ppts) (Annex Table 2 – LTU characteristics). Sweden also has somewhat more young (15-24) people among its LTU and a bit less of the older workers (55-74).

Member States with higher overall long-term unemployment rates tend to have higher regional (NUTS2) dispersion rates (Chart 5). However, the degree to which higher LTU rates overall can be attributed to the situation in their less developed regions varies considerably across Member States. While a moderate negative correlation exists between the regional GDP per capita and regional LTU rate ( $r=-0.42$ ), the relatively low explanatory value ( $r^2=0.17$ ) indicates that the local LTU rate is influenced by many other factors, including those that are likely to be defined at a national level. Thus, while the explanatory value of a regional analysis of LTU may be

<sup>(10)</sup> 2008Q4 vs. 2013Q4: US went from 75.3% to 72.8%, the EU-28 went from 70.7% to 72%, while the EA-19 went from 71.2% to 72.2%.

<sup>(9)</sup> Eurostat EU-LFS [une\_rt\_a].



Source: Eurostat EU-LFS.

and their situation has worsened due to the crisis (Chart 6). In 2006 almost one quarter of those who had been long-term unemployed in the previous year were able to find a job. However, by 2014, this proportion had fallen to only 16% (Panel A)<sup>(11)</sup>. In parallel, the persistent stay in long-term unemployment increased from around 40% in the period of 2005-2006 to around 49% in the period of 2013-2014. In contrast to the experience of the LTU, which have seen no signs of improving their job prospects, the transition rates of the short-term unemployed to employment – though still lower than in pre-crisis times – were already on the rise by 2013-2014 (Panel C).

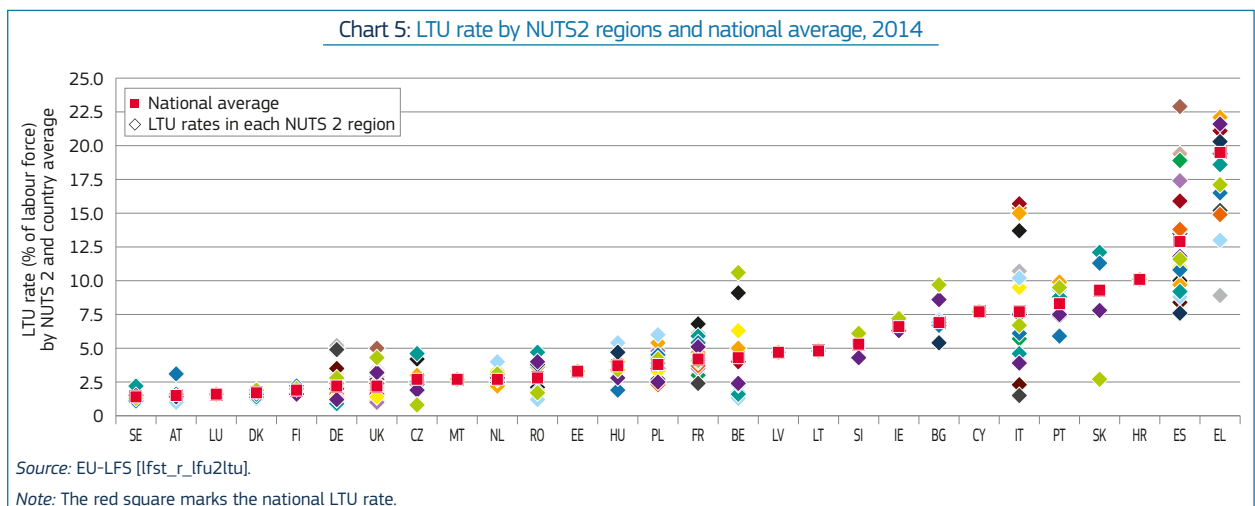
limited, it nevertheless suggests that the impact of the crisis on the duration of unemployment can vary across regions as much as it does between Member States. Furthermore, existing empirical evidence suggests that variation in regional unemployment rates has an impact on policy effectiveness. For example, the UK labour market policy (i.e. New Deal for Young People) is noted to have a larger effect on job-entry rates in areas with lower

unemployment rates than in areas with higher unemployment rates (McVicar and Podivinsky, 2010).

### 2.3. Both likelihood of finding a job or falling into inactivity reduced during the crisis

Long-term unemployed workers have about half the chance of finding employment than the short-term unemployed

Meanwhile the share of the long-term unemployed who became inactive continually decreased from a peak in 2008-2009 until 2012-2013. Some long-term unemployed people do find a temporary job before becoming unemployed again (see Panel A, transition rates from LTU to STU) but their numbers are relatively small, having remained at about 6% to 8% of LTU since 2005, with little change since the onset of the crisis.

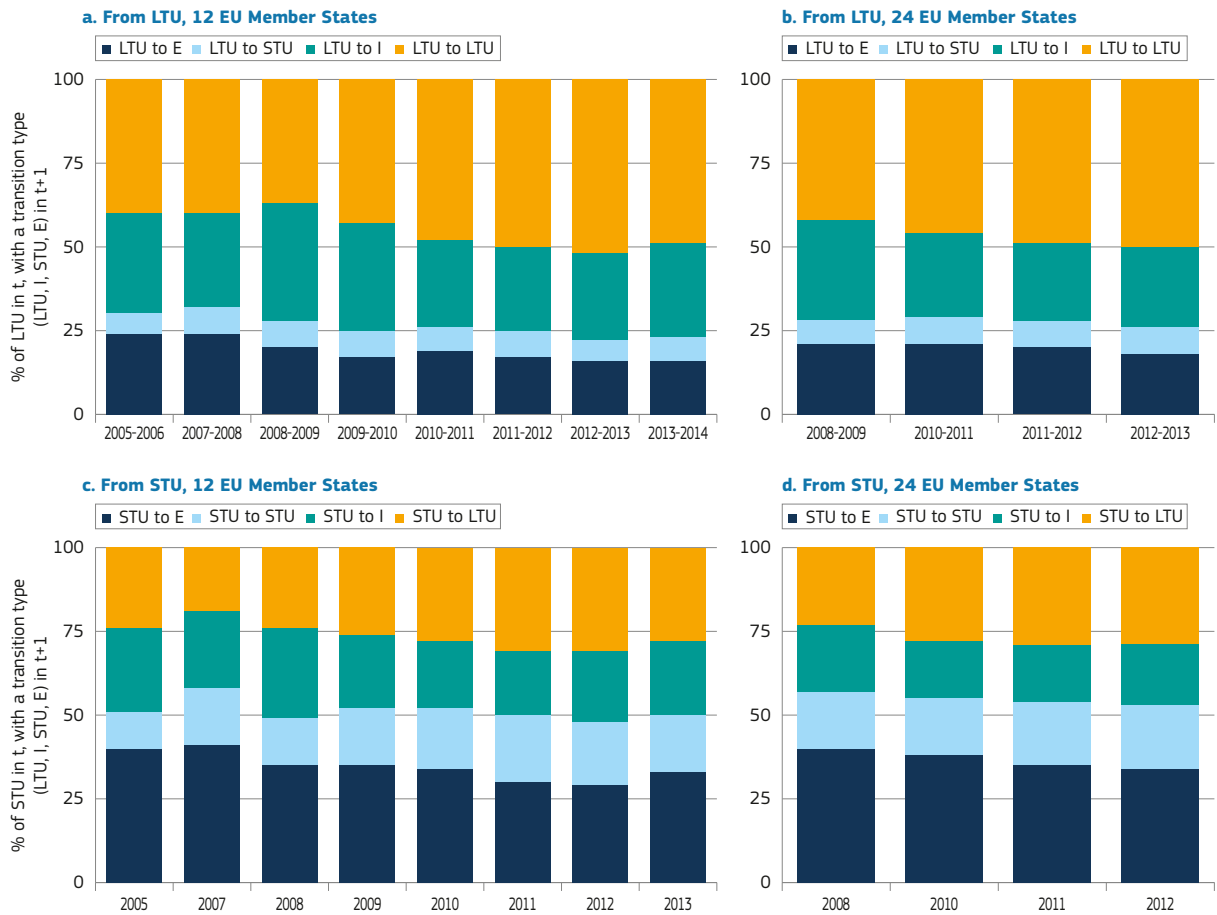


Source: EU-LFS [lfst\_r\_lfu2ltu].

Note: The red square marks the national LTU rate.

<sup>(11)</sup> These results pertain to 12 EU Member States but the shorter available series for 24 EU countries reveal a similar trend (see Panels B and D). Selection of Member States due to longitudinal EU-LFS data availability. 12 EU MS are BE, CY, EE, GR, HU, IT, MT, PL, RO, SE, SI, SK and EU-24 is EU-28 without BE, LU, NL, PT.

Chart 6: Outflows from LTU and from STU

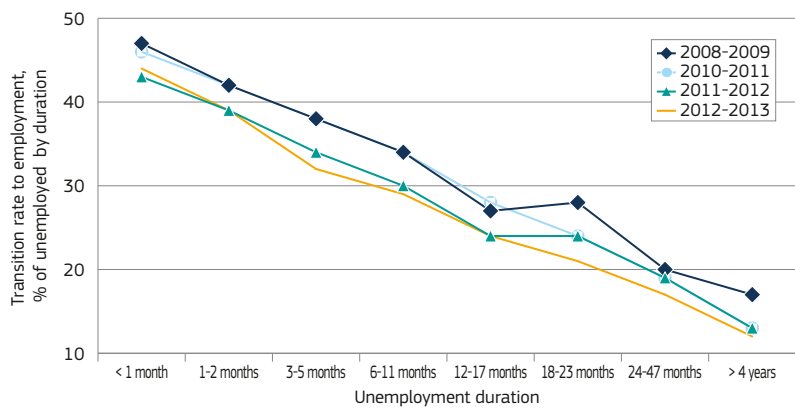


Source: DG EMPL elaborations based on EUROSTAT experimental EU-LFS flow statistics; population group 15-64 years old; EU-24 is EU-28 without BE, LU, NL and PT; here and further on, the transition rate shows percentage of unemployed people in t-1 who are employed in t.

Job finding rates among the LTU decrease the longer they remain unemployed (Chart 7). To take an extreme example, while 44% of those who had been unemployed for less than one month in 2012 found a job, only 12% of those who had been unemployed for more than four years managed to do so. Towards the end of the crisis, job finding rates dropped below 20% after 18 months of unemployment, though they were close to 30% at the beginning of the crisis.

As the duration of unemployment increases, the likelihood of becoming inactive rises (Chart 8). Paradoxically, the transitions from unemployment to

Chart 7: Transition rates from unemployment (2008-2012) to employment (2009-2013), by unemployment duration in the previous year, EU-24\*

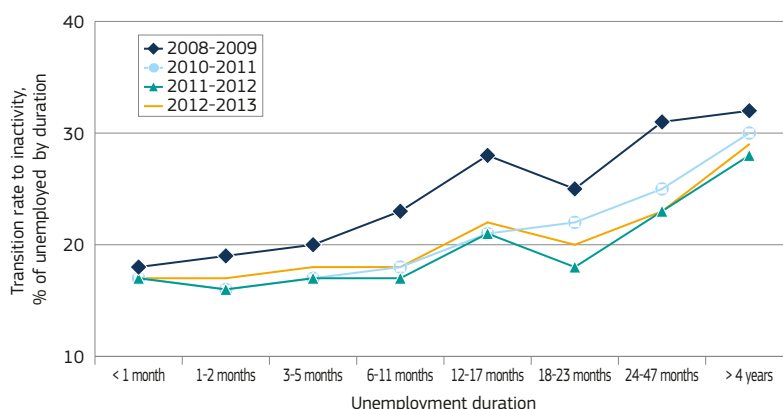


Source: DG EMPL elaborations based on EUROSTAT experimental EU-LFS flow statistics.  
 Note: \* EU-24 is EU-28 without Belgium, Luxembourg, the Netherlands and Portugal; population reference group: 25-64 years old.



employment and from unemployment to inactivity have both dropped during recent years, with the latter evidence suggesting greater labour market attachment of the unemployed during the crisis. In particular, exits to inactivity declined most for those who were unemployed for 18 months or more. Changing policy contexts such as the closure of certain labour market exit routes via early retirement or disability programmes might have affected behaviour regarding increased stays in the labour market. Given that the latest available data (Chart 6) shows a potential return of higher inactivity rates, the underlying reasons for this changing behaviour merit closer investigation.

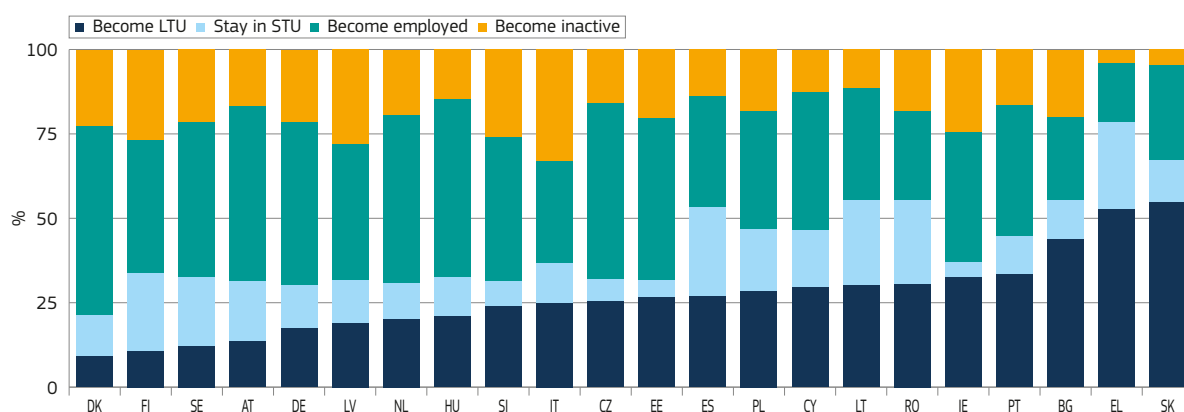
Chart 8: Transition rates from unemployment (2008-2012) to inactivity (2009-2013), by unemployment duration in the previous year, EU-24\*



Source: DG EMPL elaborations based on EUROSTAT experimental EU-LFS flow statistics.

Note: \*EU-24 is EU-28 without Belgium, Luxembourg, the Netherlands and Portugal; population group 25-64 years old.

Chart 9: Labour market status in 2014 of those in short-term unemployment in 2013



Source: DG EMPL elaborations based on EUROSTAT experimental EU-LFS flow statistics.

Note: Only Member States with available data are covered, population group 15-74 years old; data of low reliability for SI and IE regarding "stay in STU" status.

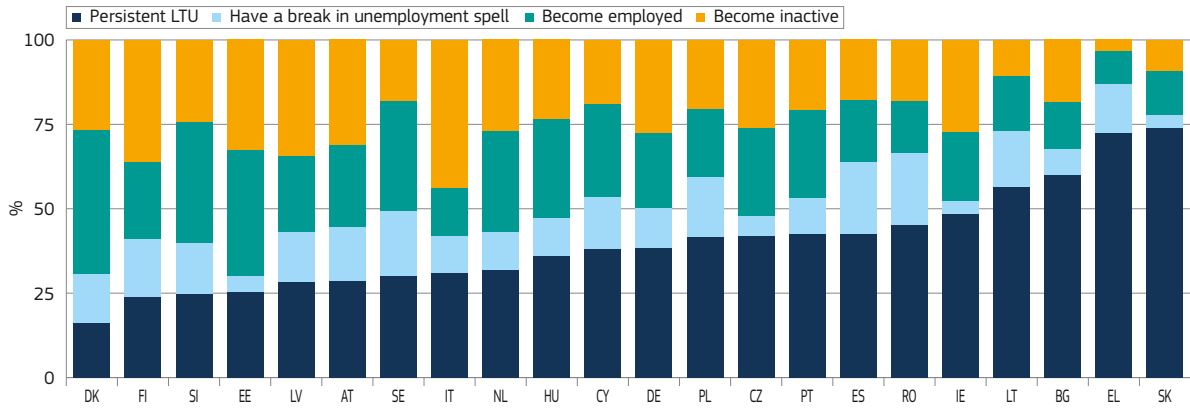
The dynamics of movements both within and between, unemployment and long-term unemployment, can vary greatly between Member States. For example, in Member States such as Denmark, Austria, Finland, Sweden, Germany and Latvia (Chart 9) less than 20% of the short-term unemployed in 2013 became LTU in the following year, compared to Bulgaria, Greece or Slovakia where the proportions were of the order of 40%. However, while in some Member States the smaller share of the unemployed becoming LTU is due to a greater chance of finding a job, in others it is due to a greater probability of withdrawing from the labour market (as seen, for example,

in the transitions from STU to inactivity in IT and LV).

Across the Member States between 25% and over 80% of the LTU remained in long-term unemployment in 2014 – revealing large differences in the dynamics of LTU levels (Chart 10). In Denmark, which has the smallest share of persistent LTU, the chances of moving into employment are quite high with more than 40% of the LTU finding jobs. In Italy, on the other hand, a similar percentage of the LTU become inactive to those remaining long-term unemployed, with only 15% finding sustainable jobs (i.e. jobs lasting at least one year).

In Greece and Slovakia – Member States with the highest LTU persistence rates – job finding chances are similarly bleak at 10% and 13% respectively. Chart 10 also shows that, in a number of Member States, the LTU tend to find temporary jobs, such as Romania and Lithuania. However, while some 15% of the LTU in these Member States do move into more sustainable jobs, close to the same proportions (around 14% and 12% respectively) experience only a short break from unemployment. In this respect it should be noted that, in cross-sectional statistics, the latter group of people will not normally be counted as long-term unemployed, indicating a potential underestimation of the real scale of long-term unemployment.

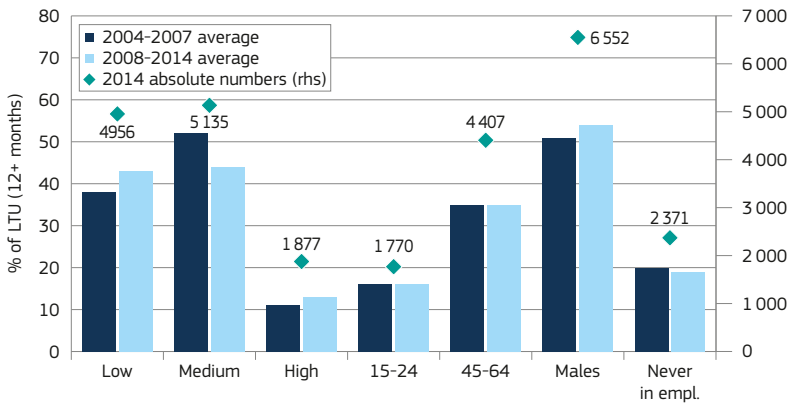
Chart 10: Labour market status in 2014 of those in long-term unemployment in 2013



Source: DG EMPL elaborations based on EUROSTAT experimental EU-LFS flow statistics.

Note: only Member States with available data are covered, population group 15-74 years old; data of low reliability for Estonia (EE) regarding "a break in unemployment".

Chart 11: Long-term unemployed (12 months or more), by characteristics pre- and during crisis, 2004-2007 and 2008-2014 averages



Source: EU-LFS, DG EMPL calculations.

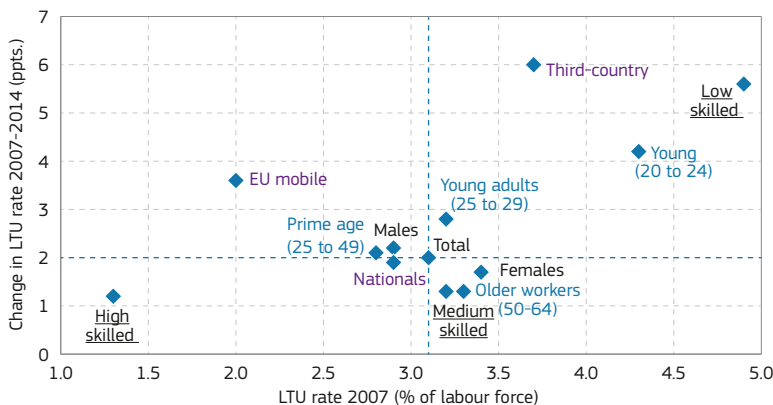
Note: The bars represent the share that each of the characteristics represents among all of the long-term unemployed in the EU-28. The reference age group is 15-74.

### 2.4. Which are the LTU most at risk? Mostly the young, low-skilled and third-country migrants

Workers face potentially higher risks of becoming and remaining long-term unemployed depending on their education, age, gender and nationality characteristics. Those who have been long-term unemployed during the crisis (Chart 11) have tended to be of medium and low levels of education (87%), and nearly a fifth (19%) have never been employed.

The incidence of LTU is more or less equally split by gender and, over the EU as a whole, the crisis seems to have had a limited impact on the main characteristics of the LTU. That said, the differences between Member States are much larger.

Chart 12: Long-term unemployment rates by different groups aged 20-64, EU-28, 2007 and 2014



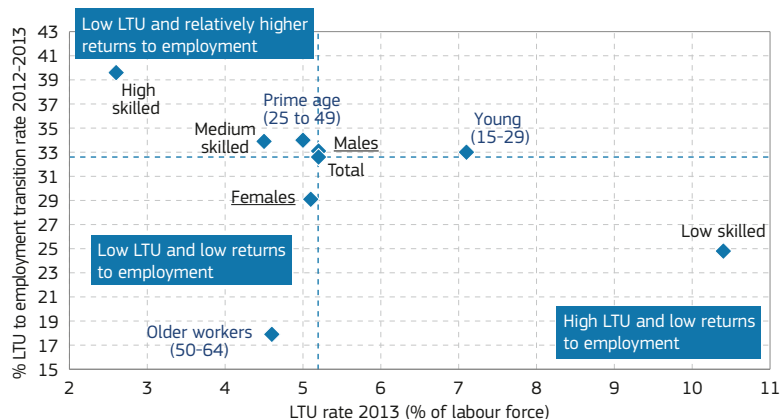
Source: DG EMPL calculations based on EU-LFS [une\_ltu\_a].

Note: Country of birth used for migration background (EU mobile, third-country migrants and nationals) with no data available for DE.

Long-term unemployment has not affected all groups of the EU-28 population equally. Those facing the highest risks *before* the crisis suffered most *during* the crisis and to this day (Chart 12). These are the low-skilled, the young and young adults as well as workers born in a third country. Conversely, other groups that were doing relatively well in resisting long durations of unemployment, such as the high and medium-skilled and nationals, were not as hard hit.

Data on the yearly dynamics of the different groups in the labour market

Chart 13: Long-term unemployment rates (20-64) and exits to employment (15-74) by different groups, EU-28, 2013

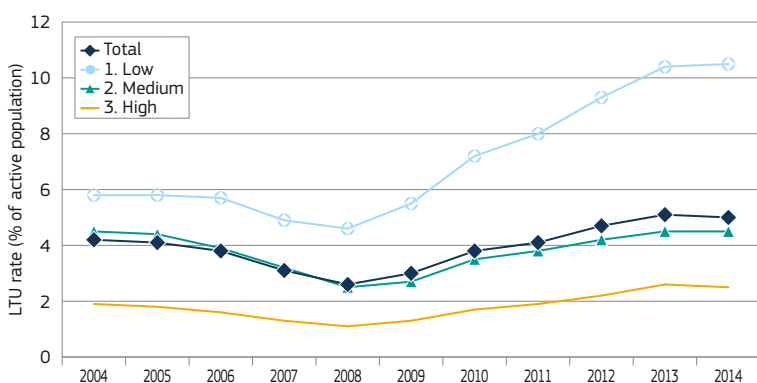


Source: DG EMPL calculations based on EU-LFS (une\_ltu\_a) and EUROSTAT experimental EU-LFS flow statistics. Transition rates refer to EU-24 aggregate, whereas LTU rate refers to EU-28. Due to data limitations the transition rate for the 25-49 age group is instead that of the 30-49 age group, whereas the LTU rate is that of the 25-49 age group.

show that, again, it is the worst off – the low-skilled, the young (20-24), and third-country migrants – that have the least chance of returning to employment (Chart 13). Moreover, while the likelihood of an older worker becoming LTU is relatively low, they are likely to have the hardest time finding fresh employment if they find themselves in that situation.

Not only are low educated unemployed most affected by LTU but their number has more than doubled over the period of the crisis (Chart 14)<sup>(12)</sup>. Furthermore, they have less chance of finding a job once they become unemployed (Chart 13), both because they were employed in sectors that have been strongly hit by the recession, and because they lack the skills currently needed by the labour market. It is therefore notable that, despite their apparent greater need for training, the participation of the low-skilled in lifelong learning/training activities, both when employed and unemployed, is much lower than for other groups (see Section 3).

Chart 14: Evolution of long-term unemployment in the EU-28 by education, 2004-2014

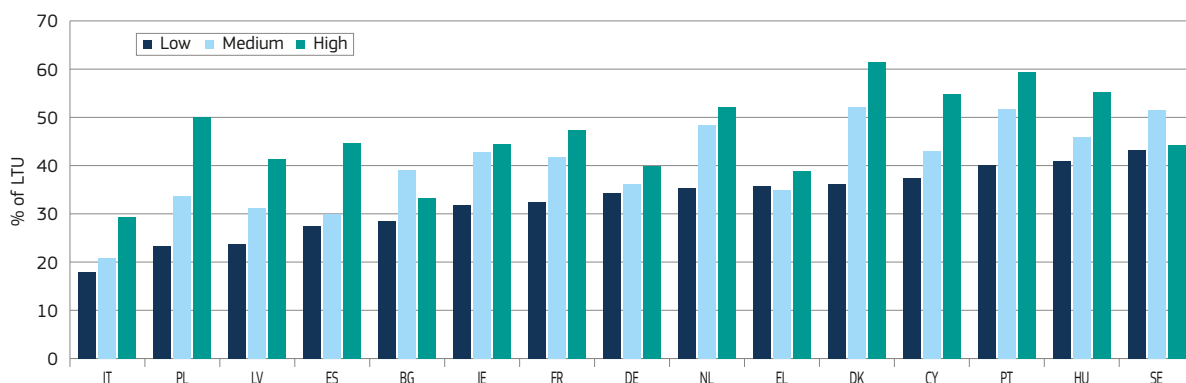


Source: EU-LFS, DG EMPL calculations.

Notes: ISCED97 classification used to distinguish educational levels: low education level corresponds to pre-primary, primary and lower secondary education (levels 0-2); Upper secondary and post-secondary non-tertiary education (levels 3 and 4); and high education level corresponds to first and second stage of tertiary education (levels 5 and 6).

Higher education increases the likelihood of finding jobs for the LTU in most Member States, but with the chances of success being highly country-specific (Chart 15). In a number of Member States, such as Poland, France, Ireland, Germany, Hungary and Portugal, higher educational levels of the LTU are associated with higher chances of finding jobs.

Chart 15: Transitions from LTU to employment by education level, 2013-2014

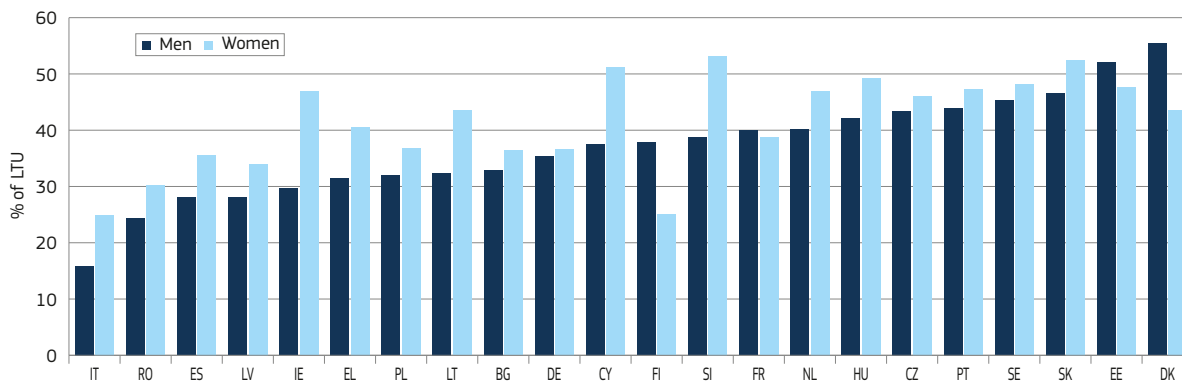


Source: DG EMPL elaborations based on EUROSTAT experimental EU-LFS flow statistics.

Note: Only Member States with available data are covered, population group 15-74 years old.

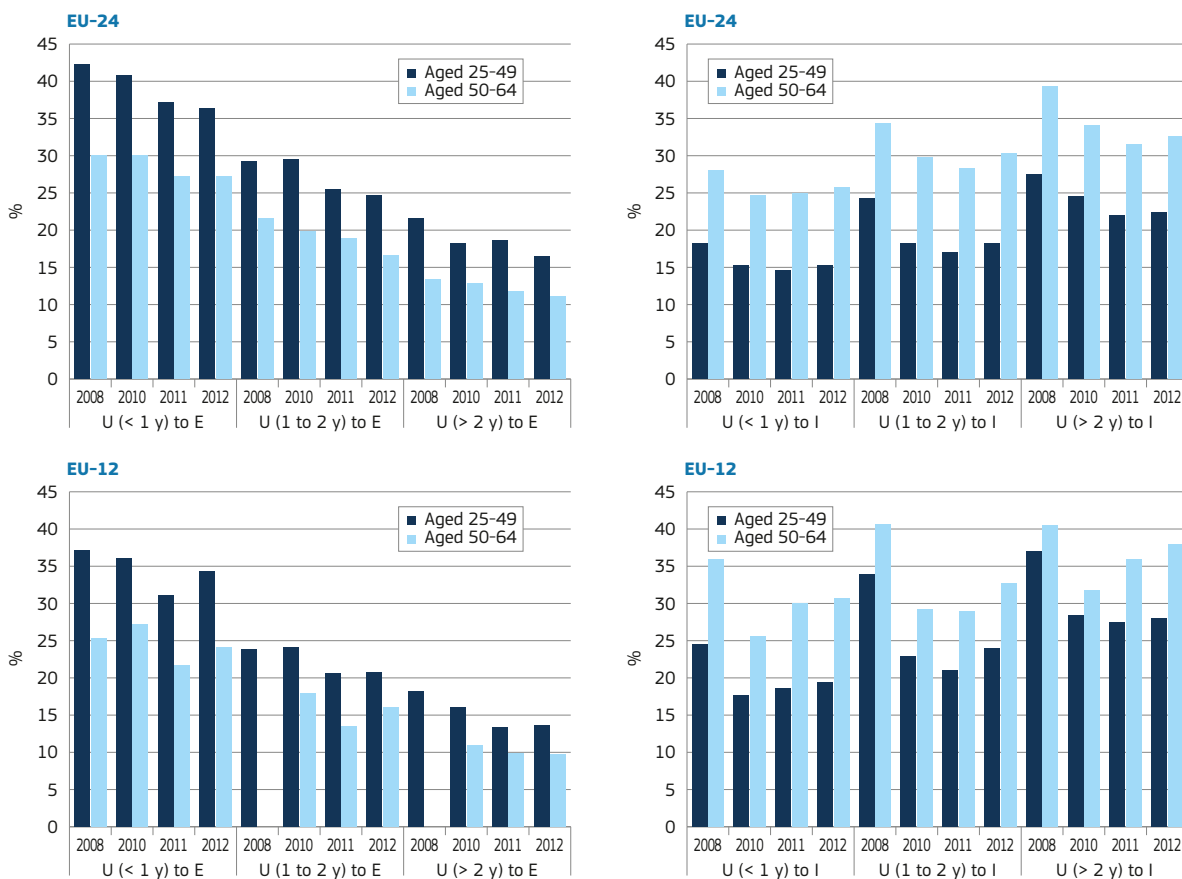
<sup>(12)</sup> From 2.5% in 2008 to 4.9% in 2013.

Chart 16: Transitions from LTU to employment by gender, 2013-2014



Source: DG EMPL elaborations based on EUROSTAT experimental EU-LFS flow statistics.  
 Note: Only Member States with available data are covered, population group 15-74 years old.

Chart 17: Transition from unemployment to employment and inactivity by age groups, EU-24 (2008-2009 to 2012-2013) and EU-12 (2008-2009 to 2013-2014)



Source: DG EMPL elaborations based on EUROSTAT experimental EU-LFS flow statistics.  
 Notes: U stands for unemployment, E for employment and I for economic inactivity; reported rates are % unemployed (by relevant duration); 12 EU Member States are Belgium, Cyprus, Estonia, Greece, Hungary, Italy, Malta, Poland, Romania, Sweden, Slovenia, Slovakia ; EU-24 is EU-28 without Belgium, Luxembourg, Netherlands, Portugal; gaps in data are due to reliability limits.

This is in line with expectations, although in Italy and Spain, those with a medium level of education do not have a much higher chance of finding a job than the low-skilled, with only those with the highest educational attainments having significantly increased employment opportunities. In Greece, labour market opportunities are weak for all educational levels, reflecting the difficult economic situation overall.

The crisis has narrowed the gap between men and women in terms of LTU. While the gap in LTU rates of men and women had been one percentage point in 2002, they converged in 2014 at just over 5%<sup>(13)</sup>. This was mainly due to men having become more affected over time by

<sup>(13)</sup> According to EU-LFS [une\_ltu\_a], the LTU rates from men and women in 2002 stood at 3.7% and 4.6% respectively, but in 2014 both stood at 5.1%.

LTU than women (Chart 12) and primarily due to the large job losses in male dominated sectors such as manufacturing and construction during the crisis (Table 1).

Men, however, still tend to have greater chances of returning to employment in most Member States (Chart 16). That said, the gender gap among the LTU is very small in Germany, the Czech

Republic, Portugal and Sweden. In a handful of Member States (Finland, France, Estonia and Denmark) women have a higher chance of returning to employment than men. The latter Member States also have higher total transition rates overall, suggesting that increasing opportunities for the integration of women into labour markets also contribute to addressing the issue of long-term unemployment.

It should be noted that some observed gender gaps are due to generational differences. For example, higher rates of female transition into employment in France are mainly due to the increased performance of older women in comparison to men (i.e. aged 50-69), while there is no gender gap among younger age groups.

Of all the age groups, the youngest and oldest workers were hardest hit by long-term unemployment in the crisis. The youngest workers (20-24) were most affected by LTU both before and during the crisis, with the recession pushing more of them into long-term unemployment than older age groups (Chart 15). Nevertheless, younger workers seem to have relatively high chances of finding a job, while the older LTU had the worst chances of returning to employment (Chart 13).

In comparison to 2007, the share of older workers (i.e. 55-64) among the LTU has increased most in comparison to other age groups (Table 1). This could be partially explained by the overall ageing of the populations but some of this increase has been due to older workers increasingly being unemployed and LTU. However, developments across Member States have been quite diverse. In some cases the increase in the share of older workers in LTU has been driven by both demographics and worsening labour market outcomes (e.g. Greece, Croatia, Ireland, Spain and the EU-28 average), while in others it has been driven more by difficult labour market conditions than population ageing (e.g. Denmark and the United Kingdom).

Transition rates to employment are lower for older people and especially for those with longer unemployment durations. Chart 17 shows that only 30% of short-term unemployed elderly people, aged between 50 and 64, were able to find a job in 2013 - about one quarter lower

than the respective transition rates to employment rate of prime working age people (i.e. aged 25 to 49).

The longer the period of unemployment is, the lower the employability chances are for both older and younger workers. If 17% of older people found jobs in 2013 after one to two years of unemployment, only just above 10% did so after more than two years of unemployment. In comparison, about 25% and 16% of younger people with respective periods of long-term unemployment were able to get employment in 2013.

The crisis has reduced the chances of finding jobs both among older and younger people - if not at the beginning of the crisis, then towards the end of it (e.g. for those aged 50 to 64 by 2012-13). The largest decreases (by close to 25%) in job finding rates were noted for elderly people who had been unemployed for one or two years, and for the prime working age people in very long term unemployment. As a result, the age gap in job finding rates narrowed for the VLTU, but widened for the LTU. Both developments point to the scarring effects of the unemployment duration. On the one hand, the chances of the elderly finding jobs are further diminished by longer unemployment periods, though they were already bleak if they were VLTU.

Recent improvement in economic prospects benefits those in STU, but leaves LTU and particularly the VLTU outside the reach. The most recent data for the period of 2013-2014, available for 12 EU Member States (Chart 17), suggests that job finding rates have started to improve for both prime working age people (by about 3 ppt) and for older workers in STU (by about 2 ppt), but only for the older workers in LTU (2 ppt). Despite the latter improvement, prospects of the older people in finding jobs are still lower than of the younger people. On the other hand, no gains in employment chances have yet been noted for any age groups in VLTU and for younger people in LTU. This lack of job gains among the prime working age people - who otherwise reveal the largest employment capacity - calls for special policy attention.

Transition rates to inactivity are higher for older workers and for longer unemployment durations (Chart 17). On average in EU-24, the gap in transition to

employment between older and prime-age working people has remained at about 10 to 12 ppt since 2008, and is relatively similar across unemployment durations. However, longer unemployment duration periods imply higher exit to inactivity rates, with those for the older people standing at about 25% if in STU, 30% if in LTU, and 32% if in VLTU, in 2012-2013.

The crisis had initially reduced exits to inactivity for both younger and older workers, but rates are on the rise again. For both age groups and for all unemployment durations, considerable reductions in exit rates to inactivity were observed from 2008 to 2010 with a further drop for both age groups in 2011, but only if in longer unemployment durations. By 2012, rates from unemployment to inactivity started to increase for all concerned groups, with the largest increases observed for those who had been unemployed between one and two years. This points to rising labour market discouragement following an unfruitful period of job searching. The latest available data for the period of 2013-2014 for 12 EU Member States suggests a continuation of this same trend, with further increase in inactivity rates for all groups and with the largest increase being among those unemployed for one to two years.

Yet again rising transition rates from unemployment to inactivity, merit further analysis. European Commission (2014f) attributed a drop of inactivity rates among the older workers to - among other influences - changing policy contexts (i.e. less accessible disability or early retirement schemes). Though drivers of recent changes are not necessarily policy related (e.g. demographic changes could also be important), the emerging evidence is pointing to at least some adverse effects of recent reforms. For example, a recent study suggests that the intensified ALMP efforts for youth (below 30) in Denmark may have contributed to increasing transitions into sickness benefits, heightening levels of inactivity, with limited additional effects on transitions to employment or education (Maibom, Rosholm and Svarer, 2014).

In terms of country of origin, third-country migrants were the worst off before the crisis and the hardest hit during the crisis. Mobile EU persons saw their fates matching those of the nationals of each country with their LTU rate



before the crisis being similar and relatively low but also increasing similarly during the crisis (Chart 16). However, the marked difference between mobile EU persons and third-country migrants highlights how much the country of origin can impact on labour market outcomes for individuals.

EU LTU rates tend to be higher in rural areas than in urban areas, which can be explained by differences in levels of economic performance, in industrial

structure and the skills composition of their populations (European Employment Observatory, 2012) with those living in less densely populated areas being more at risk of LTU during the economic downturn.

## 2.5. The LTU changed over the crisis and are somewhat different from the STU

Even though both STU and LTU increased in the EU during the crisis,

the characteristics of the LTU changed more significantly and have notable differences from those of the STU (Table 1). While the share of men and those on temporary contracts increased a lot among both STU and LTU between 2007 and 2014, the composition of those who were LTU changed over the course of the crisis and in 2014 they consisted of more third-country migrants, EU-mobile, low and high-skilled people and of those on temporary contracts (largest changes in grey highlight of Table 1).

Table 1: Characteristics of STU and LTU individuals over time: 2007, 2010 and 2014, EU-28

		STU composition (% of STU)				LTU composition (% of LTU)				Diff. in changes: LTU - STU	Diff. in 2014: LTU - STU
		2007	2010	2014	Change 2014-2007, ppt	2007	2010	2014	Change 2014-2007, ppt		
	Men	49.5%	54.1%	53.1%	3.6	50.9%	55.4%	54.3%	3.4	-0.1	1.2
	EU mobile	3.4%	4.1%	4.6%	1.2	1.7%	3.1%	3.7%	1.9	0.7	-0.9
	Third-country migrants	10.8%	11.7%	11.7%	1.0	7.0%	10.8%	12.1%	5.1	4.1	0.3
Age	20-24	22.1%	19.6%	19.3%	-2.8	11.9%	13.7%	12.6%	0.6	3.4	-6.7
	25-34	31.9%	31.0%	31.4%	-0.5	24.8%	26.5%	25.1%	0.3	0.8	-6.3
	35-44	23.3%	24.1%	22.9%	-0.4	25.1%	24.1%	24.5%	-0.6	-0.2	1.6
	45-54	16.2%	17.6%	18.0%	1.9	24.6%	22.8%	23.4%	-1.2	-3.0	5.4
	55-64	6.6%	7.7%	8.4%	1.8	13.6%	13.0%	14.4%	0.8	-0.9	6.0
Education	Low	32.6%	33.3%	30.4%	1.8	37.7%	42.2%	40.7%	3.1	1.3	10.4
	Medium	48.9%	47.1%	45.9%	1.8	51.4%	45.1%	43.2%	-8.2	-10.0	-2.7
	High	18.4%	19.6%	23.7%	1.8	10.9%	12.7%	16.1%	5.1	3.3	-7.7
Previous job	No previous employment experience	11.0%	9.6%	11.1%	0.1	17.0%	15.1%	18.0%	1.0	1.0	6.9
	A job of limited duration has ended	33.4%	34.8%	40.1%	6.7	17.1%	22.0%	24.2%	7.1	0.4	-15.9
	Dismissed or made redundant	26.1%	33.8%	26.0%	-0.1	29.7%	33.1%	30.7%	0.9	1.1	4.7
		STU rate (% of active population)				LTU rate (% of active population)				Diff. in changes: LTU - STU	Diff. in 2014: LTU - STU
		2007	2010	2014	Change 2014-2007, ppt	2007	2010	2014	Change 2014-2007, ppt		
	TOTAL	3.7%	5.4%	4.9%	1.2	3.1%	3.9%	5.1%	2.0	0.8	0.2
	Men	3.3%	5.4%	4.8%	1.5	2.9%	3.9%	5.1%	2.2	0.7	0.2
	Women	4.2%	5.4%	5.0%	0.8	3.4%	3.8%	5.1%	1.7	0.9	0.1
	Natives	3.5%	5.0%	4.6%	1.1	2.9%	3.6%	4.8%	1.9	0.8	0.3
	EU mobile	5.0%	7.5%	6.7%	1.8	2.0%	3.9%	5.7%	3.6	1.8	-1.1
	Third-country migrants	7.1%	10.2%	8.9%	1.8	3.7%	6.6%	9.7%	6.0	4.2	0.8
Age	20-24	9.5%	12.8%	12.3%	2.8	4.3%	6.3%	8.2%	3.9	1.2	-4.1
	25-34	4.7%	6.8%	6.5%	1.9	3.0%	4.1%	5.4%	2.3	0.5	-1.2
	35-44	3.0%	4.6%	4.2%	1.2	2.7%	3.3%	4.6%	1.9	0.7	0.4
	45-54	2.4%	3.7%	3.3%	0.9	3.0%	3.3%	4.4%	1.4	0.5	1.1
	55-64	2.0%	3.1%	2.7%	0.6	3.4%	3.7%	4.7%	1.2	0.6	2.0
Education	Low	5.1%	8.0%	7.6%	2.5	4.9%	7.2%	10.5%	5.6	3.1	2.9
	Medium	3.6%	5.2%	4.6%	1.0	3.2%	3.5%	4.5%	1.3	0.3	-0.2
	High	2.6%	3.7%	3.6%	1.0	1.3%	1.7%	2.5%	1.2	0.2	-1.1

Source: EU-LFS, DG EMPL calculations with contributions from Cedefop.

Differences between the LTU and STU have potential consequences for policy design. Within the total labour force, both STU and LTU increased for all groups, but among the third country migrants and the low-skilled, LTU increased much more than STU (highlighted in light green). In 2014 the older and low-educated parts of the labour force remain more at risk of being LTU than STU. Comparing the compositions of the two groups, more of the LTU consist of older, low-educated and inexperienced workers (but also less of the young, high-educated and those who were on temporary contracts). Furthermore, initial findings from Section 3.2 below indicate that, in terms of transitions back to jobs, the LTU benefit marginally more from receiving UB and PES registration than do STU, and almost equally as much from LLL participation.

As a result of the decline in economic activity in manufacturing and construction during the crisis, the occupations most affected by LTU were those employing unskilled, semi-skilled, craft and agricultural workers, although the impact varies between Member States depending on their national characteristics<sup>(14)</sup>. Compared to the situation at the height of the financial crisis, the manufacturing sector has already regained much of its economic potential, as shown by the falling numbers of both STU and LTU in those areas of the economy. Market improvements in the construction sector have likewise led to some improvement for STU, but this has not yet reached the LTU.

### 3. NOT CASTING THE NET WIDE ENOUGH: POLICIES TO TACKLE LTU

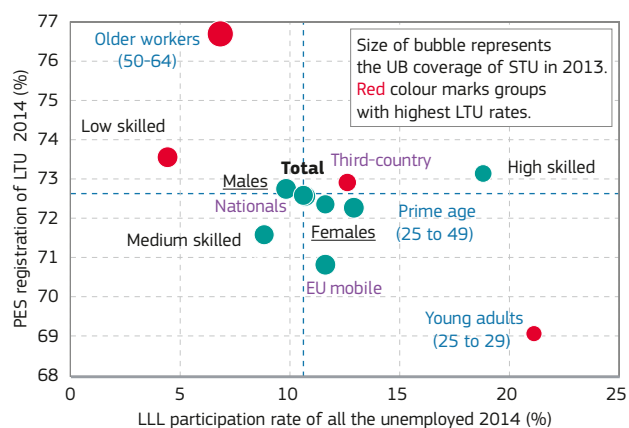
Before examining the evidence concerning the policies and policy designs that appear to be best suited for combatting and preventing LTU, it is important to assess the coverage of the main policy tools available to policy makers. For this purpose, this section begins by examining the coverage/reach of active labour market policies (ALMP), including lifelong learning/training (LLL), and of unemployment benefits (UB).

#### 3.1. Who is covered, where and how much

As regards the extent to which those who are LTU have access to, and benefit from,

<sup>(14)</sup> DG EMPL calculations based on EU-LFS ad hoc extractions on the breakdown of the LTU by previous sector and occupation for the years 2007, 2010 and 2014.

Chart 18: Coverage of various LTU groups by type of policy intervention, 2014



Source: EU-LFS, DG EMPL calculations based on ad hoc extractions.

Notes: The policy interventions are as follows: PES coverage of LTU is the percentage of the LTU of a given group that is registered with the public employment service; UB coverage is the percentage of the LTU of a given group that receives unemployment benefits or assistance; and LLL participation is the percentage of the total group (employed, unemployed and inactive) that have participated in lifelong learning or training in the last 4 weeks. No values available for PES coverage for Ireland and no values available for the Netherlands and Ireland regarding UB coverage. Unless otherwise specified, the age group for the PES registration and UB coverage is 20-64 and for LLL participation it is 25-64. For both PES registration and UB coverage 2013 value was used for Austria due to lack of data in 2014 and citizenship data was used for Germany instead of country of birth due to lack of data.

policy interventions, Chart 18 shows that, on average, almost three-quarters (73%) of the total LTU aged 20-64 are registered with the public employment service (PES), while little more than a third and a quarter of the STU and LTU, respectively, receive support in the form of unemployment benefits (STU: 38% and LTU: 25%)<sup>(15)</sup>.

Moreover, just one in ten of those aged 25-64, regardless of labour status, report having received some form of lifelong learning (participation in education or training) in the previous four weeks. This has been shown to be a real lost opportunity, since Member States with the highest investment in, and coverage of, activation and support measures (ALMP, LLL/training and UB) were those that fared best in the crisis and had the highest levels of returns to employment (European Commission, 2014f).

Policy interventions do not cover all segments of the LTU population equally. Chart 18 shows that the older and low-skilled workers are most affected by LTU (red bubble), and that while these groups are covered most by the PES and unemployment benefits (EU average: 72%), but least by lifelong learning/training efforts

(4-6% vs. 11% for the EU as a whole), a significant predictor of transitions from LTU to employment (Section 4.2). In contrast, young adults (25-29) are more likely to participate in training (21% vs. 11%) but are less likely to be registered with the PES and receiving unemployment benefits. The highly skilled, medium-skilled, male and female workers as well as prime aged workers (25-49) are all close to the overall EU average in terms of PES registration (72%) and STU UB receipt (41%), but the highly skilled unemployed are significantly more likely to be taking part in lifelong learning/training than the medium-skilled (18.8% vs. 8.8%) or the overall average (10.7%).

While this suggests that policy measures may be doing a good job of targeting efforts towards the parts of society hardest hit by the recession, it also shows that significant groups do not benefit from any of the policy interventions considered here and that, in particular, lifelong learning and training fails to reach those who appear to need it most. Also, while PES registration rates do not vary widely across population groups (as they do between Member States), gaps in coverage at the EU level are much larger for UB and LLL.

#### 3.2. The quality of policy: The LTU do not profit enough from ALMP and UB

Active labour market policies (ALMPs) – such as wage subsidies to private firms and start-up grants, training programs to enhance the employability of the

<sup>(15)</sup> It has to be noted, that the data on coverage of unemployment benefits only refers to the receipt of unemployment insurance and unemployment assistance, and it does not take account of other forms of income support, e.g. minimum income, they might be receiving. This is especially relevant for countries where the duration of unemployment benefits is limited to one year or less, and in which the long-term unemployed are de facto not covered by UB.

Table 2: Transitions rates by duration and policy intervention in the EU-24 [all education, gender and age]

Age group, year	% of total LTU	2013->2014 (PES and UB) 2012->2013 (LLL)			Transition rates		
		LLL	PES registration	UB	LTU-> E	STU-> E	LTU->I
15-64, 2013	26%		x	x	13.8	31.4	33.2
	26%		✓	✓	25.1	40.4	19.0
	48%		✓	x	17.1	30.3	24.6
	1%		x	✓	n.a.	n.a.	n.a.
15-74, 2012	91%	x			30.6	33.8	42.1
	9%	✓			34.8	39.2	33.0

Source: DG EMPL elaborations based on EUROSTAT experimental EU-LFS flow statistics; latest available data and age split used; EU-24 is EU-28 without Belgium, Luxembourg, the Netherlands and Portugal.

unemployed, direct public employment programs and PES support services - are all crucial parts of a well-functioning labour market. Such measures ensure that the unemployed return to employment as fast as possible by providing them with the support they need to successfully re-enter the job market. Such actions help to enhance their employability; assist them with their job search; find the right job for their skill-set; and incentivise employers to hire them. Overall, ALMPs have been shown to help speed up the return of the unemployed to employment (European Commission, 2014f and Kluve, 2010). Emerging evidence also shows that in the recent recession, countries with a strong activation approach, as Austria or the UK, succeeded in keeping the unemployed active on the labour market and thus experienced mainly modest increases in unemployment (OECD, 2015). Furthermore, it highlights that ALMPs have been effective even during times of economic downturn and low labour demand.

Income support, whether in the form of unemployment benefits (UB) or other welfare support, help ensure that the unemployed are financially supported in their period of job search and ALMP participation, and help maintain their employability. From a broader policy perspective, they also stabilise aggregate demand while ensuring that those affected are not pushed into poverty and social exclusion.

Income support provided to the STU, if well designed, can have an impact on the LTU stock, by allowing the STU to focus their attention on finding a job that matches their abilities. It may thus provide the STU with a higher likelihood of finding a job sooner i.e. before they become LTU. In other words, policy effectiveness in tackling the stock of LTU rests not only on policy interventions for the LTU, but also on actions for the short term unemployed.

Unemployment benefits and ALMP, in particular training and PES support, appear to have a positive impact on combatting LTU (transition from LTU to employment), preventing LTU (from STU to employment) and on ensuring the LTU do not stop searching for jobs and remain active (from LTU to inactivity). Table 2 highlights this by mapping out the three transition rates according to the policy interventions received.

Those who received any of the listed policy interventions, both LTU and STU, had higher transitions to employment and lower transitions of the LTU to inactivity. The only exception were the STU who were registered with the PES but were not receiving UB, with their transition rate to employment being marginally lower than those STU who were neither registered or receiving UB. This goes in line with the European Commission (2014f) findings indicating that transitions from STU to employment are positively correlated with UB coverage rates. Additionally, this could be an indication that receiving UB for the STU is of even higher importance than for the LTU who may anyways be relying on other forms of income replacement, as in the form of social assistance<sup>(16)</sup>.

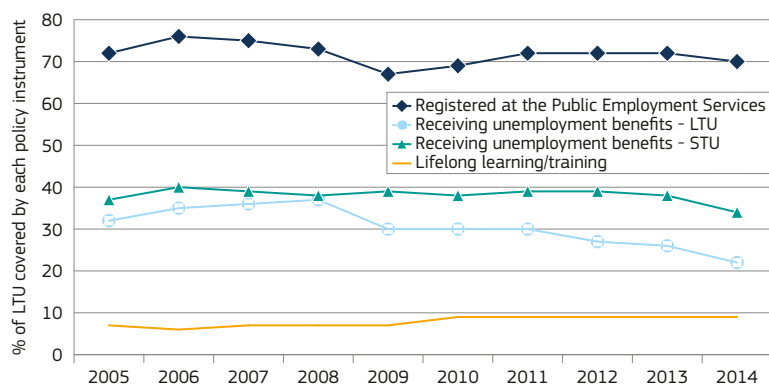
The most substantial difference concerns people that were both PES registered and receiving unemployment benefits, who had 11ppts higher transitions from LTU to employment compared to those who received neither intervention, 9ppts higher transitions from STU to employment and 14ppts less chances of going from LTU to inactivity. Those that received some kind of education or training also had consistently better transitions than those who did not.

<sup>(16)</sup> This is additionally substantiated by the fact that in 2014 UB coverage rates and lifelong learning participation seem to have a much stronger relationship in the case of those who are STU ( $r = 0.41$ ,  $r^2 = 0.16$ ) than for those who are LTU ( $r = 0.23$ ,  $r^2 = 0.05$ ).

Initial findings indicate that providing UB and PES services to LTU has a greater effect than providing them to the STU, and that they almost equally benefit from receiving LLL. Transitions to employment of those receiving UB and being PES registered compared to being neither are higher for the LTU than for the STU (+11ppts vs. +9ppts). Similarly, participation in LLL has almost an equally high impact on LTU (+4ppts) as it does on the STU (+5ppts). These charts suggest that targeting the LTU with policy interventions is indeed a worthwhile investment and go in line with the recent research evidence that even in times when “there are no jobs” labour market policies can have a large impact on re-employment chances (OECD, 2015).

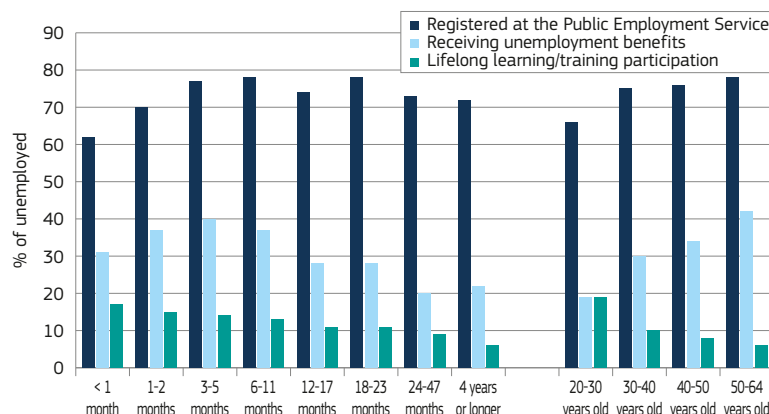
During the crisis, lifelong learning/training and registration with the Public Employment Services have increased overall, while the coverage of unemployment benefits started to decrease in the later years (Chart 19). The proportion of LTU who enhanced their employability during the crisis by participating in some form of training or education has continually increased. On the other hand, unemployment benefit receipt and registration with the PES by the LTU saw more variation over the same period. Coverage by both fell in the first year of the crisis, most probably due to the sharp increase in the numbers of LTU. Registration with the PES improved continuously from 2009 onwards, but has seen a substantial drop in the most recent years. Registration with the PES, which is the typical initial prerequisite for policy intervention, varies greatly across Member States and education levels, arguably due to national policy settings. The same is true of ALMP participation of all of the unemployed which varies from 3 persons per 100 persons wanting to work (Croatia)

Chart 19: Evolution of LTU coverage by PES, unemployment benefits and lifelong learning/training in the EU, 2005-2014



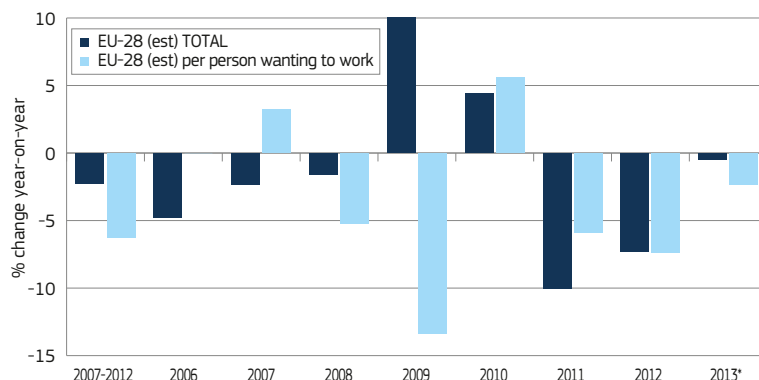
Source: EU-LFS, DG EMPL calculations. Reference age group is 20-64. The “no answer” category was not included in the calculations. PES registration values for Ireland are missing. For unemployment benefits no data is available in the case of Ireland and the Netherlands. For Austria 2013 value was used for 2014 due to lack of data.

Chart 20: Evolution of PES registration, unemployment benefit coverage and participation in lifelong learning (education and training) by age and unemployment duration, 2014



Source: EU-LFS, DG EMPL calculations. No answer replies were not included in the calculation. No values available for PES coverage for Austria and Ireland and no values available for Austria, the Netherlands and Ireland regarding UB coverage in 2014.

Chart 21: Total ALMP expenditure (categories 1-7) year-on-year growth in real terms, for EU-28 (2006-2013)



Source: Eurostat, LMP database.

Notes: EU-28 estimate used based on DG EMPL calculations. Due to missing data, for the United Kingdom and Greece 2010 value used for 2011-13, and for Spain, France, Cyprus, Malta and Romania 2012 value used also for 2013. Croatia was excluded from calculation due to only having 2012-13 values available.

to 55 persons per 100 persons wanting to work (Luxembourg) (17).

The level of support through UB given to the STU and LTU remained more or less constant at the onset of the crisis (2009-2011), but then began to fall as public spending began to tighten.

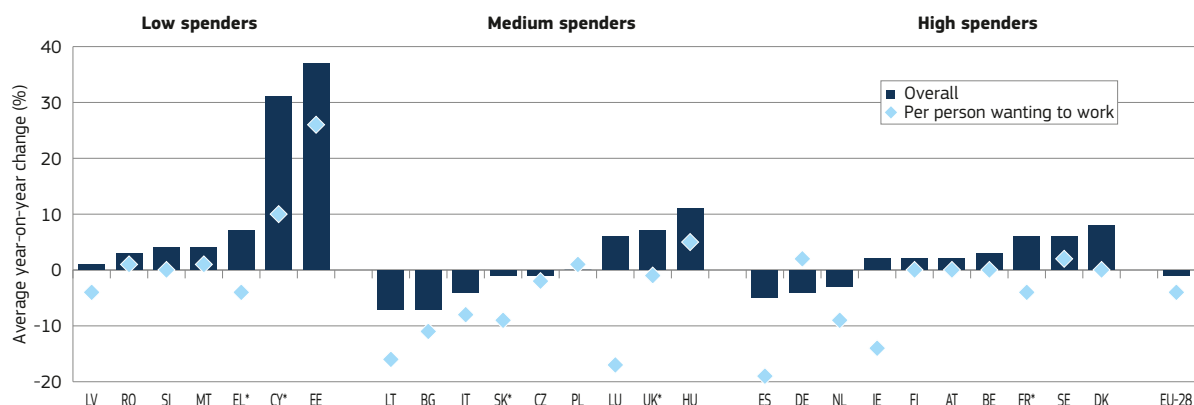
Coverage of the unemployed by various policy interventions varies with the duration of the unemployment spell and the age of the unemployed person. PES registration tends to increase with duration and age, while participation in lifelong learning tends to decline with duration and age (Chart 20). The receipt of UB generally rises in the first five months of unemployment but starts declining thereafter, reflecting the most common design. UB receipts increase with age, reflecting the capacity of older workers to fulfil the eligibility criteria, notably in terms of contribution history. All of these findings could well contribute to explaining why transition rates from LTU to employment decline with duration.

Across the EU as a whole, most ALMP expenditure goes on supply side policies, with 59% being devoted to PES and training, but with the proportion being spent on training increasing (European Commission, 2014f). In terms of specific types of active labour market policies, considerable divergence exists between Member States. The overall total spending on ALMP in the EU-28 seems to have followed the unemployment trend in the initial phase of the crisis in 2009 and 2010 but then, due to fiscal constraints, it reduced in the second phase of the crisis (Chart 21, dark blue bar).

After 2009, spending was not always aligned with the increase in the number of those out of work, as shown by the erratic evolution of expenditure per person looking for work. The analysis of growth of ALMP expenditure in real terms from European Commission (2014f) suggests that Member States which had high levels of spending on ALMP prior to the recession (e.g. Germany, Belgium, Ireland, Austria, Finland, France, Netherlands, Sweden and Denmark) weathered it better than others. However, European Commission (2014f) and Badea and Xavier (2015), also suggest that the evolution of ALMP

(17) Data is based on Eurostat-LFS data for 2012 [lmp\_ind\_actsup].

Chart 22: Annual real growth of total and per person wanting to work ALMP expenditure (categories 1-7), per Member State grouped according to level of spending (% of GDP in 2007), 2007-2012

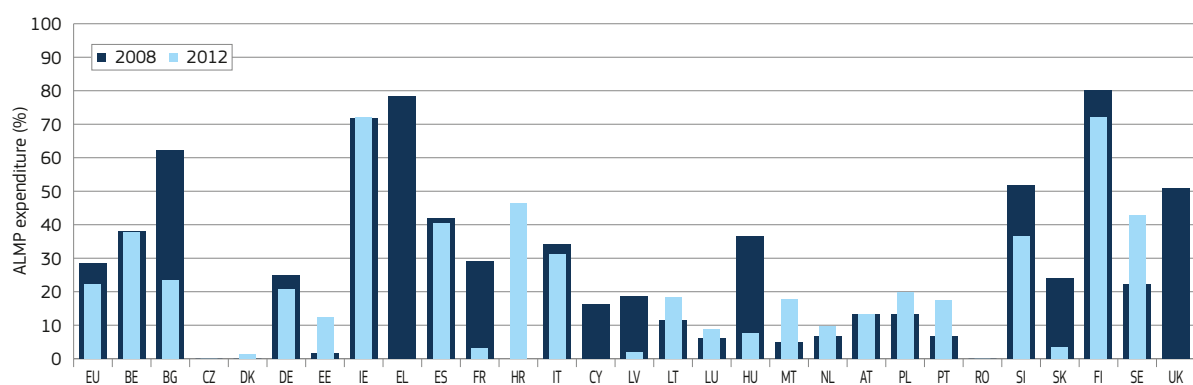


Source: Eurostat, LMP database. DG EMPL calculations of EU-28 average value.

Notes: EU-28 aggregate estimated by using, due to missing data, for the United Kingdom and Greece 2010 value for 2011-13, and for Spain, France, Cyprus, Malta and Romania using the 2012 value also for 2013, and excluding Croatia. Croatia and Portugal not included due to lack of data and breaks in series.

\*Due to breaks in series, for Greece, France and the United Kingdom 2007-2010 averages used instead of 2007-2012, for Slovakia 2008-2012 period used, and for Cyprus the 2007-2011 period was used.

Chart 23: Proportion of expenditure on ALMP measures (categories 2-7) targeted at LTU (%), 2008 and 2012



Source: DG EMPL, LMP database (own calculations).

Note: Data not available for HR in 2008 or for EL, CY and UK in 2012; CZ and RO real zeros in both years.

expenditure during the recession did not always match movements in unemployment or their scale.

The most recent data appears to be in line with these findings (Chart 21). For EU-28 as a whole, there was a decrease in both overall and relative (per person wanting to work) year-on-year ALMP expenditure in real terms over the 2007-11 period (-1.3% and -4.3% respectively), driven particularly by reductions in spending on training (European Commission, 2014f).

Following the pre-crisis period, Member States with low expenditure levels did begin to spend more on ALMP both overall and in proportion to the number of persons wanting to work (Chart 22). But many Member States did not see their ALMP expenditure move in line with their labour market developments, with some who saw their unemployment rates increase reducing both overall and relative ALMP expenditure between 2007

and 2012 (e.g. Bulgaria, Spain, Italy, Slovakia and Lithuania).

Just over a fifth of total expenditure on ALMP measures is targeted at the long-term unemployed in the EU (excluding Greece, Cyprus and the UK), based on 2012 data<sup>(18)</sup>. Although ALMP interventions support a wider group than just the unemployed (for example those who are formally considered to be inactive but want to work), the unemployed – particularly those registered with the public

<sup>(18)</sup> The LMP database includes comprehensive qualitative information about each intervention, including details of the specific groups at which the intervention is targeted. Using this information it is possible to identify the amounts spent on interventions targeted at the long-term unemployed compared to those targeted at other specific groups or open to all unemployed. Note, however, that interventions may be targeted at more than one group so that the fact that an intervention includes long-term unemployed amongst its target groups does not necessarily mean that a high proportion of participants are long-term unemployed (see further below).

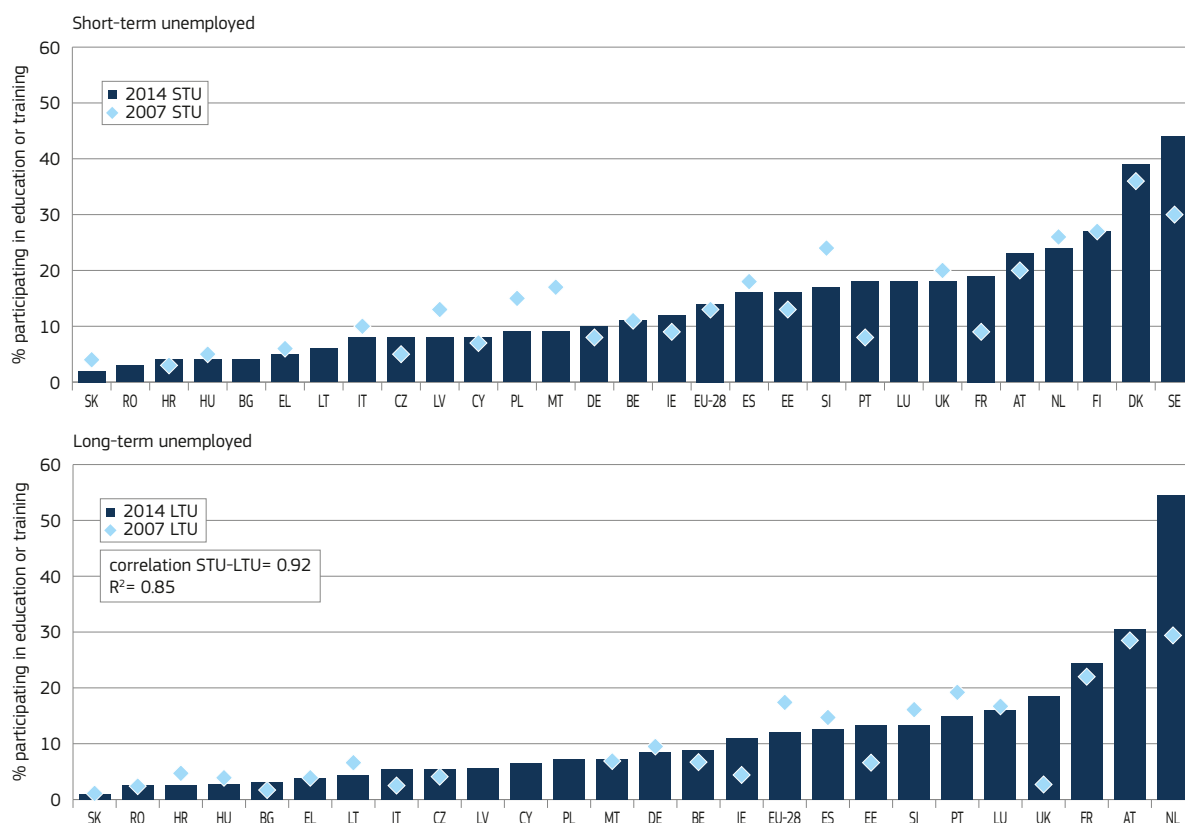
employment services (PES) – are the primary target group for ALMPs.

The situation varies considerably between Member States. The proportion of targeted expenditure varies from 0% in the Czech Republic and Romania (in neither case are ALMP measures reported as being targeted at the LTU) to 72% in Ireland and Finland (Chart 23). The latter two Member States are the only ones to target more than half of their ALMP expenditure on the long-term unemployed, while more than half of the Member States for which data is available target less than a fifth of their expenditure on the long-term unemployed (Table 3).

Of the ALMPs, participation in education and training is strongly associated with transitions from STU to employment (European Commission, 2014f). Member States with higher levels of participation, by the whole population, also show higher levels of competitiveness.



Chart 24: Participation in education and training (in the last 4 weeks) by duration of unemployment, 2007 and 2014



Source: DG EMPL calculations based on EU-LFS. Values for 2007 STU are of limited reliability for SK, HR, CY, MT and EE, and also for 2014 for SK, RO, HR, BG and MT. Values for LTU are of limited reliability for 2007 for HR, PL, SI and LU, and also for 2014 for HR, HU, IT, EE and SI. Values missing for 2007 STU for BG, LT and LU; 2007 STU for IT, CY, EE, BG, LT and LV; and 2014 LTU for BG, LT and LV.

Table 3: Groups of Member States by proportion of expenditure on LMP measures targeted at LTU

0%	CZ, RO
<10%	DK, FR, LV, LU, HU, NL, SK
10-20%	EE, LT, MT, AT, PT
20-30%	BG, DE, PL
30-40%	BE, IT, SI
40-50%	ES, HR, SE
>50%	IE, FI
Unknown	EL, CY, UK

Source: DG EMPL, LMP database (own calculations).

More of the EU's unemployed are taking part in training and educational activities in 2014 than they did prior to the crisis in 2007 (Chart 24). The STU participate more in training and education activities than the LTU, but both have increased their participation over the years. Nevertheless, this varies considerably between Member States with just under half seeing their unemployed population receive less education/training, the strongest examples being Germany and Poland. On the other hand, the overall growth in participation at EU level is largely fuelled by significant increases in Spain and France.

The level and efficiency of the support provided by unemployment benefit schemes depends on their design and the degree to which they are conditional on engaging in activation measures. Higher coverage of unemployment benefits correlates positively with LTU prevention (European Commission, 2014f). Low coverage and benefit rates not only reflect a lack of effectiveness of the benefits scheme in protecting people against income shocks, but also have a limited stabilisation impact on the economy.

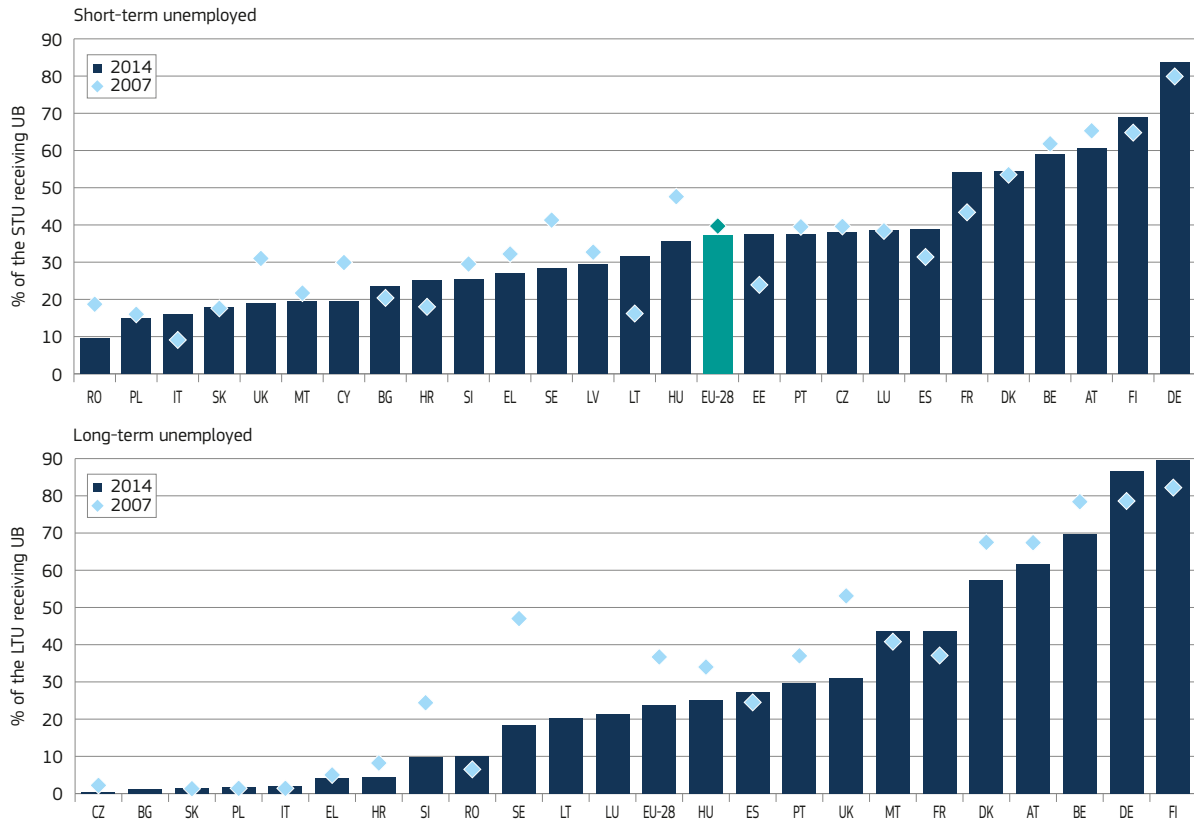
Fewer STU and LTU received unemployment benefits in 2014 than they did before the crisis. The percentage of the unemployed covered by unemployment benefits varies greatly across Member States but the EU level average currently covers just 24% of the LTU, down from pre-crisis levels of 37% (Chart 25). Member States with the most generous length of unemployment benefits, such as Belgium, Germany and Finland, saw increased take-up by the unemployed, with increased usage by the long-term unemployed, possibly due to both becoming aware of the possibilities, and the need to utilise

them, due to their prolonged period of unemployment.

Support for the unemployed in their job search before they become LTU is crucial in preventing them from falling into inactivity. The drop in UB coverage of the STU and LTU between 2007 and 2014 indicates that policy effectiveness and reach has not improved in the EU (due to the increased number of unemployed and budgetary constraints), with around half of the Member States now offering less support for their unemployed than when economic circumstances were more favourable.

In most Member States the duration of unemployment benefits for people with the lowest levels of entitlement (due to limited periods of contribution, type of contract or age) has not changed since the onset of the recession. Nevertheless, in some Member States (Ireland, Portugal, France and Netherlands) the minimum duration for the most vulnerable and those with the lowest entitlement was further reduced (Chart 26). Only in Italy was the minimum duration of unemployment benefits extended for the most vulnerable categories.

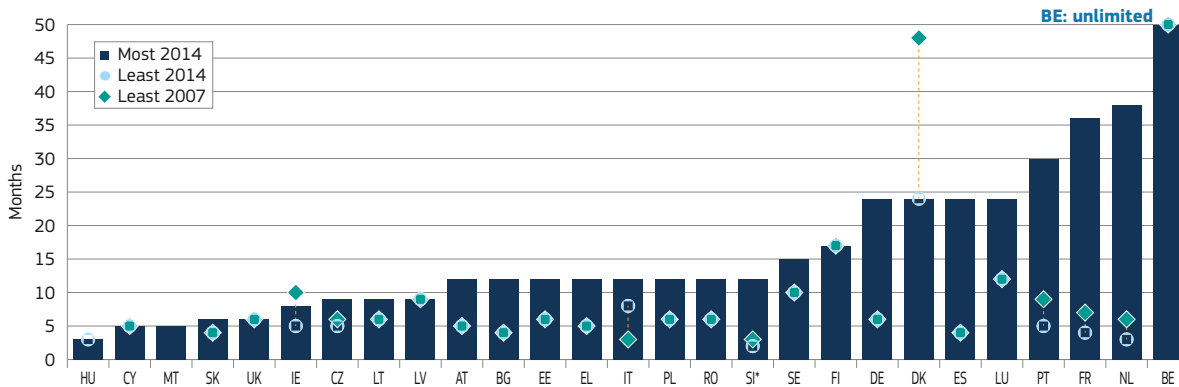
Chart 25: Unemployment benefit coverage of short-term and long-term unemployed, 2007 and 2014



Source: DG EMPL calculations based on EU-LFS.

Notes: Ireland and the Netherlands: not covered and no values available for Cyprus, Estonia and Latvia for LTU for either year nor for Bulgarian, Lithuania or Luxembourg for 2007. STU stands for short-term unemployed (less than 12 months) and LTU stands for long-term unemployed (unemployed 12 months or more). The 2013 value was used for 2014 in the case of Austria for LTU and STU. Values for Czech Republic, Bulgaria, Slovakia, Poland, Croatia, Slovenia and Luxembourg for LTU are of limited reliability, as well as for Lithuania in 2007 for STU. \* The coverage rate is the ratio of the unemployed who received unemployment benefits or assistance and those who did not receive them in each category of unemployment duration (STU and LTU).

Chart 26: Maximum duration for the least and most entitled groups of unemployed, 2007 and 2014



Source: MISSOC.

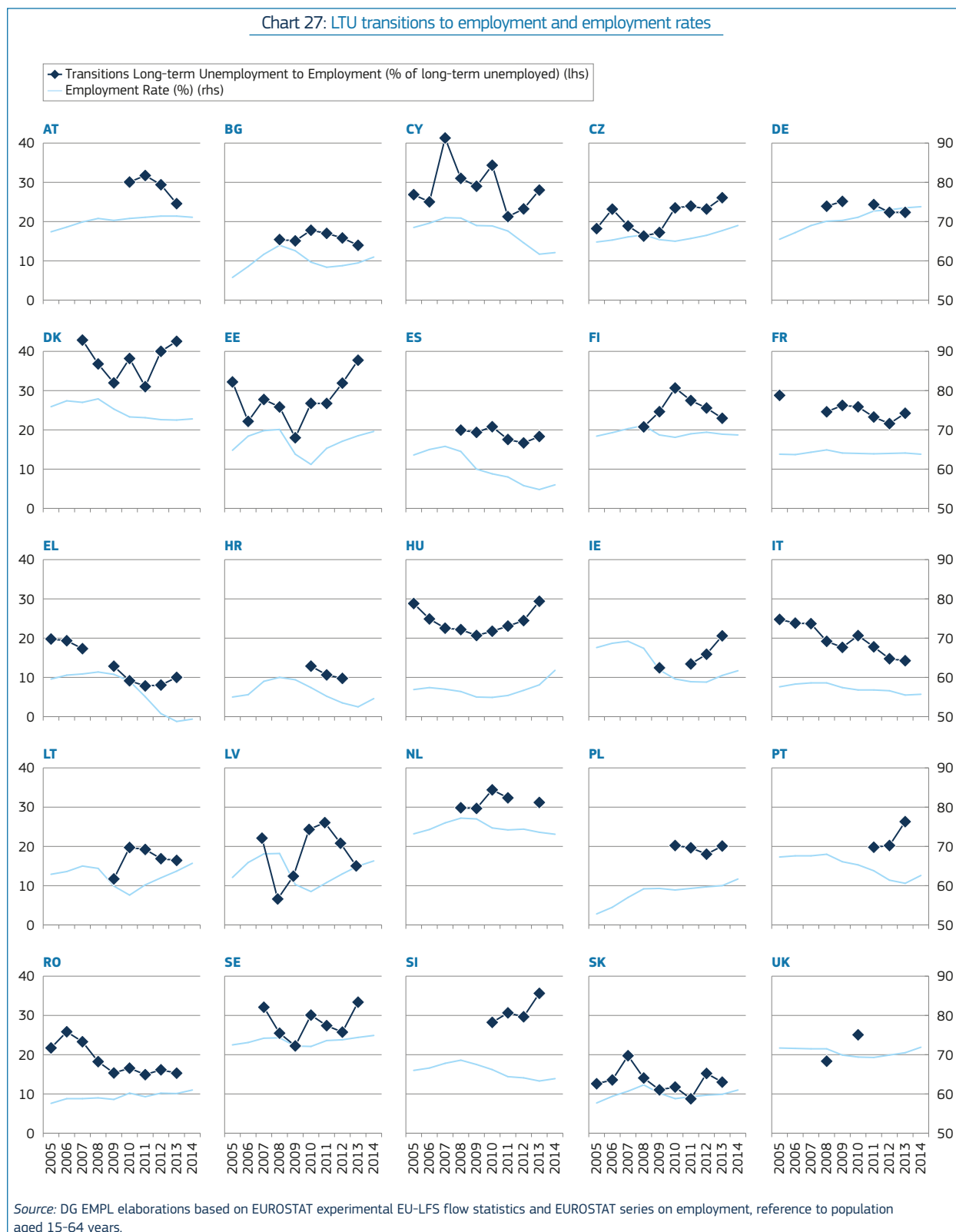
Notes: When calculating the minimum duration the longest duration for the least entitled group was taken, whereas for maximum the longest specified duration for the most entitled group was taken, not including those with disability status or with special status due to being over the age of 55. \*Note that in the case of Slovenia the minimum duration has changed due to a new category being introduced so coverage of least entitled actually increased.

The low coverage of unemployment benefits is a direct consequence of eligibility criteria linked to duration of unemployment which, in most Member States, results in the LTU having less

access than the STU. While this may be an incentive for the STU to make the most of the support provided in the early stages of unemployment, at a time of low labour demand and rising levels of

LTU it risks having a negative impact on the ability of a policy to reach the LTU, unless they receive other types of support linked to activation measures, such as social assistance.

Chart 27: LTU transitions to employment and employment rates



Source: DG EMPL elaborations based on EUROSTAT experimental EU-LFS flow statistics and EUROSTAT series on employment, reference to population aged 15-64 years.

#### 4. WHAT WORKS? THE SPECIFIC ROLE OF POLICIES AND INSTITUTIONS

This section aims to better understand the specific role of labour and social policies in facilitating transitions to employment of the long-term unemployed. Few studies have analysed determinants of transition rates, especially from a cross-country perspective, in part due to the

lack of the necessary longitudinal data. The question is nevertheless highly relevant given some emerging empirical evidence concerning the contrasting policy effects that can be expected on unemployment and on job finding rates (e.g. Petrongolo, 2009; Bradbury, 2014).

The section builds on and extends analysis on drivers of transition rates from employment to STU and LTU and vice versa, as in European Commission

(2012a). The latter study was carried out on the basis of data for 2005-2010, with a limited number of control variables pertaining to population groups for which transition data was available (i.e. age, gender, educational level, registration to PES or benefit receipt). The analysis presented evidence that having a higher education level facilitates job finding both among STU and LTU. Transition rates for men were found to be higher than for women in both finding employment and

entering unemployment. Regarding policy effects, the analysis pointed to a particularly positive and significant effect of training for LTU return to employment. Receiving unemployment benefits was observed to be associated with higher transition rates from both STU and LTU, while being registered with PES was not found, in itself, to be very supportive in finding employment<sup>(19)</sup>.

This analysis focuses on drivers of transitions from LTU to employment, taking simultaneous account of more diverse population characteristics as well as various socio-economic factors and policy effects, and doing so over a relatively longer time span (2005-2013). As such, it both re-examines previous findings and presents new evidence on the ways various individual and macro-level determinants co-influence higher or lower chances of LTU returns to jobs.

This section first maps the potential role of determinants included in the regression analysis. It reviews the overall role of the macro-economic situation, labour market policies and country effects, and also highlights the existing literature evidence about the effectiveness of individual labour market policy tools. ALMP and PES, LLL and EPL policies are explored in detail with the effects of factors such as personal characteristics being highlighted when considering the effectiveness of policy interventions<sup>(20)</sup>. It then employs regression analysis to provide new insights on the effectiveness of various policy interventions and of individual characteristics on LTU transition rates to employment, while taking into account differences in other factors such as economic growth and national level differences. Finally, the discussion of results highlights the most effective policy interventions, with a particular focus on the policies that help those with the least chance of finding jobs (i.e. younger and older workers, low-skilled, etc.).

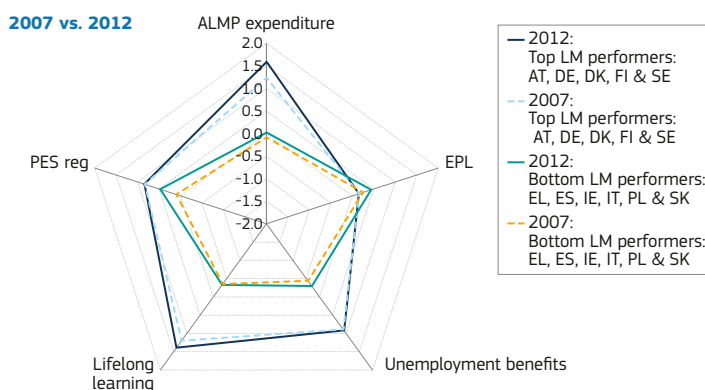
#### 4.1. Helping the LTU return to employment: existing evidence

Transition rates from LTU to employment are increasing in some Member States but continue to decrease in others

<sup>(19)</sup> The impact of PES is explored further in the Section 4.2, on the basis of more in-depth analysis.

<sup>(20)</sup> The reviewed list of factors is certainly not exhaustive and rather reflects the chosen focus and scope of this analysis.

Chart 28: Labour market institutions index (LMII), average for the top and bottom labour market performers, 2007 and 2012



Source: ALMP and UB spending data from Eurostat LMP database, Lifelong learning data from Eurostat (trng\_lfs\_02), data on opinions of managers (part of LLL component) is from the IMD WCY executive survey and IMD World Competitiveness Yearbook 2012, eligibility requirements and job search conditionalities for unemployment benefits are from Venn (2012) and the EPL index is from the OECD database.

Note: The labour market institutions index is a composite Z-score index of EPL (permanent contracts and gap between permanent and temporary contracts v3), ALMP (expenditure in % of GDP and activation conditionalities), lifelong learning (participation rates of total population in education and training and opinions of managers about skills from IMD WCY executive survey) and unemployment benefits (expenditure per person wanting to work in PPS, eligibility criteria and coverage). 2008 EPL values were used for 2007 due to availability of data. The EPL values were all turned into negative values so that the lowest EPL gap and lowest EPL value for permanent contracts had the highest Z-score. The eligibility requirements (part of UB indicator) and job search conditionalities for unemployment benefits have only 2012 data available in both years. The UB spending for 2012 uses 2011 values, except for EL and UK for whom 2010 values are used. The mean value in 2012 for each indicator is that of the 2007 scores in order to be able to compare the 2012 scores with those of 2007. For 2012 ALMP expenditure 2011 values used for CY, ES, IE, LU, MT and PL, and 2010 values used for EL and UK. For EPL in 2007 for EE, LU and SI, 2008 values were used. Transitions data unavailable for Belgium, Luxembourg, Malta, the Netherlands and the United Kingdom, and thus not included.

against the background of the slight overall improvement in total employment rates in recent years (Chart 27). In nine Member States, increasing employment rates are associated with rising transitions to employment.

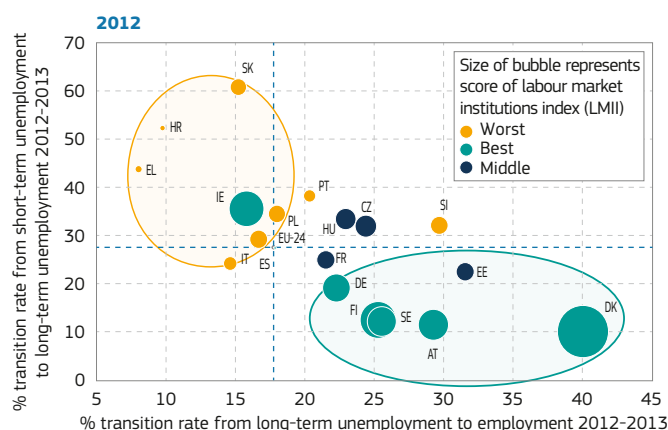
In some Member States, however, transition rates to employment continue to decrease, despite the overall employment situation remaining generally steady (i.e. Austria, Finland) or improving overall (i.e. Lithuania, Latvia). A number of factors may explain why employment growth does not translate into higher job finding rates for the LTU, such as individual characteristics, policy design and within country sectoral and regional developments (Baussola and Mussida, 2014). For example, Kroft, Lange, Notowidigdo and Katz, (2014) demonstrate that both negative duration dependence and transitions to (and from) inactivity largely explain stagnating LTU numbers in a time of employment growth in the United States. Similarly, Krueger, Cramer and Cho (2014) note that, in comparison with STU, the job finding rates of the LTU are less sensitive to the business cycle, even though their labour force withdrawal rates are.

The combination of different policy mixes rather than individual policies are seen

to account for differences in labour market outcomes across the Member States. As indicated in European Commission (2014f), Member States with the highest investment in activation and support measures are those that fare best in terms of ensuring transitions out of short-term unemployment and movements from temporary to permanent contracts. Chart 28 confirms this message and shows that the best chances of finding steady jobs are observed in the Member States with the most developed, and effectively balanced, sets of labour market institutions. The best performers combine higher spending in ALMP, stronger activation conditionality, a higher participation in lifelong learning and higher coverage and adequacy rates with respect to unemployment benefits than Member States with the lowest labour market performance.

The same is true for both preventing and fighting long-term unemployment. As shown in Chart 29, Member States with the highest prevention of LTU (i.e. lowest transition rates from STU to LTU) also have the highest job finding rates by the LTU. These Member States are assigned the highest LMII scores, due to their extensive and comprehensive coverage of unemployed by diverse social and labour market policies.

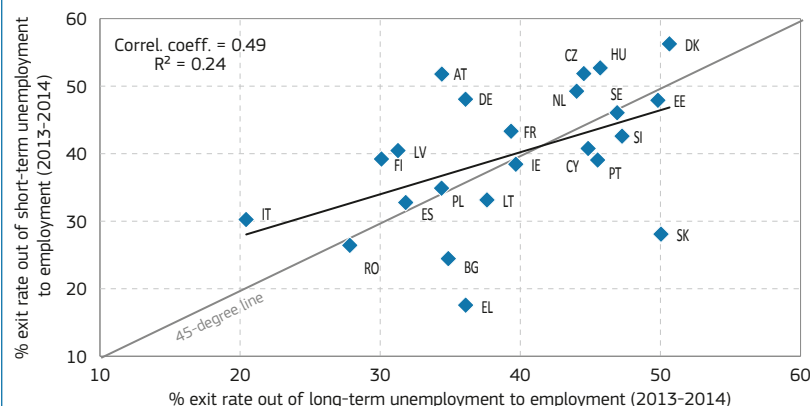
Chart 29: Transitions from STU to employment and from LTU to employment (2012-2013) and the Labour Market Institutions Index scores\* (2012)



Source: DG EMPL elaborations based on EUROSTAT experimental EU-LFS flow statistics.

Notes: \*The LMI in this chart does not include the score for PES registration. Reference population group for transition rates is 25-64 years; blue line marks the EU average. Index scores missing for Bulgaria, Cyprus, Lithuania, Latvia, Malta and Romania. Transitions data unavailable for Belgium, Luxembourg, Malta, the Netherlands and the United Kingdom, and thus not included.

Chart 30: Exit rate from short-term unemployment and long-term unemployment from 2013 to 2014



Source: Transition rates are ad-hoc experimental EUROSTAT calculations on the basis of EU-LFS longitudinal data.

Notes: Reference population group is 15-74 years; information only for Member States with available data.

EU Member States differ in the effectiveness of their LTU reintegration. Prevention of long-term unemployment is primarily dependent on stemming the inflow of individuals into unemployment and ensuring the quick return to work of the unemployed. In this respect, a dynamic labour market and policies that prevent the inflow into unemployment (e.g. short-term work arrangements; sheltered employment subsidies) have been shown to be important in preventing unemployment from becoming structural.

While the economic cycle largely explains changes in levels and flows into and out of employment, a number of other factors account for country differences. An effective social and labour market policy mix in Member States such as the Netherlands, Sweden and Finland ensure

high transition rates back to employment, while the opposite holds in Member States that are less successful in this respect (for instance, Slovakia, Greece and Bulgaria) (European Commission, 2012, 2014).

Generally speaking Member States with high exit rates from STU to employment have high exit rates from LTU (Chart 30). However, in Member States such as Germany and Italy long-term unemployed workers have much lower chances of returning to work, despite the fact that a high share of the short-term unemployed manage to do so. This could indicate fundamental skill deficiencies of the LTU in these Member States, greater labour market barriers, or insufficient policy efforts to reintegrate the LTU due to the costs and investments required.

The effect of ALMP policies on employment has larger long-term than short-term effects, with higher effectiveness achieved by certain policy designs. Based on Kluge (2010) observations from meta-analysis, most ALMP measures (with the exception of direct public employment programs or programs targeting young people) have a modest to high likelihood of producing a significant positive impact on employment rates. Filges, Smedslund, Knudsen, and Jørgensen (2015) finds that ALMP programmes combined with unemployment benefits, regardless of type, tend to mean that the unemployed participating in ALMP will have more than a 50% greater chance of finding a job than a non-participating unemployed person. The most recent meta-evaluation of ALMP policies around the world by Card, Kluge and Weber (2015) confirms the varied employment effectiveness due to programme design and highlights the role of timing. This study notes that impacts of interventions become more positive two to three years after the completion of the program, with the larger gains being observed for programmes emphasizing human capital accumulation. Furthermore, ALMPs are found to be more likely to show positive impacts in a recession, a finding also highlighted by the OECD (2015).

PES services such as job search assistance have been found to have a positive impact on the chances of the unemployed to find employment, even in the short-run (Card, Kluge and Weber, 2010). Higher PES effectiveness is linked not only to wider coverage, but also to better quality service. Based on a study by Irving, Bianchini, Manoudi, Metcalfe et al. (2015), average caseloads per PES worker across the EU countries vary from 160 (Flanders, Belgium) to over 2600 (Spain) clients annually. The study shows that the design of service provision is of utmost importance for effectiveness as well. Custom-tailored approaches to handling cases, sufficient and quality time spent on a case increase re-employment potential. Evidence based on national PES evaluations shows that general programmes are not very effective given the heterogeneity of LTU jobseekers<sup>(21)</sup>.

<sup>(21)</sup> 'PES approaches for sustainable activation of long-term unemployed', Pôle Emploi, Peer Review Bulgaria, April 2014. The publication is commissioned by the European Community Programme for Employment and Social Solidarity (2007-2013).



Targeted approaches, which are particularly relevant for people with lower access or knowledge of information and communications technology (i.e. people with migration background, elderly or lower educated people) however, require more and better trained case managers in the PES centres (Spermann, 2015). Other design features bring gains too. For example, in the context of differing regional developments, PES with devolved autonomous decision making powers are seen as more able to respond expediently and appropriately (Manoudi et al., 2014).

Education and training have been found to have a positive impact on the return to employment. In his analysis of 137 program evaluations across 19 EU and EFTA states, Kluve (2010) finds that training programs have a 'modest likelihood of generating a significant positive impact on post-program employment rates'. With a more expansive dataset, including 6 other non-EU/EFTA countries, Card et al. (2010 and 2015) find that training has small short-term effects but that it has a larger impact in the medium- or longer-term. Card et al. (2015) also find that training programs are especially effective for the LTU during an economic downturn. Osikominu (2013) shows that short-term training reduces the time in unemployment and moderately increases job stability, whereas long-term training initially prolongs the time in unemployment, but after completion enables participants to exit to employment at a much faster rate than without training (Osikominu, 2013). The participants of longer training programmes are also found to enter more stable jobs and have higher earnings. Overall, the study notes that long-term training programs are highly effective in supporting the employment chances of those with generally weak labour market prospects.

Targeting education and training at the young or older workers reveals mixed and country-specific results. Several large studies have found that training programmes targeting younger workers tend to be significantly less effective than non-targeted programmes (Kluve, 2010; Card et al., 2010) and that the same tends to be true of older workers (Card et al., 2010). However, this does not mean that the older workers are

unable to acquire new skills (Picchio, 2015; Zwick 2012). A large meta-analysis of 200 recent econometric evaluations highlighted that, while training programmes are overall effective in helping the unemployed find employment, young people seem to benefit even more in the short-term, but that both young and older workers tend to benefit less than the average in the medium- and long-term (Card et al., 2015).

Evaluations in Germany indicate that low educated youth are particularly disadvantaged and that mere education participation for low educated youth has no effect on employment (Caliendo et al., 2011), while a more recent evaluation of an innovative programme combining coaching, training and temporary work indicated that for this target group design is key for positive results (Ehlers, Kluve and Schaffner, 2012). In this respect it is argued that it is important to recognise that young workers and older workers are complementary policy targets and not competing groups for employment. In fact, evidence points to increasing employment of older workers leading to more jobs for younger workers (Boheim, 2014).

It is often argued, albeit often on the basis of deductive reasoning, that employment protection legislation is liable to create incentives for workers and firms to invest in existing employment relationships and that, by making dismissals more costly, it may deter hiring with potentially detrimental effects on LTU (Young, 2003). In line with this, high and uniform levels of employment protection can lead to insider-outsider dynamics on the labour market, creating barriers to the re-integration of the long-term unemployed. Higher EPL can reduce the number of new hirings, especially in cases of longer than average unemployment spells and higher rates of LTU and can lower employment expansion (Berger and Danninger, 2014), thus keeping LTU high following a crisis.

In practice, the evidence of EPL impact on employment and transitions out of unemployment is often not-conclusive, especially if referring to times of low labour demand (ESDE 2014). Some Member States with high EPL also have

both high employment rates and good transitions from LTU into employment - pointing to interactive influences of many factors (e.g. Denmark and the Netherlands). Moreover, during times of low labour demand, EPL reform has not been found to have had an impact on transitions in the short- to medium-term (European Commission, 2014f), with some studies signalling that reducing EPL may result in more dismissals than hirings (OECD, 2013b; ILO, 2014). While EPL alone cannot explain labour market outcomes, research by Fabrizi and Mussida (2008) suggest that, if more flexible labour market legislation facilitates the return of the short-term unemployed to employment, it has little impact on the chances of the long-term unemployed finding jobs.

The effectiveness of policy interventions vary by country and depending on the characteristics and behaviour of both workers and employers. For example, research by Rosholm (2014) points to the lower impacts of PES policy interventions for the low-skilled unemployed, whereas more substantial ALMP impacts are observed for females and long-term unemployed (Card et al., 2015). Caliendo, Kunn and Schmidl (2011), based on evidence for Germany, find that programme effectiveness often depends on group characteristics, such as employment impact of further education participation being significantly lower for low-educated youths.

Baussola and Mussida (2014) focus on Italy and find that, while a higher level of education combined with age (young) may help increase employment inflows, it also reduces employment outflows. Manning (2005) and Petrongolo (2009) argue that some individuals view PES interventions negatively and respond by not claiming benefits, but such behaviour has no effect on their entry into employment. Overall the existing literature evidence points to strong country level effects on the role of individual characteristics and overall labour market functioning.

Policies may have effects that extend beyond the intended scope of intervention. For example, Crépon, Duflo, Gurgand, Rathelot and Zamora (2013) found that intensified job counselling in France created higher short-term

opportunities for jobseekers, although this was at the expense of those who did not receive targeted intervention. Recent intensification of ALMP programmes for youth in Denmark, on the other hand, is seen to have had no significant effect on employment, but has rather increased exit rates to sickness benefits (Maibom et al., 2014). This counter-intuitive outcome is attributed to the already highly intensive Danish ALMP approach before the policy change.

Individual characteristics per se are important in preventing LTU. Personal characteristics will clearly have their own effects on LTU chances of returns to jobs. Some of these characteristics may be difficult to modify but nevertheless have adverse effects on the chances of finding jobs. In addition to the commonly discussed roles of age, gender, education or length of long-term unemployment, there are many others. O'Connell, McGuinness and Kelly (2010) in a study on Ireland, listed that the number of children, literacy/numeracy problems, lack of personal transport, low rates of recent labour market engagement or spousal earnings – all significantly increase the likelihood of the short-term unemployed becoming long-term unemployed.

Policy effectiveness should be valued not only by scope of re-employment but also by quality of jobs to which the LTU return to. For example, Krueger et al. (2014) in a study on the US show that, even if the LTU find jobs, they tend to be transitory and lead back into unemployment. Similar findings are found for the EU, with Spermann (2014) observing that many LTU in Germany who found jobs do not remain employed for extended periods of time.

Moreover, the latter study found that only one in four LTU take up employment in the primary labour market.

## 4.2. Helping the LTU return to employment: new insights

The evidence outlined above suggests that transition rates from LTU to employment are strongly influenced not only by policies and socio-economic factors but also by the characteristics and behaviour of those affected. This sub-section seeks to distinguish the effects of different factors using a database of time, cross-country and within-country variation of transition rates from LTU to employment (the dependent variable). This includes a number of independent variables that capture variations in individual characteristics and in labour and socio-economic policies, as well as economic and contextual differences across Member States (see Box 2: Description of explanatory variables and model).

The dependent variable in this analysis is the transition rate from LTU to employment from one year to the next, with a breakdown by Member State and years, covering two age groups (25 to 39 years and 40 to 64 years) and three education groups (low, medium and high). In addition, transition rates are adjusted in order to reflect whether people are registered with public employment services and if they receive benefits in order to test the specific impact of these policy interventions<sup>(22)</sup> (see Box 2).

The dataset includes information on 18 EU Member States<sup>(23)</sup> over the period 2005 to 2013 for unemployment status,

with the most recent transition rate relating to employment in 2014. Due to the degree of disaggregation of the analysis and gaps in the more historical EU-LFS data, some important data gaps occur: more than 60% of observations are from 2010 or later, and data for the full period from 2005 is only available for seven Member States (Cyprus, Estonia, Greece, Hungary, Italy, Romania and Slovakia). The share of the LTU population covered varies by country and year, however, from around a third in Cyprus in 2008 to almost all in Hungary across all years. A number of Member States (Austria, Germany, Portugal and Croatia) only have observations from 2010.

In addition to data limitation concerning the dependent variable, available data on independent variables only enables limited aspects of policy to be developed. Hence, the analysis focuses on a wide coverage of variables rather than a more in-depth study of a particular policy or its dimension, which needs to be born in mind when interpreting the results.

The results of the analysis are presented in Table 4, with eight specifications, indicating a step-by step inclusion of explanatory variables. Specifications one to seven refer to a full dataset for the period 2005 to 2013. Specification number eight covers data from 2010 onwards and, in addition to this different time dimension, reflects a country representation of the reduced sample. Despite the relatively small and specific sample of years and Member States covered, the results offer useful new insights into policy effectiveness across Member States and population groups.

<sup>(22)</sup> Clarification: the distinction is based on the LFS "Register" variable. A receipt of benefits here mainly refers to receipt of unemployment benefits and not of other types of income support. As such, in countries with UB duration limited to 12 months, benefit receipt would not be accounted for. It is likely, however, that long-term unemployed are then again re-entitled to social assistance or other minimum income supports. For example, based on Spermann (2014), 90% of LTU in Germany are actually entitled to basic income support, labelled "Hartz IV". Interpretation of benefit receipt when being registered to PES therefore needs to be interpreted with high cautiousness, as typical observations regarding influence of unemployment insurance benefits would lead to limited or biased understanding of observed effects.

<sup>(23)</sup> Austria, Cyprus, Czech Republic, Germany, Denmark, Estonia, Greece, Croatia, Hungary, Italy, Lithuania, Latvia, Poland, Portugal, Romania, Sweden, Slovenia, Slovakia.

### Box 2: Description of explanatory variables and model

All explanatory variables refer to the time of unemployment, i.e. time  $t$ , thereby implying a one-year time-lag compared to the year in which the LTU moved to employment. We distinguish two types of variables, as some characteristics are observed in the individual (i.e. group) levels, whereas other characteristics feature core differences across Member States.

Group level characteristics are first of all captured by binary variables covering age, education, registration with PES services and UB receipt. Maximum 18 groups are distinguished for a given year and country (i.e. 2 dimensions of age, 3 dimensions of education level and 3 dimensions by registration/receipt of unemployment benefits). One should be aware that depending on the PES design within Member States, some groups are by default not available or their population representativeness is very low. For example, no benefit receipt while being registered to PES as LTU is observed for Cyprus. Further group characteristics are estimates on within group shares of: women; people with unemployment duration less than 18 months; people who participated in LLL (training); people who were on a fixed term contract; people with no job experience; people who left due to illness or disability; people who left due to personal or family responsibilities; people over 55 years old. These characteristics are estimates based on EU-LFS survey data and capture heterogeneity across population groups in more detail. In addition, the number of LTU is used as a regression weight to adjust modelling results for the size of population groups covered.

Country level characteristics are explored including policy interventions and macro-economic indicators. GDP growth and the output gap between actual and potential GDP (i.e. the amount by which an economy deviates from its potential output) capture economic potential of Member States over time, with negative rates depicting a degree and evolution of financial crisis. Indicators on the tax wedge and net increase in disposable income if moving from unemployment to employment (NIDI) are based on OECD tax-benefit models and inform on diverse policy settings and financial incentives to work. The EPL index is an OECD measure of employment protection legislation relating to collective and individual dismissals of workers on permanent contracts<sup>(1)</sup>. ALMP participation rates are calculated on the basis of DG EMPL LMP database in relation to people wanting to work. Finally, country fixed effects are taken into account and provide insights into the remaining country level effects that are not explicitly captured by included specific country level variables. The reference category for the country fixed effects includes two countries: Italy and Cyprus. Italy is chosen due to most complete series of records across years and across dimensions of dependent variable. Information on Cyprus is pooled into the reference category as distinction of fixed effects is not possible due to particularly limited dimensions of dependent variable.

A number of other variables (i.e. information on unemployment benefit coverage or union density across countries) have been considered but excluded due to robustness checks such as in relation to multi-collinearity. For example, country differences regarding spending on family benefits and healthcare have been checked, but are excluded due to too high correlation with variable of ALMP participation.

As the constructed database pools cross-sections over time and population groups within countries, models and methods accounting for auto-correlation of dependent variable have been applied. In addition to the section described OLS model with lagged dependent variable, GLS with correction for autocorrelation model has also been tested and pointed to as robust and comparable results. To account for the strong interactions between individual level characteristics and policy effects, a separate structural equation model was established to compare results for younger and older workers. The model uses variables from specification 7, i.e. the full set of available country and year observations.

<sup>(1)</sup> Version 2; missing values in EPRC index for some countries (i.e. Croatia, Lithuania) are imputed using external information sources with estimation of EPRC index equivalent information; here and further on, missing gaps across years are imputed using information on the most recent observations.

The regression results (Table 4) indicate that LTU registration with PES has a small but positive effect on rates of finding employment but only when a wider list of Member State and group level interactions are taken into account. For example, in line with the observations made in ESDE (2012), registration to PES is not found to be significant if only taking into account the main personal characteristics, such as age or education. However, taking into account other differences across the LTU population, as receipt of training, duration of unemployment and in particular various national level effects, leads to positive PES effects being observed.

This result underlines the difficulties involved in taking account of the PES effects when many other simultaneous factors are involved, as well as the fact that the effectiveness of registration with PES varies significantly, depending on the characteristics of the population groups and across countries. The result complements existing literature observations on the importance of PES design, while indicating that policy efforts to facilitate LTU return to employment can benefit from ensuring both the coverage and quality of the PES services.

Receiving unemployment benefits, while being a registered long-term unemployed has a positive effect on job finding rates overall, when country-specific effects are not accounted for (Table 4, columns 1-4). Once accounting for differences in GDP growth and other national level information, such as the coverage of ALMP measures, this effect weakens but nevertheless remains positive (Table 4, column 5-6). When seeking to take account of country-specific effects (Table 4, columns 7-8), the effect becomes insignificant, but this may be partly explained by the very heterogeneous coverage of UB (see Section 3.1) in the countries reviewed, as well as by the many changes that occurred in the design of benefits during the crisis years. In some countries (Bulgaria, Italy, Poland, Slovakia) unemployment benefits do not cover the LTU, while in others (Germany) more than 60% of LTU receive unemployment benefits. Moreover, as outlined above, it has to be recognised that the LFS data on benefit receipt only relates in principle to unemployment benefits, and may not capture the role of other types of income support such as minimum income schemes, which are, de facto, more important for LTU than for STU.

Altogether, the evidence shows strong country level differences in the design of PES and unemployment benefit systems, leading to the positive, but highly heterogeneous, result in terms of their impact on job finding rates.

Participation in LLL is a particularly strong driver of LTU transitions to employment - a finding valid across all specifications. This suggests that, despite differences in LLL policy designs across countries, this type of support has a unifying and strong positive effect on LTU job finding rates. In line with existent literature findings, this underlines the effectiveness of policy designs targeted at human capital accumulation.

Though the impact of ALMP coverage is only captured at the country level,

the results show that higher coverage by ALMP measures can have a positive effect on LTU entries into employment. The effectiveness of this intervention appears to be highly country-specific, supporting wider literature evidence on the influence of specific design types for overall effectiveness of ALMP measures.

The regression results suggest that higher degrees of employment protection legislation strictness are associated with lower employment chances of LTU. This supports some of the literature observations that higher EPL creates barriers to the re-integration of the long-term unemployed, at least for the one year span for which our transition rates are calculated for. However, this finding would deserve further analysis.

As noted before, EPL impacts can vary highly across countries and time (i.e. low or high labour demand), pointing to interactive influences of many factors.

In addition to positive evidence on LLL, the regression analysis shows that job experience is also a strongly positive factor for returns to work, further highlighting importance of human capital formation. Though the finding is more sensitive to differences across countries, the overall result confirms the positive role of policy initiatives as apprenticeships and other on the job training schemes. A note of caution should be issued, as the type of job - that the long-term unemployed find - matters. For example, as shown in the regression analysis, temporary jobs might not necessarily serve as 'stepping stones'.

Table 4: Determinants of transition rates from LTU to employment

		Model specification							
Explanatory variables		1	2	3	4	5	6	7	8
Group level	Lagged dependent variable, LTU to E	0.42***	0.35***	0.31***	0.31***	0.19***	0.17***	0.10***	0.11***
	<b>Registration and UB receipt</b>	0.19***	0.18***	0.15***	0.15***	0.08*	0.09**	0.01	-0.04
	<b>Registration, but no UB receipt</b> (reference cat.: No registration, no UB receipt)	0.04	0.05**	0.05**	0.05**	0.04*	0.09***	0.07***	0.05*
	Aged 25-39	0.21***	0.09**	0.24***	0.23***	0.25***	0.14**	0.18***	0.20***
	Education: medium	-0.22***	-0.18***	-0.26***	-0.25***	-0.32***	-0.25***	-0.27***	-0.25***
	Education: low (reference category: high education)	-0.30***	-0.25***	-0.26***	-0.26***	-0.33***	-0.28***	-0.33***	-0.28***
	<b>Participation in LLL</b>		0.21***	0.26***	0.26***	0.24***	0.13**	0.13***	0.18**
	Share of women		-0.08***	0.00	0.00	0.01	0.08***	0.02	0.03
	Share of aged: > 55 years		-0.10**	-0.09*	-0.09*	-0.11**	-0.17***	-0.15***	-0.14**
	Share of LTU duration: < 18 months		0.07***	0.10***	0.10***	0.17***	0.13***	0.23***	0.26***
	Share of temporary jobs			-0.16***	-0.16***	-0.14***	-0.11***	-0.04	0.00
	Share of people with no job experience			-0.16***	-0.16***	-0.22***	-0.08	-0.13***	-0.20***
	Share of people with health problems				-0.01	-0.04*	-0.04	-0.04	-0.02
	Share of people with family care resp.				0.00	0.00	0.04	0.01	-0.01
	Country level	GDP growth					0.20***		0.20***
Output gap, actual vs. potential GDP						0.01		0.16***	0.04
Tax wedge, single person 67 % AW						0.08***		-0.04	0.03
NIDI, single person, 67 % AW						-0.14***		-0.13	0.09
<b>EPL index</b>						0.02		-0.25***	-0.27***
<b>ALMP participation</b>						0.07***		0.22***	0.12
Austria							0.08***	0.04*	0.05
Czech Republic							-0.02	-0.04	n.a.
Germany							0.18***	0.13***	0.26***
Denmark							0.13***	0.03	0.06
Estonia							0.07***	0.02	0.00
Greece							-0.24***	-0.06	-0.32
Croatia							-0.07***	-0.08***	-0.06
Hungary							0.08***	-0.05	-0.03
Lithuania							-0.02	-0.01	-0.05
Latvia							0.09***	0.12***	0.16***
Poland							-0.03	-0.29***	-0.30***
Portugal						0.09	0.15***	0.19***	
Romania						0.04	0.04	-0.10	
Sweden						0.04	-0.05	-0.08	
Slovenia						0.06***	0.05***	0.06***	
Slovakia						-0.09***	-0.25***	-0.17***	
(Constant, unadjusted coeff.)		12.69	15.38	15.48	15.81	10.37	14.37	38.92	29.52
Observations		1391	1391	1391	1391	1391	1391	1391	841
Adj R-squared		0.3761	0.4213	0.4442	0.4436	0.5215	0.5171	0.5814	0.6402
Number of Member States					18				17
Starting year of the selected period					2005				2010

Note: Standardised beta coefficients reported instead of confidence intervals; \*\*\* - p < 0.01; \*\* - p < 0.05; \* - p < 0.1.



People in long-term unemployment from previous employment with fixed term contracts have lower chances of being re-employed. However, this depends very much on country-specific labour market characteristics. For example, accounting for country level effects (Table 4, column 7) in a reduced sample specification (column 8), the evidence is that transition rates to employment are not affected by the share of temporary jobs. This could signal that labour markets in the EU post 2010 are starting to change and more temporary jobs are being offered. On the other hand, the regression model cannot control for the type of jobs obtained. As such it is likely – and in line with previous observations (see Section 2.3) – that LTU with temporary jobs experience are likely to be employed in temporary positions again.

Medium and low-skilled long-term unemployed people have less chance of entering employment than those with high levels of educational attainment in all circumstances. That said, the gap between the medium and low-skilled in their chances of transition to employment is only visible if other influences, such as participation in LLL and job experience or country differences, are *not* accounted for (see e.g. column 3 and column 8). This indicates that the educational gap in job finding rates is not only due to educational differences *per se*, but also due to other unobserved heterogeneity – be it across countries or people.

Transition rates of women in LTU are not significantly different from those of men, with observable differences largely explained by other characteristics, such as types of jobs held before entry into unemployment and overall job experience (see difference between columns 2 and 3).

In line with existing literature observations, the elderly people are found to have much lower levels of entry into employment. This result is strong and homogenous across all studied

model specifications, suggesting that age is a relevant factor in accounting for transitions to employment in all Member States.

Moreover, the more time spent being unemployed, the lower the chances are of finding employment and the analysis shows that controlling for other individual and country level factors only reinforces this conclusion.

Among the macroeconomic drivers of LTU transitions to employment, GDP appears to have an equal importance as some of the labour market policies discussed above. The influence of the output gap variable, which potentially captures crisis effects in terms of macro-economic conditions, is more ambiguous, with no significant effects observed in the reduced sample specification.

Country level characteristics of tax and benefit systems have an impact on transition rates but their role varies greatly across Member States, as indicated by the reduced significance of policy variables by including country fixed effects (columns 6, 7, 8).

The analysis also suggests that a number of important factors that are unaccounted for in the analysis still drive further differences in transition rates across Member States. For instance, such unobserved factors – approximated by inclusion of binary country variables in the regression model – are highly significant in determining higher transition rates in Germany, Latvia and Slovenia, but considerably lower transitions to employment in Slovakia.

Analysis by age groups suggests that registration to PES with no receipt of benefits has a larger positive impact on transition rates for older people and that the total positive effect of PES registration is primarily driven by observations on the younger people aged 25–39 (Chart 31). The additional value of PES registration for older workers might be due to the PES facilitating access to

information that older workers would not otherwise have (i.e. use of internet for job search, advices on job situations, etc.). The opposite holds for younger people. Overall the results point to the need for PES services to cover different generational needs.

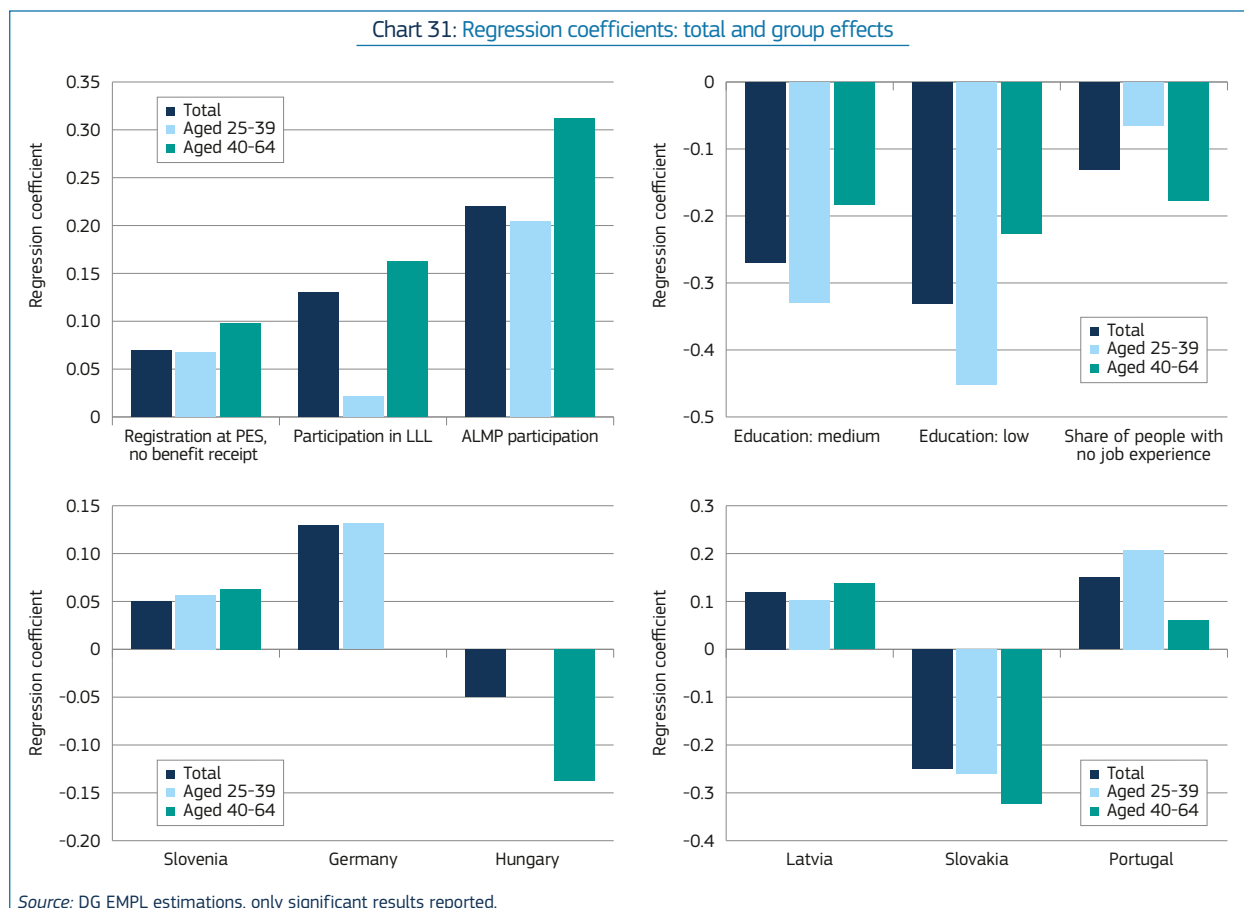
The chances of older people entering employment are significantly increased by participation in both LLL and ALMP. This finding is particularly important given that transition rates to employment among the elderly LTU are very low. Moreover, it seems that the overall highly positive effect of LLL programmes is due to consequent transition rates of the elderly, as the effect on the younger people is much smaller.

Low education levels are more of a hindrance to entering employment for the young LTU than for the older LTU, probably because previous job experience compensates for lower education levels (Chart 31). This finding might also imply that different jobs are available for young people in comparison to older people, while noting that a lack of job experience is likely to be a much larger impediment for older people.

Some differences between Member States in terms of impact on transitions from LTU to employment are due to differences across age groups. For example, in comparison to Italy, higher transition rates to employment are noted for the LTU youth in Germany though, otherwise, regression traces no significant differences for the older people. In Hungary, on the other hand, difference is due to results for older people and in Slovenia the total (positive) regression result is driven by a better performance of both younger and older people. Similarly, employment opportunities seem to be higher for Portuguese young people rather than older people, while in Latvia younger LTU seem to have relatively fewer opportunities. The negative performance among the Slovakian long-term unemployed seems to be unrelated to age.



Chart 31: Regression coefficients: total and group effects



Source: DG EMPL estimations, only significant results reported.

## 5. DISCUSSION AND SUMMARY

Levels of long-term unemployment are currently at record highs and include a high, and still rising, share of people who have been unemployed for more than two years, with significant negative consequences for economic growth, labour market functioning and workers' health. While the unemployment rate did start to decline in 2013, LTU has only stabilised in the most recent quarters, but with considerable variations across Member States. Currently the Member States with the highest unemployment rates have a high share of LTU among the unemployed but comparisons of Member States with similar levels of unemployment highlight the fact that some appear to be doing much better than others in preventing and combating LTU.

Both the likelihoods of finding a job and of falling into inactivity reduced during the crisis, hinting at steadier labour

market attachment of the unemployed throughout the economic downturn. Long-term unemployed workers have about half the chance of finding employment than the short-term unemployed and their chances worsened during the crisis. Job finding rates vary from 10% to 42% across EU Member States. Among the LTU, job finding rates decrease with longer durations and this worsened the longer the crisis went on. The likelihood of remaining LTU from one year to the next varies from 25% to more than 80% across EU Member States revealing large differences in the dynamics of the EU labour market.

The young, the low-skilled and third-country migrants faced the highest risk of being LTU before the crisis and, along with the EU mobile, were the hardest hit during the crisis, whereas the old and low-skilled have the least chance of returning to work. The crisis has narrowed the gap between men and women in terms of LTU. Nevertheless, men tend

to have better chances of returning to employment in most Member States. Not only are the low educated labour force most affected by LTU but this group has more than doubled during the crisis. Conversely, education raises opportunities of finding jobs for the LTU in most Member States.

However, policy interventions that we know matter for the LTU vary a lot between Member States and do not cover all segments of the LTU population equally nor adequately. During the crisis, training/lifelong learning and registration with Public Employment Services have increased overall while the coverage of unemployment benefits has started to decrease in the most recent years. There are considerable differences between Member States' policy coverage of the LTU, ranging from less than 1% to 90% in terms of UB receipt, from 22% to 100% in terms of PES registration, and from 1% to 55% in terms of participation in training/lifelong learning. These,

as ESDE 2012 also showed, explain part of the differences in the resilience and reaction of different Member States to the economic crisis.

Differences in policy coverage also exist between different segments of the population with implications for policy effectiveness as the most at risk are not always the most covered by all policy interventions. For instance, older workers and the low-skilled who are most affected by LTU appear to be better than average covered by PES and unemployment benefits (EU average: 72%), but least by lifelong learning efforts (4-6% vs. 11% for the EU as a whole).

In contrast, young adults (25-29) are more likely to participate in training (21% vs. 11%) but are less likely to be registered with the PES and receiving unemployment benefits. The highly skilled, medium-skilled, male and female workers as well as prime aged workers (25-49) are all close to the overall EU average in terms of PES registration (72%) and STU UB receipt (41%), but the highly skilled unemployed are significantly more likely to be taking part in training and lifelong learning than the medium-skilled (18.8% vs. 8.8%) or the overall average (10.7%).

PES registration tends to increase with duration and age, while participation in training tends to decline with both duration and age. In the most common format the receipt of UB rises in the first five months of unemployment but declines thereafter, and in some Member States less than 10% of the LTU receives them. There is a positive trend in terms of lifelong learning, with the unemployed in the EU (STU and LTU) taking part in more training and educational activities in 2014 than they did prior to the crisis in 2007 (10.7% vs. 9.3%).

The chapter has used the most recent Eurostat experimental data on transitions from LTU to employment to construct a comprehensive model and run a regression analysis on which policy interventions helped combat LTU most effectively across Member States. When doing so it has controlled for a wider set of country-specific socio-economic developments and personal characteristics like age, gender or prior work

experience than were ever used before. When considering the characteristics of the long-term unemployed population and macroeconomic developments, policy intervention remains a key influence in aiding the long-term unemployed back into stable jobs. While, as expected, economic growth was of key importance for LTU job finding rates during the 2005 to 2013 period, recently its impact has diminished and other factors seem to have had a greater impact.

All other things being equal, the long-term unemployed who have participated in training or education and have job experience are far more likely to transition to a sustainable job. This tends to be especially the case for the low-skilled as the gap between medium and low-skilled, compared to the high skilled, narrows when accounting for participation in training/lifelong learning and job experience. This strongly suggests that the educational gap in job finding rates could be bridged by additional targeted training and work experience and adds further weight to the evidence that the worst affected segments of the population by LTU, the low-skilled and the older workers, profit least from training/lifelong learning efforts.

Being registered with the PES, especially in combination with receiving unemployment benefits, significantly increases the chances of the LTU to transition into sustainable employment but the relevance of receiving benefits has declined in recent years. The positive impact of PES registration and receipt of unemployment benefits depends on the quality of their delivery and design, as their impact on job finding rates strongly varies across Member States.

Though the impact of ALMP coverage was only captured at the Member State level, the results showed that higher coverage by ALMP measures can have a positive effect on LTU entries into employment. The effectiveness of this intervention appears to be highly country-specific, supporting wider literature evidence on the influence of specific design types for overall effectiveness of ALMP measures.

Higher degrees of employment protection legislation strictness are associated with lower employment chances of LTU. Arguably, this supports the wider

literature observations that higher EPL creates barriers to the re-integration of the long-term unemployed - at least for the one year span that out transition rates are calculated for. It is particularly strong for those workers whose productivity is uncertain, such as the long-term unemployed.

The regression analysis also looked into what consequences for policy effectiveness different personal characteristics might have when combining them with particular policy interventions. PES registration and receipt of unemployment benefits were found to have a larger positive impact on transition rates for younger people, whereas the effect of PES registration per se is stronger for older workers. This is in contrast to the fact that the younger workers are those who are covered by unemployment benefits and PES registration the least. Future research is needed to try and provide insight into why this is so and whether it means that younger LTU workers are more in need of income support when unemployed than older ones in order for their job search to be successful.

Moreover, the analysis indicated that lower education levels are more of a hindrance to entering employment for the younger than the older LTU. Future research could try and indicate whether this is due to the older workers' comparatively lower overall level of education compensating for their lack of formal education or whether formal education is more important now in a wider number of sectors and/or professions that are hiring younger workers.

The analysis and literature review nevertheless indicates that LTU needs to be tackled with a combination of measures. These include, most importantly, participation in active labour market policies, in particular in training/lifelong learning, and preferably combined with work experience, PES support to guide the job search process, and unemployment benefit receipt to ensure they are financially able to take part in policy interventions aimed at increasing their employability. However, the relative importance of each of these forms of support vary, depending on the personal characteristics of those concerned, underlining the need for more individualisation and targeting of policy measures.

## ANNEX

Annex Table 1: LTU rate (% of active population) by country and by group

	Total		Gender				Educational attainment						Age						Country of birth															
			Men		Women		Low		Medium		High		15-24		55-74		Nationals		EU mobile		Third-countries													
	'07	'14	'07	'14	'07	'14	'07	'14	'07	'14	'07	'14	'07	'14	'07	'14	'07	'14	'07	'14	'07	'14	'07	'14										
EU-28	3.1	5.0	1.9	2.9	5.0	2.2	3.3	4.9	1.6	4.7	10.0	5.3	3.1	4.4	1.3	2.5	1.2	4.1	7.6	3.5	3.1	4.3	1.2	2.9	4.8	1.9	2.0	5.7	3.7	3.6	9.7	6.1		
AT	1.3	1.5	0.2	1.2	1.7	0.4	1.5	1.4	-0.1	2.9	3.5	0.7	1.0	1.2	0.2	0.8	1.1	0.3	1.3	1.4	0.1	1.8	0.0	1.0	1.2	0.2	1.9	1.7	-0.2	3.5	3.7	0.2		
BE	3.8	4.3	0.5	3.3	4.7	1.4	4.4	3.8	-0.6	7.7	9.7	2.0	3.6	4.2	0.6	1.4	1.8	0.4	5.7	8.0	2.4	3.3	3.7	0.3	3.1	3.2	0.1	4.5	5.1	0.6	13.2	13.9	0.7	
BG	4.1	7.6	3.5	3.7	8.5	4.8	4.5	6.6	2.1	12.0	19.4	7.4	3.0	7.2	4.2	1.3	3.1	1.8	6.3	12.7	6.4	4.4	8.3	3.9	4.1	7.0	2.9							
CY	0.7	7.7	7.0	0.8	8.3	7.5	0.7	7.0	6.4	1.0	10.7	9.6	0.9	9.0	8.2	0.4	5.3	4.9	2.4	10.7	8.3	0.7	8.9	8.2	0.7	8.0	7.3							
CZ	2.8	2.5	-0.3	2.1	2.1	0.0	3.6	3.0	-0.6	13.8	14.0	0.2	2.2	2.3	0.1	0.4	0.7	0.2	3.5	3.8	0.3	2.2	2.2	0.0	2.7	2.6	-0.1	7.2	4.2	-3.0	4.4	2.7	-1.7	
DE	4.8	2.2	-2.6	4.9	2.4	-2.5	4.7	1.9	-2.8	9.6	5.6	-4.0	4.7	2.1	-2.7	1.8	0.9	-0.9	3.9	1.8	-2.1	7.1	2.9	-4.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
DK	0.6	1.6	0.9	0.5	1.5	1.0	0.7	1.6	0.9	0.8	2.5	1.7	0.5	1.4	0.9	0.6	1.2	0.6	0.3	1.1	0.8	1.3	1.7	0.5	0.5	1.4	0.8							
EE	2.3	3.3	1.0	2.9	3.9	1.1	1.7	2.7	1.0	4.6	5.9	1.3	2.5	3.9	1.4	1.2	2.1	0.8	3.1	4.4	1.4	2.2	3.0	0.8	2.1	3.1	1.0							
ES	1.7	12.6	10.9	1.3	12.1	10.9	2.4	13.1	10.8	2.4	18.4	16.0	1.4	12.2	10.8	1.1	6.9	5.8	1.7	21.4	19.7	2.7	13.3	10.6	1.8	12.1	10.4	1.4	13.4	12.1	1.3	18.5	17.2	
FI	1.6	1.9	0.2	1.7	2.1	0.3	1.5	1.7	0.2	3.0	3.9	0.9	1.6	2.1	0.5	0.9	1.0	0.0	1.0	1.0	0.1	3.0	3.1	0.0	1.5	1.8	0.3							
FR	3.1	4.2	1.2	2.8	4.6	1.8	3.3	3.8	0.5	5.5	8.6	3.0	2.5	4.2	1.6	1.6	2.3	0.6	4.3	6.7	2.4	2.8	4.8	2.0	2.7	4.1	1.4	3.0	3.4	0.5	7.5	9.8	2.4	
EL	4.2	19.5	15.3	2.2	17.2	15.0	7.0	22.4	15.4	3.7	21.7	18.0	5.3	22.2	16.8	3.0	14.0	11.0	9.4	31.5	22.1	1.9	13.7	11.8	4.3	18.8	14.6	3.1	20.0	16.9	3.6	26.8	23.2	
HR	6.0	10.1	4.1	5.0	9.6	4.6	7.2	10.6	3.4	8.2	18.0	9.8	6.1	10.9	4.8	3.3	4.0	0.7	11.6	22.6	11.0	3.8	7.3	3.5	5.9	9.9	4.0	7.7	9.5	1.8	6.7	12.0	5.3	
HU	3.5	3.7	0.2	3.3	3.6	0.3	3.6	3.7	0.1	9.4	8.8	-0.5	3.0	3.6	0.6	0.9	1.2	0.3	6.5	6.7	0.1	2.2	3.8	1.6	3.5	3.7	0.2							
IE	1.4	6.6	5.2	1.8	8.3	6.5	0.9	4.6	3.6	3.1	13.3	10.1	1.0	7.9	6.8	0.5	3.0	2.5	1.9	9.3	7.4	0.9	6.0	5.1	1.4	6.4	5.0	1.2	7.7	6.4	2.1	7.4	5.3	
IT	2.9	7.7	4.8	2.3	7.1	4.8	3.9	8.6	4.6	3.8	10.9	7.1	2.6	7.1	4.4	1.8	3.8	2.0	8.6	24.8	16.3	1.2	3.4	2.3	2.9	7.5	4.7	3.2	9.1	5.9	3.1	9.6	6.5	
LT	1.4	4.8	3.4	1.5	5.4	4.0	1.3	4.2	2.9	2.6	13.2	10.6	1.7	6.4	4.7	0.5	1.4	0.9	1.8	4.4	2.6	1.5	5.6	4.1	1.4	4.8	3.4							
LU	1.2	1.7	0.5	1.3	1.7	0.4	1.1	1.6	0.6	2.0	2.7	0.7	0.9	2.2	1.3	0.7	0.9	0.2	3.5	3.6	0.1	0.9	2.2	1.3	1.0	1.2	0.2	1.0	1.6	0.5	4.0	4.1	0.1	
LV	1.6	4.7	3.0	2.0	5.3	3.4	1.3	4.0	2.7	2.8	11.0	8.1	1.7	5.2	3.5	0.7	1.8	1.1	1.2	4.7	3.6	1.5	4.0	2.5	1.6	4.5	2.9							
MT	2.7	2.8	0.1	2.8	3.2	0.4	2.5	2.0	-0.4	4.1	4.9	0.8	1.1	1.1	0.0	0.3	0.9	0.6	3.7	3.2	-0.5	2.2	3.4	1.2	2.7	2.7	0.1							
NL	1.4	2.5	1.1	1.3	2.6	1.2	1.5	2.4	0.9	2.2	4.0	1.8	1.3	2.7	1.3	0.9	1.2	0.3	1.0	1.5	0.5	2.9	3.9	0.9	1.0	2.6	1.5	1.8	3.8	1.9	3.5	7.2	3.7	
PL	4.9	3.8	-1.1	4.6	3.7	-0.9	5.4	4.1	-1.3	9.5	9.3	-0.2	5.3	4.3	-1.0	1.6	1.7	0.1	7.5	7.4	-0.1	3.9	3.4	-0.6	4.9	3.8	-1.1							
PT	3.9	8.4	4.6	3.2	8.4	5.1	4.6	8.5	3.9	4.3	10.0	5.8	3.3	8.3	4.9	2.3	4.9	2.5	4.6	12.6	8.0	3.3	9.0	5.7	3.8	8.2	4.4							
RO	3.2	2.8	-0.4	3.6	3.1	-0.5	2.7	2.4	-0.3	3.5	2.6	-0.9	3.5	3.1	-0.3	1.4	2.0	0.6	9.7	8.7	-0.9	0.8	1.0	0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SE	0.8	1.4	0.6	0.9	1.6	0.7	0.8	1.3	0.5	1.3	3.5	2.2	0.8	1.2	0.4	0.6	0.8	0.3	0.7	1.3	0.5	1.1	1.6	0.4	0.6	0.9	0.2	1.5	1.9	0.4	2.6	5.4	2.8	
SI	2.2	5.3	3.1	1.8	5.0	3.1	2.7	5.7	3.0	3.6	10.0	6.3	2.3	5.6	3.4	1.1	2.9	1.8	3.0	7.6	4.6	1.5	4.7	3.2	2.2	5.1	3.0							
SK	8.3	9.3	1.0	7.4	9.4	1.9	9.3	9.1	-0.2	39.8	32.9	-6.9	6.6	8.9	2.2	1.7	3.3	1.6	11.6	17.0	5.4	6.8	8.0	1.3	8.3	9.3	1.0							
UK	1.3	2.1	0.8	1.6	2.5	0.9	0.9	1.6	0.7	2.8	5.0	2.2	1.0	2.0	1.0	0.4	0.6	0.2	2.3	4.4	2.2	1.0	1.9	0.8	1.2	2.2	1.0	0.8	1.4	0.7	2.2	2.9	0.7	

Source: DG EMPL calculations based on EU-LFS extractions and (lfsa\_urgacob) and (lfsa\_upgacob).

Annex Table 2: LTU composition (% of LTU) by country and by group, 2014

	Gender		Educational attainment			Age		Country of birth		
	Men	Women	Low	Medium	High	15-24	55-74	Nationals	EU mobile	Third-countries
EU-28	54.6	45.4	41.3	42.8	15.6	14.7	14.5	84.3	3.7	12.0
AT	57.1	42.9	33.9	43.6	22.5	11.8	14.5	66.3	9.4	24.3
BE	59.2	40.8	44.4	38.4	17.2	15.1	11.6	62.9	8.8	28.3
BG	59.8	40.2	34.2	53.7	12.1	9.9	20.6	99.8	0.0	0.1
CY	55.7	44.3	25.5	44.9	29.5	13.6	15.8	79.4	8.9	11.7
CZ	47.4	52.6	27.7	66.3	6.0	10.2	14.5	95.4	3.2	1.4
DE	59.2	40.8	33.2	56.1	10.6	8.1	26.4	N/A	N/A	N/A
DK	52.5	47.5	31.6	35.4	22.9	10.3	19.4	71.9	6.2	21.9
EE	60.9	39.1	15.1	60.5	24.4	11.2	18.8	80.7	0.2	19.1
EL	49.4	50.6	30.4	47.6	22.0	10.3	8.8	86.4	2.1	11.4
ES	51.8	48.2	56.5	22.7	20.8	11.9	14.4	78.3	5.2	16.5
FI	56.6	43.4	26.4	52.5	21.1	6.9	33.1	85.2	4.6	10.2
FR	56.6	43.4	36.3	44.0	19.7	14.9	17.1	77.8	2.6	19.5
HR	51.0	49.0	21.1	69.1	9.5	19.6	10.3	87.2	1.1	11.7
HU	53.6	46.4	30.6	61.1	8.3	13.6	15.5	97.7	2.0	0.3
IE	69.1	30.9	32.3	46.2	19.0	12.7	14.0	76.1	16.6	7.3
IT	52.8	47.2	47.3	43.1	9.6	20.5	7.2	83.0	5.3	11.6
LT	56.3	43.7	15.1	73.2	11.7	8.1	21.0	96.7	0.1	3.2
LU	56.1	43.9	25.9	44.4	24.2	13.2	14.1	34.0	43.9	22.0
LV	57.1	42.9	22.0	65.3	12.7	8.8	16.4	86.8	1.1	12.1
MT	72.1	27.9	80.3	12.2	7.5	17.0	17.7	91.6	2.3	6.1
NL	55.8	44.2	36.1	45.9	16.7	9.4	28.1	75.3	3.9	20.7
PL	52.2	47.8	15.9	70.5	13.5	16.2	13.8	99.5	0.1	0.4
PT	50.7	49.3	62.2	24.3	13.4	11.0	19.0	88.4	2.3	9.3
RO	62.1	37.9	23.4	63.6	13.0	22.6	6.4	N/A	N/A	N/A
SE	58.3	41.7	38.5	39.9	21.6	11.3	22.3	47.5	6.9	45.6
SI	50.3	49.7	22.1	61.1	16.8	10.0	11.3	87.3	2.3	10.4
SK	56.0	44.0	23.2	69.3	7.4	14.2	12.2	99.7	0.2	0.1
UK	64.5	35.5	44.8	39.2	12.0	30.0	16.0	83.5	3.9	12.7

Source: DG EMPL calculations based on EU-LFS extractions and [fsa\_urgacob] and [fsa\_upgacob].

## REFERENCES

- Arpaia, A. Kiss, A. and Turrini, A., 'Is unemployment structural or cyclical? Main features of job matching in the EU after the crisis', *European Economy*, DG ECIN Economic Papers 2014, p. 527.
- Arpaia, A., Curci, N., Meyermans, E., Peschner, J. and Pierini, F., 'Short-time working arrangements as response to cyclical fluctuations', *European Economy Occasional Paper No 64*, European Commission, 2010.
- Badea, P. and Xavier, A. (2015) Analytical Web Note 1/2015 - A descriptive analysis of the EU Labour Market Policy (LMP) Statistics (08/06/2015). European Commission.
- Baert S. and Verhaest D., 'Unemployment or Overeducation: Which is a Worse Signal to Employers?', *IZA DP No.8312*, 2014.
- Barnes, M., Gumbau-Brisa, F. and Olivei, G. P., 'Cyclical versus Secular: Decomposing the Recent Decline in U.S. Labor Force Participation', *Federal Reserve Bank of Boston*, 2013.
- Baussola, M., & Mussida, C. (2014). Transitions in the Labour Market: Discouragement Effect and Individual Characteristics. *Labour*, 28(2), 209-232.
- Bell, D. N. F. and Blanchflower, D. G., 'Young People and the Great Recession', *IZA DP No 5674*, 2011.
- Berger, H. and Danninger, S., 'The Employment Effects of Labor and Product Markets Deregulation and their Implications for Structural Reform', *CEifo Working Paper*, Series No 1709, May 2006.
- Biewen, M. and Steffes, S., 'Unemployment Persistence: Is There Evidence for Stigma Effects?', *Economics Letters*, Vol. 106, No 3, 2010, pp. 188-90.
- Boeri, T. and Bruecker, H., 'Short-time work benefits revisited: some lessons from the global financial crisis', *Economic Policy*, Vol. 26, Issue 68, 2011, pp. 697-765.
- Boheim, R. 'The effect of early retirement schemes on youth employment'. *IZA World of Labor* 2014, p. 70.
- Bradbury, K. 'Labor market transitions and the availability of unemployment insurance'. No 14-2. Working Papers, Federal Reserve Bank of Boston, 2014.
- Brenner, H., 'Unemployment and heart disease mortality in European countries', *Final Report for the European Commission*, 2013.
- Brenner, M.H. 'Impact of long term unemployment on self-perceived health in the EU', *Final Report for the European Commission*, 2015 (forthcoming).
- Bryan, M. and Longhi, S., 'Couples' labour supply responses to job loss: boom and recession compared', *ISER Working paper series No 2013-20*, October 2013.
- Cahuc, P. and Carcillo, S., 'Is Short-Time Work a Good Method to Keep Unemployment Down?', *IZA Discussion Paper*, No 5430, 2011.
- Caliendo, M., Kunn, S. and Schmidl, R., 'Fighting Youth Unemployment: The effects of Active Labour Market Policies', *IZA DP 6222*, 2011.
- Card, D., Kluve, J., & Weber, A. (2015). *What works? A meta analysis of recent active labor market program evaluations* (No w21431). National Bureau of Economic Research.
- Card, D., Kluve, J., & Weber, A. (2010), "Active Labour Market Policy Evaluations: A Meta-Analysis", *The Economic Journal*, 120(548), F452-F477.
- Cedefop, 'Return to work: Work-based learning and the reintegration of unemployed adults into the labour market', *Cedefop working paper*, No 21, Luxembourg: Office for Official Publications, 2013.
- Cedefop 'Matching skills and jobs in Europe: Insights from Cedefop's European skills and jobs survey', available online at: <http://www.cedefop.europa.eu/en/publications-and-resources/publications/8088>, 2015a.
- Cedefop, 'Skills, qualifications and jobs in the EU: The making of a perfect match?', *Cedefop reference series report*, forthcoming, 2015b.
- Cedefop, 'Stronger VET for better lives', *Cedefop's monitoring report on vocational education and training policies 2010-2014*, Reference series 98, Luxembourg: Office for Official Publications, 2015c.
- Cockx, B. and Picchio, M., 'Scarring effects of remaining unemployed for long-term unemployed school-leavers', *IZA DP*, No 5937, 2011.
- Crépon, B., Duflo, E., Gurgand, M. Rathelot, R. and Zamora, P., 'Do Labor Market Policies Have Displacement Effects? Evidence from a Clustered Randomized Experiment', *The Quarterly Journal of Economics*, Oxford University Press, Vol. 128 (2), 2013, pp. 531-580.
- Cutler, D., Huang, W. and Lleras-Muney, A., 'When Does Education Matter? The Protective Effect of Education for Cohorts Graduating in Bad Times', *NBER Working Paper*, No 20156, 2014.
- Dolado, J.J., Jansen M., Felguereso F., Fuentes A., Wölfl A., 'Youth labour market performance in Spain and its determinants - A micro level perspective', *Economics Department Working Papers*, OECD, No 1039, 2013.
- Ecorys-IZA, 'Costs-benefits of active and passive labour market measures', 2012.
- Ehlers, C., J. Kluve & S. Schaffner, 'Temporary Work as an Active Labor Market Policy: Evaluating an Innovate Program for Disadvantaged Youth', *Economics Bulletin*, 32, 2012, pp. 765-773.
- Eichhorst, W., N. Rodríguez-Planas, R. Schmidl and K.F. Zimmermann, 'A Roadmap to Vocational Education and Training Systems around the World', *IZA Discussion Paper*, No 7110, 2012.
- Eichhorst, W., Neder, F., Tobsch, V., & Wozny, F. (2015). *A European Perspective on Long-Term Unemployment* (No 9321). Institute for the Study of Labor (IZA).
- Eurofound, 'Extending flexicurity — The potential of short-time working schemes', *ERM Report*, 2010.
- Eurofound, 'Household over-indebtedness in the EU: The role of informal debts', *Publications Office of the European Union*, Luxembourg, 2013.
- Eurofound, 'Access to healthcare in times of crisis', *Publications Office of the*



- European Union, Luxembourg, 2014a. <http://www.eurofound.europa.eu/areas/health/healthcareservices.htm>.
- Eurofound, 'Changes to wage-setting mechanisms in the context of the crisis and the EU's new economic governance regime', Dublin, 2014b.
- Eurofound, 'Drivers of recent job polarisation and upgrading in Europe: European Jobs Monitor 2014, Publications Office of the European Union, Luxembourg, 2014c.
- European Commission, 'Employment in Europe', 2010a.
- European Commission, 'Self Employment in Europe 2010', *European Employment Observatory Review*, 2010b.
- European Commission, 'Employment and Social Developments in Europe', 2011a.
- European Commission, 'Labour market developments', ECFIN, 2011b.
- European Commission, 'Industrial Relations in Europe 2010', Brussels, 2011c.
- European Commission, 'Employment and Social Developments in Europe', 2012a.
- European Commission, 'The impact of the economic crisis on the situation of women and men and on gender equality policies', Expert Group on Gender and Employment (EGGE), 2012b.
- European Commission, 'Staff working document accompanying the document Proposal for a Council Recommendation on Establishing a Youth Guarantee', 2012c.
- European Commission, 'A Decade of Labour Market Reforms in the EU: Trends, Main Features, Outcomes', LABREF, 2012d.
- European Commission, '*Industrial Relations in Europe 2012*', Directorate-General for Employment, Social Affairs and Inclusion, 2012e.
- European Commission, 'Evaluation of flexicurity 2007–2010: Final Report', Directorate-General Employment, Social Affairs and Equal Opportunities, 2012f.
- European Commission, 'Employment and Social Developments in Europe', 2013a.
- European Commission, 'Industrial Relations in Europe 2012', Brussels, 2013b.
- European Commission, 'Draft Joint Employment Report accompanying the Communication from the Commission on Annual Growth Survey 2014', Brussels, 2013c.
- European Commission 'Employment and Social Situation Quarterly Review', March 2014', 2014a.
- European Commission, 'A Decade of Labour Market Reforms in the EU: Insights from the LABREF database', LABREF, 2014b.
- European Commission, 'Is unemployment structural or cyclical? Main features of job matching in the EU after the crisis', August 2014c.
- European Commission, 'Assessment of the 2014 national reform programmes and stability programmes for the Euro Area', Commission Staff Working Document, 2014d.
- European Commission 'Employment and Social Situation Quarterly Review', June 2014', 2014e.
- European Commission 'Employment and Social Developments in Europe, 2014', 2014f.
- European Commission 'Employment and Social Situation Quarterly Review', March 2015', 2015a.
- European Commission, 'Industrial Relations in Europe 2014', Directorate-General for Employment, Social Affairs and Inclusion, 2015b.
- European Employment Observatory, 'Stimulating job demand: the design of effective recruitment incentives in Europe', *EEO Review*, 2014.
- European Employment Observatory, *EEO Review: Long-term unemployment*, 2012.
- European Parliament, 'Gender aspects of the effects of the economic downturn and financial crisis on welfare systems', 2014.
- Fabian et al. 'The legacy of the recession: values and societal issues', *Social Situation Monitor*, Research note No 7, 2014.
- Fabrizi, E., & Mussida, C. (2009). The determinants of labour market transitions. *Giornale degli Economisti e Annali di Economia*, 233-265.
- Filges, T., Smedslund, G., Knudsen, A. S. D., & Jørgensen, A. M. K. (2015). Active Labor Market Programme Participation for Unemployment Insurance Recipients: A Systematic Review. *Campbell Systematic Reviews*, 11(2).
- Gaini, M., Leduc, A. and Vicard, A., 'A scarred generation? French evidence on young people entering into a tough labour market', *Direction des études et synthèses économiques*, G 2012/05, INSEE, 2012.
- Gregg, P., 'The impact of youth unemployment on adult unemployment in the NCDS', *The Economic Journal*, Vol. 111, 2011, pp. 626-653.
- Guio A.C., Pomati, M., 'How do European Citizens cope with economic shock? Expenditures that households in hardship are curtailing first'; European Commission, to be published, 2014.
- Hijzen, A. and Martin, S., 'The role of short-time work schemes during the global financial crisis and early recovery: a cross-country analysis', *IZA Journal of Labor Policy*, Vol. 2, No 5, 2013.
- Hijzen, A. and Venn, D., 'The role of short-time work schemes during the 2008–09 recession', *OECD Social, Employment and Migration Working Papers*, No 2010/15, OECD Publishing, Paris, 2010.
- Holmlund, B., 'What do labor market institutions do?', *Working Paper Series 2013*, No 23, Uppsala University, Department of Economics, 2013.
- International Labour Organisation, 'Deregulating labour markets: how robust is the analysis of recent IMF working papers', by Mariya Aleksynska; International Labour Office, Conditions of Work and Employment Branch. - Geneva: ILO, 2014.
- International Monetary Fund, 'Euro Area policies', *IMF Country Report*, No 14/198, 2014a.
- International Monetary Fund, 'Euro Area policies', *IMF Country Report*, No 14/199, 2014b.

- Immervoll, H. and Scarpetta, S., 'Activation and employment support policies in OECD countries. An overview of current approaches', *IZA Journal of Labor Policy*, Vol. 1, No 9, 2012.
- Irving, P., Bianchini, D., Manoudi, A. and Metcalfe H, ICF INTERNATIONAL (2015). Assessment report on PES capacity, European Commission, DG EMPL.
- Kahn, L. B., 'The long-term labor market consequences of graduating from college in a bad economy', *Labour Economics*, Vol. 17, No 2, 2010, pp. 303–16.
- Kluve, J., 'The effectiveness of European active labor market programs', *Labour Economics*, Vol. 17, No 6, 2010, pp. 904–18.
- Kroft, K., Lange, F., Notowidigdo, M. J., and Katz, L. F., *Long-term unemployment and the Great Recession: the role of composition, duration dependence, and non-participation*, No w20273. National Bureau of Economic Research, 2014.
- Krueger, A. B., Cramer, J. and Cho, D., *Are the long-term unemployed on the margins of the labor market?*, Brookings Papers on Economic Activity (2014): 229-280.
- Maibom, J., Rosholm, M. and Svarer, M. 'Can Active Labour Market Policies Combat Youth Unemployment?' *Nordic Economic Policy Review*, No 1 - 2014, pp. 215-262.
- Manning, A., 'You Can't Always Get What You Want: the Impact of the Jobseeker's Allowance', *CEP Discussion Papers*, No dp0697, Centre for Economic Performance, LSE, 2005.
- Manoudi, A. et al. (2014), "Small scale study on PES business models", prepared for the European Commission, DG Employment, Social Affairs and Inclusion, [ec.europa.eu/social/BlobServlet?docId=11972&langId=en](http://ec.europa.eu/social/BlobServlet?docId=11972&langId=en)
- McVicar, D. and Podivinsky, J.M. 'Are Active Labour Market Programmes Least Effective Where They Are Most Needed? The Case of the British New Deal for Young People', Melbourne Institute Working Paper Series 2010, No 16. Melbourne Institute of Applied Economic and Social Research, the University of Melbourne.
- Mosthaf A., 'Do Scarring Effects of Low-Wage Employment and Non-Employment Differ BETWEEN Levels of Qualification?', *Scottish Journal of Political Economy*, Vol. 61, Issue 2, May 2014, pp.154-177.
- Nielsen Ø.A., Reiso K. H., 'Scarring effects of unemployment', *IZA DP*, No 6198, 2011.
- O'Connell, P. J., McGuinness, S., & Kelly, E. (2010). *A statistical profiling model of long-term unemployment risk in Ireland* (No 345). ESRI working paper.
- Oreopoulos, P., von Wachter, T. and Heisz, A., 'The Short and Long-Term Career Effects of Graduating in a Recession: Hysteresis and Heterogeneity in the Market for College Graduates', *American Economic Journal: Applied Economics*, Vol. 4, No 1, 2012, pp. 1–29.
- Organisation for Economic Cooperation and Development, 'Employment Outlook 2010: Moving beyond the job crisis', Paris, 2010.
- Organisation for Economic Cooperation and Development, 'Divided we stand', 2011.
- Organisation for Economic Cooperation and Development, 'Closing the gender gap', 2012a.
- Organisation for Economic Cooperation and Development, 'What Makes Labour Markets Resilient During Recessions?', *Employment Outlook 2012*, 2012b, pp. 43–107.
- Organisation for Economic Cooperation and Development, 'Crisis squeezes income and puts pressure on inequality and poverty', 2013a.
- Organisation for Economic Cooperation and Development, 'Employment Outlook', 2013b.
- Organisation for Economic Cooperation and Development, 'OECD Skills Outlook 2013: First results from the Survey of Adult Skills', 2013c.
- Organisation for Economic Cooperation and Development, 'Employment Outlook', 2014a.
- Organisation for Economic Cooperation and Development, 'Jobs, Wages and Inequality and the Role of Non-Standard Work', OECD Publishing, Paris, 2014b.
- Organisation for Economic Cooperation and Development, 'Society at Glance', OECD Publishing, Paris, 2014c.
- Organisation for Economic Cooperation and Development, 'Employment Outlook', 2015.
- Osikominu, A. (2013). Quick job entry or long-term human capital development? The dynamic effects of alternative training schemes. *The Review of Economic Studies*, 80(1), 313–34.
- Otterbach, S., and A. Sousa-Poza. 'Job insecurity, employability, and health: An analysis for Germany across generations', *FZID Discussion Paper*, No 88-2014, 2014.
- Peschner, J. and Fotakis, C. 'Growth potential of EU human resources and policy implications for future economic growth,' Directorate-General for Employment, Social Affairs Working Paper No 03/2013, Luxembourg 2013.
- Peschner, J., 'Exploring conditions for EU growth given a shrinking workforce', *Free Movement of Workers and Labour Market Adjustment*, 2012, pp. 213-233.
- Petrongolo, B. 'The long-term effects of job search requirements: Evidence from the UK JSA reform'. *Journal of Public Economics*, 2009 - 93 (11-12). pp. 1234-1253.
- Picchio, M., 'Is training effective for older workers?' *IZA World of Labor*, 2015, p. 121.
- Reeves, A., McKee, M. and Stuckler, D., 'Economic suicides in the Great Recession in Europe and North America', *The British Journal of Psychiatry*, 2014.
- Rosholm, M., 'Do case workers help the unemployed? Evidence for making a cheap and effective twist to labor market policies for unemployed workers' *IZA World of Labor*, 2014, 2014. Jg., S. 72.
- RWI, 'Study on labour market transitions using micro-data from the Statistics on Income and Living Conditions (SILC)', 2014.
- Scarpetta, S., Sonnet, A. and Manfredi, T., 'Rising Youth Unemployment During The Crisis: How to Prevent Negative Long-Term Consequences on a Generation?', *OECD Social, Employment and Migration Working Papers*, No 106,

OECD Publishing, 2010, <http://dx.doi.org/10.1787/5knh79zb2mmv-en>.

Schmillen, A. and Umkehrer, M., 'The scars of youth — Effects of early career unemployment on future unemployment experience', *IAB Discussion paper*, No 6, 2013.

Schmillen, A. and Umkehrer, M., 'Verfestigung von früher Arbeitslosigkeit — Einmal arbeitslos, immer wieder arbeitslos?', *IAB Kurz-Bericht*, No 16, 2014.

Skans, O.N., 'Scarring effects of the First Labor Market Experience', *IZA DP*, No 5565, 2011.

Social situation monitor, 'Scarring effects of the crisis', Research note 06, 2014.

Solga, H., 'Education, economic inequality and the promises of the social investment state', *Socio-economic Review*, Vol. 12, 2014, pp. 269–97.

Spermann, A., 'Long-term Unemployed Need More Effective Support', *IZA Compact*, November (2014).

Spermann, A. (2015). How to fight long-term unemployment: lessons from Germany. *IZA Journal of Labor Policy*, 4(1), 1-15.

Stovicek, K. and Turrini, A., 'Benchmarking unemployment benefits systems', *European Commission Economic Papers*, No 454, May 2012.

Vanderbroucke, F., Hemerijk, A. and Palier, B., 'The EU need a social investment pact', *OSE Paper Series*, Vol. 5, 2011.

Van Kersbergen, K. and Hemerijk, A., 'Two decades of change in Europe: the emergence of the social investment model', *Journal of Social Policy*, Vol. 41, No 3, 2012, pp. 475–492.

Young, D., 'Employment protection legislation: its economic impact and the case for reform', *Directorate General of Economic and Financial Affairs, European Commission*, No 186, 2003.

Zwick, T. 'Training effectiveness— Differences between younger and older employees', *Working and Ageing: The Benefits of Investing in an Ageing Workforce*, Cedefop (ed.), Luxembourg: Publications Office of the European Union, 2012, pp. 36–54.

# Mobility and migration in the EU: Opportunities and challenges <sup>(1)</sup>

## 1. INTRODUCTION - PERCEPTIONS IN THE LIGHT OF FACTS

This chapter focuses on EU mobility and third-country migration. The chapter looks at both opportunities and challenges of mobility and third-country migration in the EU from the specific angle of (optimal) factor allocation and the EU's growth potential. In other words, the chapter attempts to answer the questions of 1) whether people who are mobile within the EU and third-country migrants contribute positively to employment and economic growth and 2) whether the EU makes full use of their potential. The latter point focuses on their qualifications, how they are used, and whether these people are allocated optimally or could be better allocated across sectors and activities. The chapter attempts to provide additional and robust evidence on the economic contribution of both groups.

From this particular angle, the chapter shows that the labour market performance of people who are mobile in the EU (exercising their basic right to free movement) is very different from that of migrants from outside the EU, as a result of a number of factors (including education

levels) and their very different legal situation and rights. In order to better work out these differences, the chapter includes both groups in one common analysis rather than engaging in two separate, unconnected analyses. Whereas third-country migrants often face legal obstacles in EU countries, free movement is a right linked to EU citizenship. While the chapter focuses on the economic impact of both groups of people moving across borders, it acknowledges that the value of intra-EU mobility and third-country migration goes well beyond their contribution to the economy.

As regards terminology, the term **EU mobility**, or related terms such as **'mobile EU people'** and **'intra EU-mobility'**, refers to people born <sup>(2)</sup> in the EU who live in another Member State than the one they were born in. Currently there are 14 million EU residents aged between 15 and 64 years not living in their Member State of birth. The chapter further distinguishes between mobile people born a) in the EU-15 (i.e. in the Member States that comprised the EU before the 2004 enlargement), b) in the EU-10 (i.e. in those Member States which joined the EU in 2004) and c) in the EU-3 (i.e. in those Member States that joined

after 2007: Romania, Bulgaria, Croatia). Where necessary, mobile people in EU-10 and EU-3 will be combined in one category: EU-13.

The term **'third-country migrants'** refers to people born outside the EU moving into EU Member States. It covers about 28 million people aged between 15 and 64 years who currently reside in an EU Member State, but were born outside the EU. As a result, the chapter refers to **'natives'** as those born and living in the Member State under review, **'mobile EU people'** as those born in another EU Member State but living in the Member State under review and **'third-country migrants'** as people born outside the EU but living in the Member State under review. The terms **'international migration'** or **'international migrants'** are more general terms covering anyone not living in her/his country of birth. These terms are often used by international organisations (e.g. OECD) who do not *a priori* distinguish between intra-EU mobility and third-country migration.

People, and in particular third-country migrants, cross borders for various reasons other than work, and these reasons may include family unification, studying and international protection. Indeed, economic conditions within and outside the EU coupled with political unrest beyond its borders currently spur unprecedented migration flows as people seek shelter or

<sup>(1)</sup> By Jörg Peschner with contributions from Magdalena Grzegorzewska (section 2.2), Balazs Palvolgyi (section 4.5) and Sonia Jemmotte (editorial support) under the supervision of Nicolas Gibert-Morin.

<sup>(2)</sup> Unless differently annotated, the concept of 'country of birth' rather than 'nationality' is applied to distinguish the different groups of foreign populations. An exception is the analysis of Chapter 4.1 which builds on aggregate (instead of micro) data and uses the 'nationality' concept. The reason is that the EU Labour Force Survey does not include the variable 'country of birth' for Germany.

strive for better living conditions in Europe. In the first 8 months of 2015, almost 700 000 people applied for asylum in the EU – more than in the whole of 2014, and more than twice the number in the whole of 2010<sup>(3)</sup>. The sheer numbers and the individual tragedies often associated to the circumstances which made people leave their home countries have focused new societal and media attention on the issue of migration. The debate, however, goes well beyond refugee flows. It includes the impact of international migration in general and is often dominated by sentiments rather than facts.

Terms such as poverty migration, benefit or welfare tourism pop up regularly in connection with both intra-EU labour mobility and migration from third-countries. In addition, recently strong political sensitivities in a number of EU Member States render a fact-based discussion about the impact of intra-EU mobility and third-country migration more difficult.

These developments have their impact on public opinion about migration issues. Following a recent survey amongst EU citizens<sup>(4)</sup>, 57% responded that immigration from outside the EU ‘evoked a negative feeling’. And even for EU workers exercising their basic rights, crossing EU borders as mobile EU people, 41% of the respondents express this negative attitude. However, in-depth economic analysis is often absent from media coverage on these issues. To facilitate a more constructive debate, this chapter seeks to provide a fact-based analysis on the labour market performance of internationally mobile people living in the EU as well as their impact on the economy and public finance, with a particular focus on the host countries’ perspective.

Looking at other regions with a long migration history, many analysts and studies suggest that economies can and do benefit from migration. For example, Canada is considered one of the largest recipients of immigrants since the 1950s. The country has over the years actively pursued pro-active, yet selective migration policies, trying to attract skilled immigrants. There is little ‘doubt [that] immigration plays an important role in Canada’s economy’<sup>(5)</sup>.

The EU economy faces different challenges, above all: demographic ageing, a shrinking of working-age population, and comparably feeble productivity growth in the middle of an intensifying global competition on product and factor markets. It is hence suggested by some that migration could play a vital role in addressing some of the demographic and current economic challenges. Claims are that due to the younger age profile of migrants, their inflow into Member States could help to redress the ageing population trends as projections hint that demographic dependency<sup>(6)</sup> will double by the 2050s. At the same time, a more skills-oriented, yet more open, stance towards migration may address part of those challenges. Ideally, both mobility and migration would help reduce qualification mismatches and overcome bottlenecks on the labour market, thus improving labour allocation and reducing unemployment. However, despite recent progress that third-country migrants have made in terms of education, non-EU OECD countries seem to attract relatively more high-skilled migrants than the EU<sup>(7)</sup>. At the same time, compared to mobility within the United States, intra-EU mobility is still relatively limited.

Section 2 outlines the extent of the demographic challenge before depicting recent observable trends of migration and EU mobility in Europe. As aggregate figures on employment or unemployment often fail to fully reflect the dynamics behind changing stocks, Section 3 engages in the analysis of micro-data. From the perspective of the individual, it sheds some light on what are the drivers of mobility within the EU as well as the labour market performance and dynamics of EU mobile workers and third-country migrants. Section 4 focuses on the wider economic impact of mobility and migration in the EU’s most important host countries. It starts with an analysis of whether the current allocation of migrants and mobile workers across

$$EDR = \frac{\text{Number of dependent people}}{\text{Number of employed people}} = \frac{YOUNG [<20\text{ years}] + \text{Not employed [20–64 years]} + OLDER [>64\text{ years}]}{\text{Employed [20–64 years]}}$$

industries corresponds to the industries’ growth performance. The section then outlines the importance of qualification and its efficient use and presents a model

simulation on the economic impact of higher immigration at alternative levels of education. Finally, it highlights evidence on the effect on wages and public finances. Section 5 concludes.

## 2. TAKING STOCK: DEMOGRAPHIC REALITY AND RECENT STATISTICS

The section starts from the demographic reality which for the EU is characterised by a declining working-age population and an ageing of both total and working-age population. Those trends will increase demographic dependency on younger cohorts as well as a scarcity of human capital. The analysis will reflect on these developments from the perspective of growth and conclude what they could imply for tomorrow’s policy stance towards migration and intra-EU mobility. It then offers a brief review of selected relevant statistics on foreign people’s labour market performance in EU host countries.

### 2.1. The context of demography from the angle of growth

*Pure demographic reality calls for comprehensive policy approaches*

Eurostat expects the EU’s working-age population to shrink by an average of 0.4% every year over the coming four decades<sup>(8)</sup>, though with huge variation across Member States. There is analytical evidence that additional migration can contribute to slowing down the trend, but it cannot stop it. To demonstrate this, authors usually draw on the ‘economic dependency rate’ (EDR), often defined as the ratio of those out of employment (the young below age 20 years plus the non-employed aged 20 to 64 plus older people above 64) per person in employment (aged 20 to 64)<sup>(9)</sup>. Hence, one could define:

<sup>(3)</sup> Eurostat Asylum statistics, see table [migr\_asyappctzm].

<sup>(4)</sup> Eurobarometer 82, autumn 2014, p. 33.

<sup>(5)</sup> Mohsen and Pendakur (2013), pp. 778–9.

<sup>(6)</sup> Here: The share of people aged 65 and older per person aged 15 to 65.

<sup>(7)</sup> Chaloff (2015), Gubert and Senne (2015).

<sup>(8)</sup> Eurostat Europop 2013 population projection, main scenario, age group 20–64 years (series proj\_13npms).

<sup>(9)</sup> For the concept see Titu et al. (2012). The following illustration is an update of Peschner (2012).



Consider that the EU-28 was to achieve its 'Europe 2020' employment target: by 2020, 75% of all people aged between 20 and 64 years would be in employment<sup>(10)</sup>. It would mean that, adding to today's employment rate of below 70%, EU-wide 14 million people of that age group would enter into employment by 2020. EDR could then move from today's 1.41 down to 1.26 by 2020 as indicated by the orange line in Chart 1. However, if after the year 2020 the employment rate stays constant at 75% (without further improvements), EDR will climb quickly. It will approach its maximum of 1.6 dependent people per employed around the year 2060 – see dark line in Chart 1. This will happen due to the decline of working-age population and the increasing number of older people as projected by Eurostat<sup>(11)</sup>.

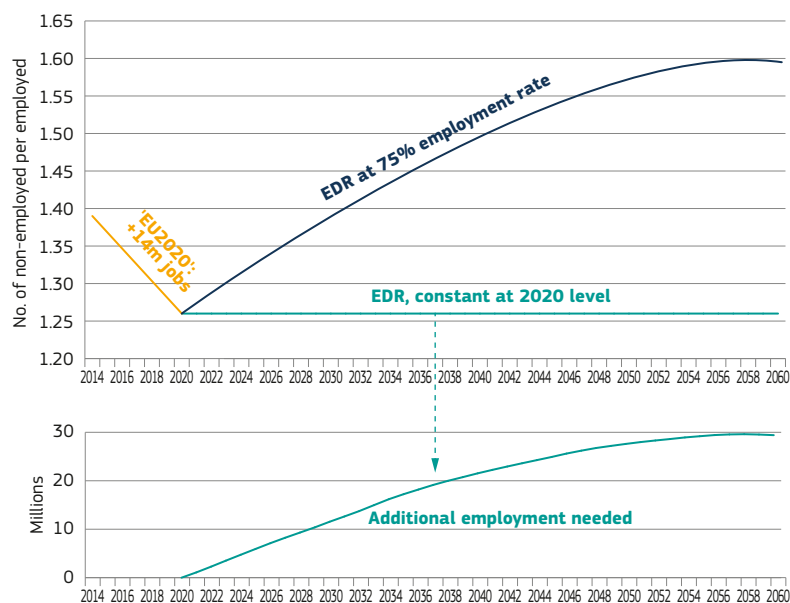
To demonstrate the impact of the declining working-age population, one could compare this constant – 75% – scenario with a theoretical one that tries to keep EDR from rising. That is, it is kept constant at the level of 1.26 after 2020. In that theoretical case, in 2060 the EU would need some 30 million more people in employment compared to the situation where the employment rate would be 75%. If this gap was to be filled with additional<sup>(12)</sup> third-country migrants, the number of additional migrants needed in 2060 would be much higher than 30 million. It would depend on the age structure and the employment rate of future third-country migrants. One would have to consider that today's working-age migrants and their descendants will also be dependent tomorrow. Moreover, as people migrate for different reasons than work, more than one third-country migrant would have to come in order to fill one vacancy. The *additional* number of third-country migrants necessary to fill a 30 million employment gap in 2060 would therefore be a multiple of 30 million. Today there are 28 million third-country migrants aged between 15 and 64 years living in the EU.

<sup>(10)</sup> European Commission (2010), esp. p. 5.

<sup>(11)</sup> Eurostat's Europop 2013 population projection, main scenario.

<sup>(12)</sup> 'Additional migrants' means in addition to the net migration component already included in Eurostat's population projection (annual net migration into the EU of around 900 000 people in 2015, climbing to 1.4 million by around 2040, before declining to some 1 million by 2060).

Chart 1: Pure demographics: Additional employment needed to maintain economic dependency rate (EDR) as from 2020, EU-28



Source: DG EMPL calculations based on Eurostat EU-LFS and Europop 2013 population projection, main scenario, update of Peschner (2012).

This finding has strong implications for EU policies trying to address the challenge of demographic change for the labour market:

- It is not an option to put the entire pressure *exclusively* on migration because the number of additional third-country migrants necessary under these conditions would have to climb to unrealistic magnitudes.
- On the other hand, if no additional migration from third-countries was permitted to alleviate the pressure on employment, the employment rate of people aged between 20 and 64 years would have to climb up to the level of 86% for the EU-28 (2014: below 70%), also through higher intra-EU mobility of existing workers. Even today's benchmark (80% in Sweden) would seem modest to the theoretical requirement for the entire EU in the very long run.
- Finally, if no policies at all were to materialise to improve the employment potential, then the pressure would be put exclusively on further productivity gains to compensate for the loss of potential employment if the economy were to continue growing at welfare-maintaining pace. Earlier work has shown that the speed of the theoretical productivity gains then necessary for the EU-28 would have to more than double,

compared to the pre-crisis long-term average<sup>(13)</sup>.

Putting the pressure on only one of the above magnitudes may be unrealistic, but it is a useful exercise as it demonstrates the extent of the challenge stemming from the declining working-age population. This indicates that migration alone will not sustain employment in the long run, and it points to a possible need for a comprehensive policy package including higher intra-EU mobility, i.e. increasing today's mere 4% share in the EU's working age population who live in another EU country. As mobile EU people search for better employment opportunities in other EU countries they contribute to achieve higher employment rates in the EU, thus making better use of existing human resources in times when they get scarce due to the declining working-age population.

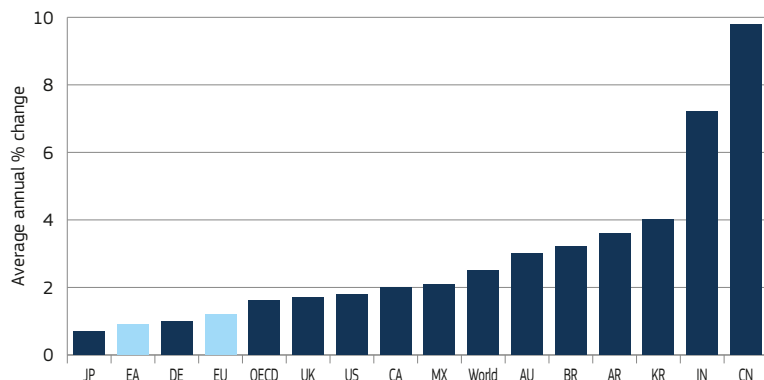
Indeed, seeing intra-EU mobility and third-country migration as instruments to safeguard economic growth may become a necessary change of paradigm as the demographic challenge adds to the EU's evidently weak growth performance vis-à-vis its main global competitors<sup>(14)</sup>.

The analysis to follow will therefore concentrate on exploring the potential

<sup>(13)</sup> Peschner and Fotakis (2013), Fotakis and Peschner (2015).

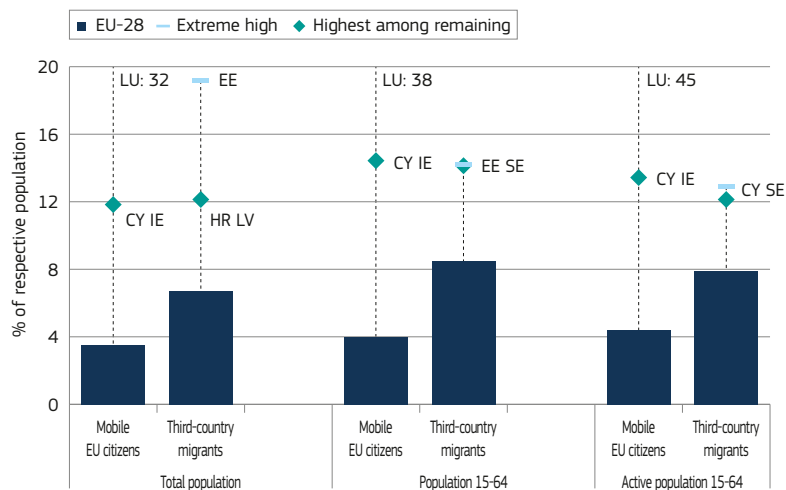
<sup>(14)</sup> For example: van Ark et al. (2013), Rincon-Aznar et al. (2014).

Chart 2: EU is in need of growth – GDP growth between 2000 and 2014, the EU and selected countries/regions



Source: World Bank.

Chart 3: Share of mobile EU citizens and third-country migrants – total population, working age population and active population of working age, 2014



Source: DG EMPL calculations based on Eurostat Demographic statistics and EU-LFS.

Notes: EU aggregate based on DE 2013 for population indicators, EU aggregate based on estimates for DE. The 'extreme high' show the figure for the resp. country with highest shares in the EU.

impact of both intra-EU mobility and third-country migration **from the angle of the contribution they (could) make to economic growth**. It will show that it crucially depends on the formal qualification (and skills) they supply and its efficient use on the labour market.

Indeed, as Lemaître (2014) points out, 'the potential need for immigrants in the context of population ageing ... cannot be assessed on the basis of demographic imbalances alone, but must take into account changes in the nature of employment' (15). This includes further dimensions, apart from the mere headcount, such as the level of qualification that migrants supply to the host-country's labour market as well as the occupations or the growth potential of the economic sectors they join.

These findings put the focus on the supply of higher education. Cedefop (2015) reckons that the EU's stock of highly educated labour force has been growing by some 3% annually since 2005, almost three times the average growth rate. It is, however, expected to slow significantly, down to just 1.8% in the next ten years. Mestres' (2014) findings for OECD countries suggest that the demographic decline of young cohorts, progressive retirement of well-educated older workers, and a moderate contribution of migrants are all factors leading to this trend. An intensifying global competition for talent may be its consequence (16).

For the efficient use of existing qualifications to support economic growth in the host-country, Lemaître hints that the allocation of migrants across occupations is not optimal. In Europe, new immigrants

(both intra-EU and non-EU migrants) made up 15% of all entries into strongly growing occupations over the period 2000-2010. At the same time, immigrants represented 24% of Europe's entries into the most strongly declining occupations. This implies that a stronger support to growth would be possible through more growth-friendly human resource allocation – notwithstanding the fact that mobile EU people and third-country migrants may often work in jobs which are considered less attractive by native workers (17).

In addition, he provides evidence for sub-optimal use of existing migrant human resources – reckoning that despite recent progress in their education, half of low-skilled jobs in Europe are in fact taken by immigrants, with substantial cross-country variation, though. There is hence evidence that over-qualification is a serious impediment to economic growth (18).

## 2.2. Recent statistical facts

### *Still less mobile EU people in the EU than third-country migrants ...*

Before further elaborating on these important findings, this section gives a brief statistical overview over the recent development in the stocks and flows of mobile people in the EU and third-country migration into the EU. 3.5% of the EU's total population are people born in the EU, living in another EU country. Their share in the working-age population (between 15 and 64 years of age) is only slightly higher. Given that freedom of movement across borders is one of the basic rights of EU citizens, sought also to improve human resource allocation across EU labour markets, these figures still appear modest. As shown in Chart 3, the number of third-country migrants is roughly twice as high.

However, these figures hide substantial variation across Member States. The share of mobile EU people in total population exceeds 10% in Cyprus, Ireland and Luxembourg (32%), while the share of mobile EU people moving to EU-13 Member States (which joined the EU in 2004 or later) remains modest so far, below 0.5% in Bulgaria, Romania, the Baltic States, and Poland. Overall, five big Member States (Germany, Spain, France, Italy and the United Kingdom) host 70% of all mobile EU people. Similarly,

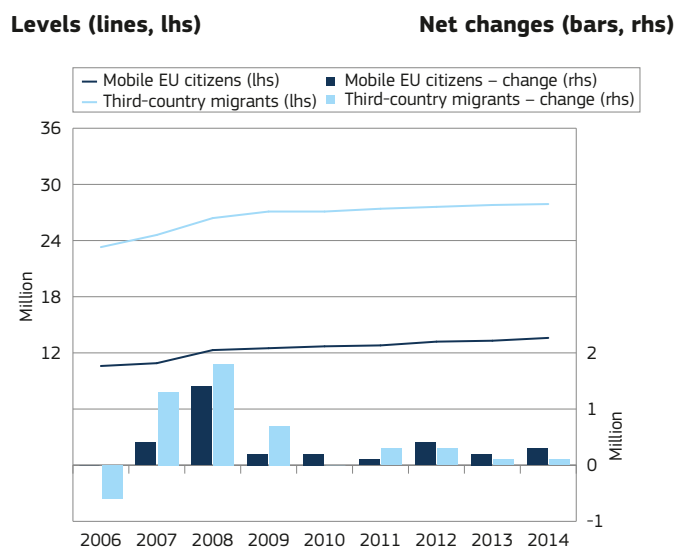
(17) European Commission (2014:2), p. 4.

(18) Lemaître (2014), p. 113.

(15) Lemaître (2014), p. 113.

(16) Mestres (2014), esp. pp. 89-95.

Chart 4: Mobile EU people and third-country migrants, aged 15-64, EU-25



Source: DG EMPL calculations based on Eurostat Demographic statistics.

Note: Based on estimates (using LFS) for AT 2009, BG 2009-2010, HR 2009-2012, RO 2009-2011, SK 2009-2011, DE 2014 and all Member States 2005-2008.

*Germany and the United Kingdom are the popular destinations*

The distribution of inflows to EU destination countries varies considerably in the long-term<sup>(21)</sup>. The 2013 picture reveals that intra-EU mobility and third-country migration follow different patterns: almost half of the people in the EU who changed residence for another EU country went either to Germany or the United Kingdom – two big Member States with high employment levels. On the other hand, France, Spain and Italy were the destinations of only 20% of all mobile EU people. The distribution of third-country migrants is very different from that pattern: Only 35% of them went to Germany and the United Kingdom while another 35% chose France, Spain, and Italy – where positive employment growth resumed

Table 1: Working age population and main labour market outcomes, EU, 2014

	Total	Native-born	Mobile EU citizens			Third-country migrants	
			all	EU-15	EU-10		EU-3
<b>Population 15-64</b>							
million	328.1	288.2	13.5	6.9	3.4	3.2	26.4
%			4.1	2.1	1.0	1.0	8.0
<b>Active population 15+</b>							
million	242.4	212.9	10.8	5.5	2.8	2.6	18.7
%			4.5	2.3	1.1	1.1	7.7
<b>Activity rate 15-64</b>							
Total	72.3	72.2	78.7	77.2	81.5	78.8	69.8
Resident for more than 6 years			78.7	77.5	80.9	79.7	72.7
Resident for 6 years or less			78.5	75.8	82.8	76.6	56.2
Resident for 3 years or less			77.3	72.8	83.8	76.5	52.1
<b>Employment rate 15-64</b>							
Total	64.8	65.2	70.3	70.9	74.9	64.3	57.9
Resident for more than 6 years			70.3	71.2	74.5	64.4	60.8
Resident for 6 years or less			70.1	68.8	75.7	64.0	43.6
Resident for 3 years or less			67.1	63.6	75.0	62.0	39.7
<b>Unemployment rate 15+</b>							
Total	10.2	9.6	10.5	8.1	8.1	18.3	17.0
Resident for more than 6 years			10.5	7.9	7.8	19.0	16.3
Resident for 6 years or less			10.8	9.2	8.6	16.4	22.3
Resident for 3 years or less			13.2	12.6	10.5	19.0	23.6

Source: DG EMPL calculations based on Eurostat EU-LFS.

Note: EU aggregate based on estimates for DE (distribution of mobile people/third-country migrants based on nationality).

these countries host more than 70% of external migrants in the EU.

*... but both EU mobility and third-country migration increased recently*

Chart 4 reveals increasing mobility following the EU enlargement of 2004. In the EU-25<sup>(19)</sup> in 2008, the stocks of mobile EU people and third-country migrants

of working age grew by some 1.4m and 1.8m, respectively, but levelled down again from 2010. Since then, mobile EU people have seen a slightly stronger increase, mainly because inflows grew more intensely in the aftermath of the 2007 enlargement<sup>(20)</sup> (see Chart 4) as more EU people from Romania and Bulgaria were increasingly looking for jobs beyond their own countries.

only in 2014. There are obviously very different driving forces behind intra-EU mobility and third-country migration.

*Employment rate of mobile EU people higher than the natives'*

Overall, mobile EU people' employment and activity rate in the EU exceed those of the native population with the

<sup>(19)</sup> The EU-25 include all EU countries except EU-3 (Romania, Bulgaria and Croatia).

<sup>(20)</sup> For example: Kahanec et al. (2014).

<sup>(21)</sup> European Commission (2015:1), p. 84.

exception of people from EU-3 (Romania, Bulgaria and Croatia) who are as strongly affected by unemployment as are third-country migrants. That is, at least from the perspective of pure employment probability, mobile EU people's labour market performance is generally strong. Recent mobile EU people who arrived after the onset of the crisis (resident for up to six years) do not seem to be less attached to the labour market than their longer-established peers (resident for more than six years). Except for EU-3, they tend to show employment and activity rates which exceed those of native-born people.

*... whereas third-country migrants are more strongly affected by both unemployment and inactivity...*

For third-country migrants the picture is much more diverse. Very recent migrants seem to have particular problems (re-)joining the labour market – with an employment rate below 40%, though with a marked recovery, at low level, as they establish themselves in the host country. Chart 5 shows the employment rates of third-country migrants, depending on their time of arrival in the host country. It confirms the (low-level) upward-trend as they continue residing in the host country. It also confirms that the initial situation following arrival seems to have become more and more difficult in recent years: the first employment rate reported for the different entry cohorts has been declining almost continuously since 2004.

A selected set of more detailed statistics on international migrants' labour market performance and socio-demographic characteristics can be found in Annex 1.

### 3. EU-MOBILITY AND THIRD-COUNTRY MIGRATION IN THE INDIVIDUAL'S CONTEXT: TODAY'S DRIVING FORCES

This section contains a series of micro-data analyses to explain what factors drive people's decision to change residence from one EU country to another (Section 3.1); what are the reasons behind mobile EU citizens' and third-country migrants' individual labour market performance in the host country (Section 3.2) and behind changes in that performance (Section 3.3)? Unless differently annotated, the analyses are based on the 2012 and 2013 (merged) micro-data from the European Labour Force Survey (LFS).

#### 3.1. Individual and country-specific 'factors of gravity' for intra-EU mobility

Using 1992–2011 time series data from the OECD International Migration Database, the European Commission (2015:1), in its recent Labour Market and Wage Developments in Europe report, analyses what macro-economic factors trigger bilateral migration flows. The analysis looks in particular at what could be the impact of intra-EU mobility in the EU-15 in the event

of economic shocks which hit countries asymmetrically<sup>(22)</sup>.

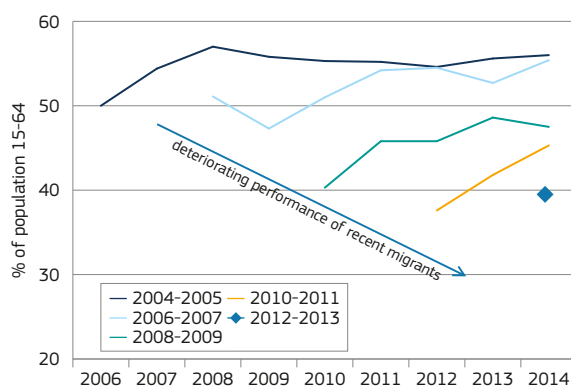
The findings from this analysis have far-reaching implications. It suggests that intra-EU mobility (as well as third-country migration) reacts significantly to the macroeconomic environment: e.g. differences in the unemployment rate or GDP per capita between the source and the potential destination country. These differences have become more pronounced in the EU during the crisis. Related to that, the analysis finds that intra-EU mobility has the potential to absorb asymmetric labour-demand shocks in the EU to some extent. They balance out labour demand shortages in some regions with over-supply (high unemployment) in others, preventing these shocks from having a more pronounced impact on unemployment or activity rates in the long run.

These findings imply that as people are mobile and cross borders they improve geographical (and sectoral) labour allocation as 'gravity' (differences in macro-economic core variables) would pull labour to where it made a higher contribution to growth. For the EU this would imply that without intra-EU mobility the EU-wide hikes of unemployment during the crisis would have been even more pronounced. That is, evidence strongly suggests that cross-border labour mobility also contributes to the deepening of the Single Market.

This section looks at intra-EU mobility and explores to what extent the European Commission's (2015:1) findings hold at micro-level, i.e. from an individual's perspective: Which are the personal or country-specific 'factors of gravity' making people cross borders within EU countries?

This chapter looking at respondents in the LFS aged between 20 and 64 years who were living in the EU twelve months before the survey, the question is: has the person during the twelve months up to the survey been mobile within the EU?<sup>(23)</sup> He or she has been mobile if their

Chart 5: Employment rates of third-country migrants in the EU by year of arrival in the host country and years of residence



Source: DG EMPL calculations based on Eurostat EU-LFS.

Notes: Average rates of third-country migrants who arrived in 2005–2006, 2007–2008, 2009–2010, 2011–2012 and in 2013; Germany is excluded.

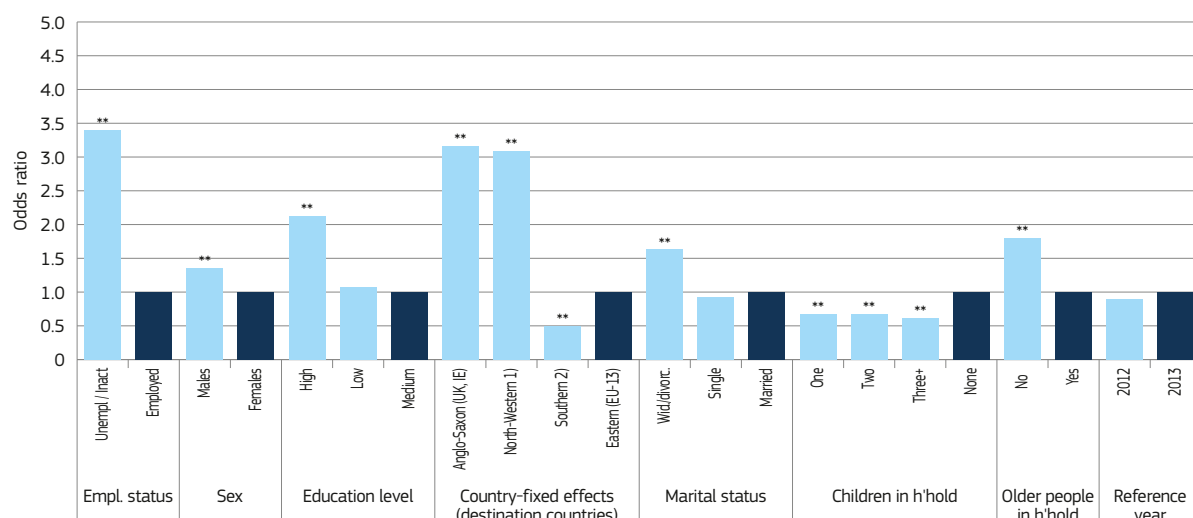
**How to read this chart:** Take the cohort 'entry 2008–2009'. In 2010 its employment rate was just around 40%. Over the years spent in a host country the rate of the cohort 'entry 2008–2009' has been on an upward trend approaching 48%.

<sup>(22)</sup> European Commission (2015:1), Part II, Section 1, earlier published as Arpaia et al. (2014).

<sup>(23)</sup> The approach uses the retrospective question in the LFS asking for the country of residence one year before the survey. If this EU country is not identical to residence EU country at the time when the survey takes place, a dummy variable will be set equal to one, otherwise remains zero. This dummy will be the independent variable 'is mobile' in an ordinal logistic regression. People moving to the EU from outside the EU are excluded from the sample of mobile people in order to avoid too strong heterogeneity to the non-mobile control group.



Chart 6: Driving forces of intra-EU mobility - Odds ratios of having crossed intra-EU borders, relative to reference group (=1, darker)



Source: DG EMPL calculations based on Eurostat EU-LFS 2012 and 2013 micro-data (merged).

Notes: \*\* and \* denote: coefficient is statistically significant below 1% and 5%, resp.

1) North-Western cluster: AT, DE, NL, LU, BE

2) Southern cluster: ES, PT, EL, IT, FR

**How to read this chart:** Take the variable 'Sex' as an example. Females are defined as the reference class. That is, the odds for females of crossing EU borders is normalised to 1. The odds for males are then 1.13. That is, the odds (chance or risk) of males crossing EU borders are 13% higher than they are for females, all other variables being equal.

residence was changed from a country inside the EU to the surveyed EU country. It then uses regression analysis to understand what the drivers behind intra-EU mobility are.

The regression model tries to find whether or not 'being mobile' within the EU can be explained by an array of relevant variables which includes the basic individual characteristics such as age, sex, and education level, as well as the person's labour status 12 months before the survey, that is, whether the person has been in employment<sup>(24)</sup> or not (inactive or unemployed)<sup>(25)</sup>. In addition, the family context is included as it is expected to have an influence on someone's decision to move abroad. Therefore, the model also controls for the marital status, the number of children in the household and whether or not there are older people living in the household. Another control variable is 'country-fixed effects' which are observed or unobserved differences in the surveyed countries. These include differences in labour market or institutional conditions which may trigger or hinder intra-EU mobility. For data limitation reasons the surveyed

(destination) countries are grouped into four clusters in this section:

The United Kingdom and Ireland build the Anglo-Saxon cluster. The North-Western cluster consists of other high-income countries with a relatively stable labour market: Austria, Germany, the Netherlands, Luxembourg and Belgium. The Eastern cluster combines Eastern European Member States that joined in 2004 or later (EU-13) whereas the Southern cluster includes Spain, Portugal, Greece, Italy and France.

Finally, the regression is controlled for the reference year as the LFS 2012 and 2013 data-sets are used for the analysis. The method and all control variables are explained more in depth in Box 1 which holds for the regression analyses carried out throughout the entire chapter.

Annex 2 contains the results of the regression in different specifications, i.e., varying the above mentioned control variables. The full model with all control variables is shown in Chart 6. It shows the ratio of odds that a person in a Member State has been mobile during the previous 12 months, depending on all control variables. Each variable defines one reference class to which the odds ratio refers (dark bars). That is, the odds ratio is set equal to 1 for the reference class.

*Strong pressure on people out of work to cross borders in search of employment...*

The results confirm the macro-finding of European Commission (2015:1) that a person's own labour status prior to his or her decision to cross borders or not is a very strong driving factor in that decision. The odds of unemployed or inactive people crossing borders are more than three times the odds for employed workers. In other words, all other factors being equal, inactive workers or those made redundant are more strongly inclined to change residence for another EU country than those already in employment. This finding is in line with expectations, but the significantly higher odds imply that people, once out of work, tend to make a bigger effort to improve their situation by searching for employment in another country, which in turn helps to more efficiently allocate labour across the EU.

*... and well-performing countries are magnets*

Also in line with European Commission (2015:1), the destination country plays a pivotal role in that respect. Chart 6 reveals that country fixed effects vary a lot across clusters of countries. They reflect the chance of finding an EU-mobile person in the respective country-cluster relative to the Eastern cluster (=1) which combines

<sup>(24)</sup> The labour status a year before it is captured in the LFS variable WSTAT1Y. WSTAT1Y= 1: Person carries out a job or profession, including unpaid work for a family business or holding, including an apprenticeship or paid traineeship etc.

<sup>(25)</sup> 'Inactive' considers WSTAT1Y= 7 or 8: Persons fulfilling domestic services and 'other inactive persons' (other than pupils, students, pensioners, disabled persons).



### Box 1: Basic methodology applied in this chapter on micro-data analysis - Ordinal logistic regression

Micro-data analysis presented in this chapter is based on a set of control variables that don't vary. Those variables are the independent variables in an ordinal regression which tries to explain a person-specific event. In this sub-section the event is her decision to move from one country to another, i.e., to be internationally mobile. Other sections below will look at the person's probability to be employed (and not unemployed or inactive), or to change labour status (moving into and out of employment), or the economic sector she works in. These are the dependent variables. The question is always: what factors make such individual event more probable? The analysis will be based on 2012 and 2013 data from the Labour Force Survey (LFS).

For all events, the following regression equation holds as a general rule:

$$\ln \left( \frac{p(event)}{1-p(event)} \right) = C + \alpha \cdot RegionOfBirth + \beta \cdot SEX + \gamma \cdot EDUC + \Delta \cdot Age + \delta \cdot MaritalStatus + \varepsilon \cdot Child + \theta \cdot Elderly + \pi \cdot Country + \varkappa \cdot Year$$

$p(event)$  denotes the probability for a person that a certain event occurs. The explanatory variables are:

- **Region Of Birth** [not for Section 3.1 on factors of gravity]: a person's country (region) of birth. EU-15 for mobile citizens from the 15 Member States before 2004; EU-10 for the 10 Member States which joined in 2004; EU-3 for Romania, Bulgaria and Croatia. In addition, the analysis considers third-country migrants those born outside the EU.
- **SEX and Age**: A person's gender and her Age (covariate)
- **EDUC**: A person's highest educational attainment level according to the International Standard Classification of Education (ISCED 1997), distinguishing only Low (ISCED 1-2), Medium (ISCED 3-4), and High (ISCED 5-6) education
- **Age**: A person's age (a 'covariate' as age is a continuous, not a classified variable like all others)
- **Marital Status**: A person's marital status: Classified in three classes: Widowed/divorced; single; or married
- **Child**: the number of children in the household (aged below 15 years): none, 1, 2, or more than 2.
- **Elderly**: Elderly persons in the household (aged 65 or older): Yes or No
- **Country**: Country-fixed effects are necessary to take into account observed or unobserved differences between host countries (different labour market situations, institutions, business cycles etc.) and to control for biases that may emerge due to different cultural backgrounds, i.e., different understanding of one and the same survey question in different countries.
- **Year**: The survey year as the 2012 and 2013 Labour Force Survey micro datasets are merged to increase the number of observations (be more reliable). Mobility in these two years may have been systematically different, for example, because the two years mark different economic cycles in the survey countries. That would imply that the results in 2012 and 2013 are not necessarily comparable. In order to avoid that bias one has to control also for the reference year.

'Event' is binary classified (0 or 1). That is, the dependent variable is the *probability* of an event,  $p(event)$ , relative to its counter-probability,  $1-p(event)$ . In other words: the dependent variable is the chance (or risk) that the event happens. The resulting coefficients  $\alpha$ ,  $\beta$ , etc. reflect **ratio of odds** relative to a reference case. For example, if the 'event' is to have been internationally mobile in the last 12 months or not, in the case of SEX the coefficient  $\beta$  could reflect that the chance for men of having been mobile is  $x$  times the chance for women if women are the reference (=1). Technically speaking, the ratio of odds follows directly from  $\beta$ . It is equal to  $e^\beta$  because  $\beta$  is the linear coefficient not for the odds  $p/(1-p)$  itself but for its natural logarithm, called the 'logit' (Backhaus et al. (2008), pp. 249-260).

EU-13 Member States. Controlled for all other individual factors, the Anglo-Saxon and North-Western countries which are characterised by relatively high per-capita income and low unemployment attract a large numbers of recently mobile people, whereas Eastern European and especially the Southern clusters are less popular destination countries. For Southern Europe this finding reflects the very difficult labour market situation at the time of the survey (2012/13).

These findings support the theoretical notion that given the diversity of labour market conditions EU-wide, labour is moving towards those places

where conditions are best<sup>(26)</sup>, helping to achieve a better allocation of productive resources across the EU.

Other determinants of one's willingness to move to another country are:

- Whereas for the marital status no significant influence can be found, the presence of children lowers the

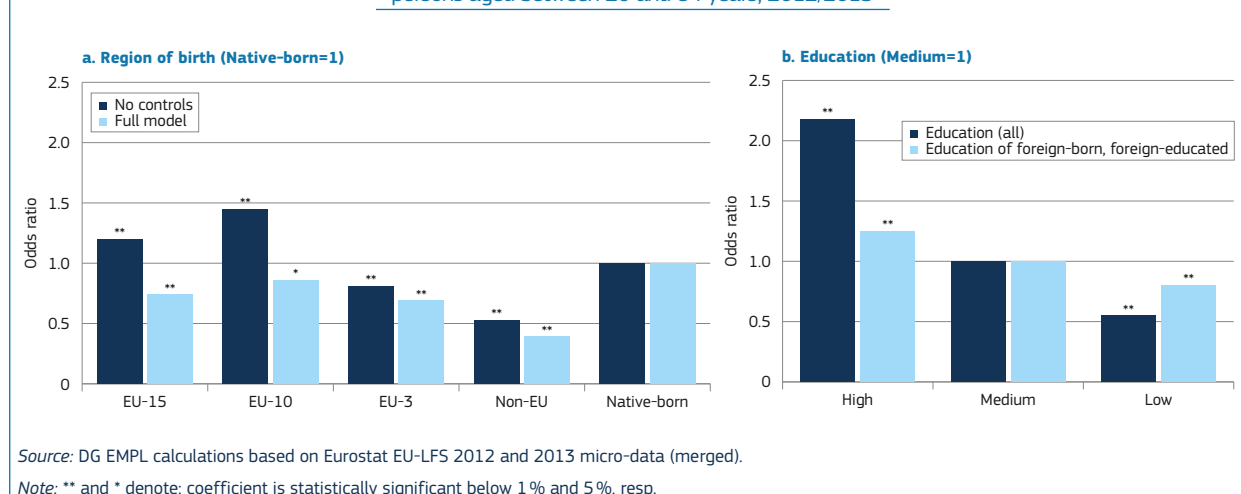
<sup>(26)</sup> A gravity model in European Commission (2015:1) also demonstrated the importance of the relative unemployment rate for determining bilateral gross flows – while also population size, geographical proximity, EU membership of both source and destination country, a past colonial relationship, a common language and a country's migration history (network-effects) were found to play a role. All these effects are captured in the country-fixed effects.

probability to move to another EU country significantly. The probability is further reduced by the existence of elderly people in the household.

- Age (not shown in the chart for technical reasons<sup>(27)</sup>): The findings confirm that higher age strongly reduces the odds of crossing borders within the EU. Furthermore, the chance is significantly higher for males than for females.

<sup>(27)</sup> Age is the only variable in the regression which is not categorical (divided into few classes), but given as a continuous range of values. It is therefore called a 'covariate' in the regression. Technically, interpretation of the age-coefficient is therefore different from the odds ratios given for the other (classified) variables.

Chart 7: Ordinal logistic regression: Odds ratio for being employed, by region of birth and education level; persons aged between 20 and 64 years, 2012/2013



- Formal qualification: High education strongly correlates with higher intra-EU mobility. The sections to come will demonstrate that this finding has important implications for the contribution that mobile EU people and third-country migrants can make to the host country's labour market performance and its economy.

### 3.2. Relative employment performance and its drivers: empirical evidence

Aggregate statistics presented in Section 2 reveal substantial differences in the labour market performance between mobile EU people and third-country migrants from different regions of birth. A more complete stocktaking of the reasons for these differences requires taking people's socio-demographic background into account.

This section therefore engages in a regression analysis with a person's labour market status as the dependent variable: if aged between 20 and 64 years, the individual can be either working (i.e. be employed) or not working (be inactive or unemployed). For technical reasons the analysis is restricted to mobile EU people and migrants who have been residing in the EU host country for up to 10 years. The main explanatory variable is the person's region of birth where four groups are distinguished: EU-15, EU-10 and EU-3 as mobile EU people and third-country migrants. The other explanatory variables are the ones used in the previous section (see also Box 1): a person's gender, age, family context, level of education and country-fixed effects. However, in addition to

these variables, another supplementary control variable is constructed which describes whether foreign-born people in the EU had gained the highest educational degree in the host country or outside (foreign education of mobile EU people and third-country migrants)<sup>(28)</sup>.

Chart 7 looks at 20-64 year-old mobile EU people and third-country migrants who have been residing in their EU host country for up to 10 years. It shows their chance (odds) of being in employment, relative to the respective native-born population before and after controlling for all above-mentioned individual and country characteristics. The pure employment rates reported earlier are well reflected by the uncontrolled coefficients (no controls) given in Chart 7a: EU-15 and EU-10 mobile people stand a significantly better chance of being in employment than native-born people; for EU-3 people and especially third-country migrants the opposite is observed in that they show a lower chance of being employed than natives.

Controlling for the full set of characteristics (full model) reduces the odds of being in employment especially for

<sup>(28)</sup> The LFS does not report on whether or not a person has acquired their highest education in the reporting country. However, there is an indirect proxy for foreign education: the variable HATYEAR captures the year when the highest qualification was acquired, and REFYEAR is the year of the survey. It is hence possible, together with the variable giving the years of residence in the host country (YEARESID), to prepare a dummy variable equal to 1 if REFYEAR - HATYEAR > YEARESID. In that case the acquisition of the highest qualification should have happened before entering the host country. For native-born people the dummy variable is set to '0' in any case.

**EU-15 and EU-10** mobile people. In particular, controlling for the full set of characteristics included in the regression reduces the odds of mobile people from EU-15 and EU-10 so strongly that they are now below those for native-born people.

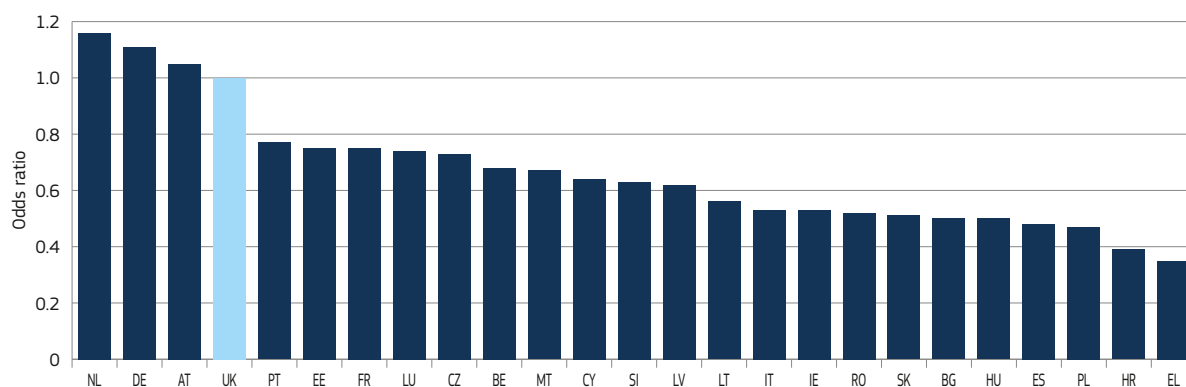
*Mobility tends to improve labour allocation across Europe, also because mobile EU people are well educated...*

This means that these two groups' high employment odds are strongly explained by individual factors. Annex 3 shows a number of specifications for the regression, introducing the control variables one by one. One can see that three factors explain the biggest part of the difference as shown in Chart 7a in the case of mobile EU-15 and EU-10 people:

- Education effect: The odds of being in employment are higher when the education level is higher (Chart 7b). On the other hand, the analysis below will show that the education-mix<sup>(29)</sup> of mobile EU-15 and EU-10 people tends to be higher, on average, than is the case with their native-born peers. The combination of these two findings implies that high employment rates of EU-15 and EU-10 mobile people are also due to a more favourable education-mix.
- Country-fixed effects (Chart 8): Mobile EU-15 and EU-10 people tend to choose those countries in which

<sup>(29)</sup> The terms 'education mix' and 'qualification mix' in this chapter refer to the distribution across education levels.

Chart 8: Ordinal logistic regression: Country-fixed effects. Odds ratio of being employed, relative to the UK (=1); persons aged between 20 and 64 years, 2012-2013



Source: DG EMPL calculations based on Eurostat EU-LFS 2012 and 2013 micro-data (merged).

employment rates are higher. This positive selection effect improves their own labour market performance in the host country and is thus a source of better labour allocation across the EU. In line with Guzi et al. (2015) and European Commission (2015:1), this confirms that mobile EU people and third-country migrants are responsive to the local labour market conditions in the host country.

- Age effect: Mobile EU-10 people tend to be younger than nationals. At the same time, age is significantly negatively correlated with the odds of being in employment. Hence, the age-effect clearly improves their labour market performance.

*... but there are problems with capitalising on higher education attained outside the host country.*

Mobile EU people's and migrants' **return on higher education**, in terms of higher employment rates, is obviously much lower when having acquired the highest education abroad (outside the host country). This can be seen from the light in relation to the dark bars in Chart 7b. As people improve their education they will see their chances of being employed improve by much less if they are foreign-born and foreign-educated, compared to all people. This finding is in line with recent literature<sup>(30)</sup>. It implies, expressed in positive terms, that higher education of mobile EU people and third-country migrants will indeed lead to better labour market prospects in the host country. But the return on higher education will be more significant if people

<sup>(30)</sup> Damas de Matos and Liebig (2014) have elaborated extensively on this finding (esp. pp. 201-209).

attain these qualifications in the host country itself, for example because they acquire language and other country-specific relevant skills and experiences<sup>(31)</sup> – important levers to better capitalise one's formal education. Foreign education yields a lower return. At the same time, apart from the problem of formal recognition, local employers may assess qualifications acquired in other countries differently from those attained in the host country.

*Many people often cross borders for different reasons than work. But legal obstacles may also prevent better performance of mobile EU-3 people and (especially) third-country migrants*

Despite being two very different groups, Chart 7 reveals that **mobile EU-3 people and third-country migrants** face similar problems of employment performance. Their odds of being employed are significantly lower than the odds of the native population. Contrary to EU-15 and EU-10 mobile people, this finding does not change significantly when controlling for the individual characteristics (particularly education) and country differences. This implies (1) that these groups' return on higher education is particularly low and (2) that the low employment probability of mobile EU-3 people and third-country migrants is partly explained by other factors not taken on board by the model:

- Many third-country migrants come to the EU for reasons other than work (family unification, education,

<sup>(31)</sup> Network effects also play a role. In addition, as workers reside in the host country, they get more acquainted with the working environment and vice versa. Mutual trust is being built up in the course of time.

international protection). Table 2 shows that their employment rates are particularly low. There is a strong gender dimension behind this finding: In the important case of family unification, the employment rate of women (39%) is only half the level of men (76%).

Table 2: Third-country migrants (aged 25-64 years) established in the last 10 years, by main reason for migration, 2008

Main raison	Distribution (%)	Employment rate (%)
Employment	43	82
Family	36	49
International protection	6	41
Other	7	64
Study	8	59
Total	100	65

Source: Eurostat, EU-LFS, 2008 module, ad-hoc extractions.

- However, even for those who come for work, discrimination, non-acceptance of their foreign qualifications and legal obstacles to taking up employment may further restrict people's access to the labour market. Legal barriers are a reality for third-country migrants. To a lesser extent this also holds true for mobile EU-3 people at a time (survey of 2012/2013) when nine out of 25 Member States, including the biggest ones, still had transitional restrictions in place to free movement for people from Bulgaria and Romania<sup>(32)</sup>. As from 2014, with the restrictions removed by all EU countries, these findings may potentially change.

<sup>(32)</sup> France, Germany, Austria, Belgium, the Netherlands, Luxembourg, the United Kingdom, Malta and Spain.

### 3.3. Understanding labour market dynamics

Understanding the relative labour market performance of EU mobile workers and third-country migrants requires the inclusion of labour market **dynamics** in the analysis. Indeed, analysing the stocks of those employed, unemployed or inactive in a certain year gives ‘only a still picture at a point in time’<sup>(33)</sup>. In addition, an individuals’ chance of getting a job if not in employment or the risk to transit into unemployment can have a decisive and sustainable impact on his or her further work-related biography. Therefore, the analysis of (static) labour market conditions is supplemented by an analysis of labour market **transitions**. The regression analysis stays at EU aggregate level in order to overcome data-shortcomings due to smaller sub-samples.

This section therefore looks at labour market transitions (1) from unemployment or inactivity into employment and (2) from employment into unemployment within a defined period. How do third-country migrants and mobile EU people perform relative to the control-group, the natives? And what are the factors explaining the differences? Like before, the analysis will be based on micro-data from Eurostat’s 2012 and 2013 LFS. In a first regression analysis, the driving forces of a transition from unemployment or inactivity (one year prior to the survey) into employment (at the time of the survey) will be explored. A second regression examines transitions from employment into unemployment.

Box 2 presents the LFS variables used for the transitions, the data limits encountered, and how they are resolved.

The dependent variable is the odds of a transition. The independent variable of interest is the region of birth, again distinguishing mobile EU people from EU-15, EU-10 and EU-3, and third-country migrants. Socio-demographic control variables include the gender, the educational attainment level, the marital status, the number of children and the presence of elderly persons in the households, as well as country fixed effects<sup>(34)</sup>.

#### Box 2: Calculating transitions: LFS data limits and how they are solved

The LFS variable MAINSTAT captures the current labour market status and is directly comparable to WSTAT1Y, the status from one year ago. Both variables distinguish employment, unemployment, and a number of other special labour market statuses (pensioners, pupils, students, disabled etc.). For the two transition directions, the following general rule is considered:

- Transitions into employment: those who were unemployed or inactive a year before the survey (WSTAT1Y =2, 7, or 8)<sup>(1)</sup> and employed (MAINSTAT =1)<sup>(2)</sup> at the time of the survey.
- Transitions out of employment: Those who were employed one year before the survey (WSTAT1Y =1) and unemployed (MAINSTAT =2) at the time of the survey. Inactive people are not included here as the analysis focuses on the risk of losing job rather than the chance to retire.

However, two important Member States, namely Germany and the United Kingdom, do not report the current status in the form of MAINSTAT. For those two countries MAINSTAT is replaced by ILOSTAT, having to accept certain statistical noise in the transitions because unlike MAINSTAT, the concept of ILOSTAT is not fully identical to WSTAT1Y. Therefore, for Germany and the United Kingdom the following is assumed:

- Transitions into employment: those who were unemployed or inactive a year before the survey (WSTAT1Y =2, 7, or 8) and employed (ILOSTAT =1) at the time of the survey.
- Transitions out of employment: those who were employed one year before the survey (WSTAT1Y =1) and unemployed (ILOSTAT =2) at the time of the survey.

Furthermore, Germany does not report the country of birth in the LFS. For that reason the concept of ‘nationality’ is used as a proxy for ‘country of birth’ in the case of Germany in order not to lose the biggest Member State in the sample.

This definition of a transition differs from the one applied by Eurostat which, inter alia, uses quarterly overlaps instead of year-on-year transitions based on annual LFS data<sup>(3)</sup>.

<sup>(1)</sup> WSTAT1Y/MAINSTAT = 2: Unemployed; For the inactive, 7: Person is fulfilling domestic services and 8: Other inactive persons. That is, the following circle of people are not included in the ‘inactive’: 3: pupil, student etc.; 4: in retirement or early retirement or has given up business; 6: in compulsory military service. By merging the unemployed and inactive into one group measurement errors are minimised. Those errors occur if survey respondents confuse being ‘unemployed’ with ‘inactive’. They can disturb accuracy of estimations of labour market transitions (Artola and Bell (2001)).

<sup>(2)</sup> WSTAT1Y/MAINSTAT =1: Carries out a job or profession, including unpaid work for a family business or holding, including an apprenticeship or paid traineeship etc.

<sup>(3)</sup> See [http://ec.europa.eu/eurostat/statistics-explained/index.php/Labour\\_market\\_flow\\_statistics\\_in\\_the\\_EU#Methodology](http://ec.europa.eu/eurostat/statistics-explained/index.php/Labour_market_flow_statistics_in_the_EU#Methodology).

#### *Recently, labour market dynamics of EU mobile people into employment is strong...*

Starting with the results for the year-on-year transition from unemployment and inactivity into employment, Annex 4 contains the complete results of the regression, introducing the above-mentioned control variables one by one in order to see what impact they have on the chance of mobile EU people and third-country migrants out of work

to find employment, relative to native-born people. Chart 9 shows the results by region of birth. That is, the graph shows what the chances are of a foreign-born person of each of the four categories of having experienced a transition into employment over the last year, relative to a native-born person.

Those odds ratios are shown in Chart 9 for the full model including all the control variables (bright), and the model with no controls (except for the reference year,

<sup>(33)</sup> Stibbard (1999), pp. 2, 3.

<sup>(34)</sup> The general methodology and the variables used are outlined in Box 1.



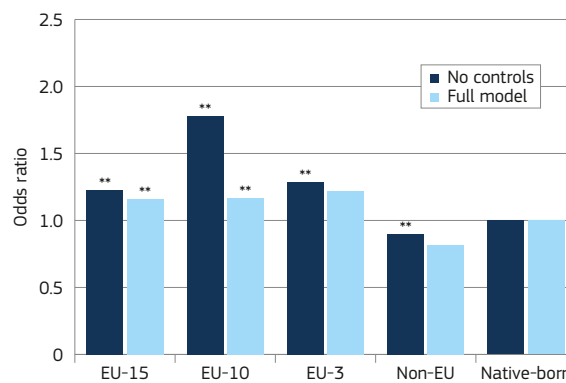
dark). There are two major observations (for details see the respective coefficients in Annex 4):

1. The uncontrolled odds-ratios show that the chance for all categories of mobile EU people to move into employment is higher than for native-born people. The positive labour market dynamics is particularly pronounced for people from the ten New Member States which joined in 2004 (EU-10 mobile people). Once unemployed or inactive, their chance to re-enter employment is 1.8 times the one of native-born people. On the other hand, entering into employment seems to be more difficult for third-country migrants than for nationals.
2. There is a pronounced difference between the uncontrolled odds and the full model for EU-10 people. This implies that the individual socio-economic context is particularly important in explaining this group's positive labour market dynamics. Most importantly, similar to the odds of being in employment examined above:
  - Country effects (selection effect): In 2014, excluding Germany<sup>(35)</sup>, almost half of all EU-10 mobile people in the EU lived in the United Kingdom, a country which has seen an employment surge of +4% since 2011 – far above the EU-average (+0.8%). As EU-10 mobile people concentrate on destinations with dynamic labour markets, this improves their chance of finding employment once inactive or unemployed. To a lesser extent, the positive selection effect also improves labour dynamics of mobile EU-15 people and third-country migrants. Contrary to that, the selection effect in the case of mobile EU-3 people has a negative impact as many of them reside in Spain and Italy, two countries with high unemployment<sup>(36)</sup>.
  - Age: EU-10 mobile people are younger, on average, than the native population in EU host countries. Age is significantly negatively

<sup>(35)</sup> In Germany country of birth is not reported.

<sup>(36)</sup> If one excludes Germany as a potential host country (Germany does not report the country of birth in the LFS), then in 2014 the majority of mobile EU-3 people lived in Spain and Italy. Hence, country fixed effects reduce the odds of entering into employment for this group.

Chart 9: Ordinal logistic regression: odds ratio for a transition from unemployment and inactivity into employment between 2011–2012 and 2012–2013, by region of birth, relative to native-born people (=1)



Source: DG EMPL calculations based on Eurostat EU-LFS 2012 and 2013 micro-data (merged).

Note: \*\* and \* denote: coefficient is statistically significant below 1% and 5%, resp.

Table 3: Ordinal logistic regression: odds ratio for a transition from unemployment and inactivity into employment between 2011/12 and 2012/13, by region of birth – uncontrolled odds ratios by time of residence

	All foreign-born	Resident for more than 1 year	Resident for more than 5 years	Resident for more than 10 years
EU-15	1.23**	1.11	0.96	0.89
EU-10	1.78**	1.54**	1.22	1.12
EU-3	1.29**	1.24**	1.21**	1.27*
non-EU	0.90**	0.89**	0.89**	0.85**

Source: DG EMPL calculations based on Eurostat EU-LFS 2012 and 2013 micro-data (merged).

Note: \*\* and \* denote: coefficient is statistically significant below 1% and 5%, resp.

correlated with the chance of moving into employment. As a result, the odds of transiting into a job tend to be higher for EU-10 (and to a lesser extent EU-3) mobile people, everything else being equal.

- Education: Higher education improves the odds of transiting into employment to some extent. On average, EU-10 (and EU-15) mobile people show higher education levels than the native population in the respective host countries. Their good formal qualifications obviously help them re-enter into employment once unemployed or inactive. Contrary to that, including the variable of education seems to make little difference in the case of mobile EU-3 people and third-country migrants.

One has to consider that the odds ratios given in Chart 9 for all four groups of international migrants are probably somewhat upward-biased. To the extent that taking up a job in another country was the motivation for crossing borders within the previous year, it is a matter of fact that the probability of people who

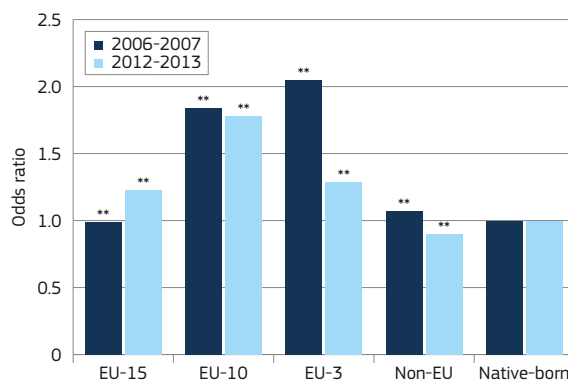
crossed borders experiencing a transition into employment is systematically higher. Even if this finding already constitutes evidence that mobile EU people help improve labour market dynamics across the EU, one may reduce that bias by excluding from the denominator those international migrants who have resided in the host country for less than a year.

The content of Chart 9 is being shown again in the first column of Table 3 for the uncontrolled model. It contains the odds for international migrants, relative to natives, of changing labour market status from either unemployed or inactive to employed (dark blue bars in Chart 9). The second column considers only those international migrants who have resided in the host country for more than a year. Columns 3 and 4 extend the residence period to more than five and ten years, respectively.

Expectedly, the odds ratios in the case of mobile EU people tend to become lower as they reside in the host country for a longer time, suggesting some assimilation of international migrants' labour market dynamics to the host society. The assimilation process seems to be



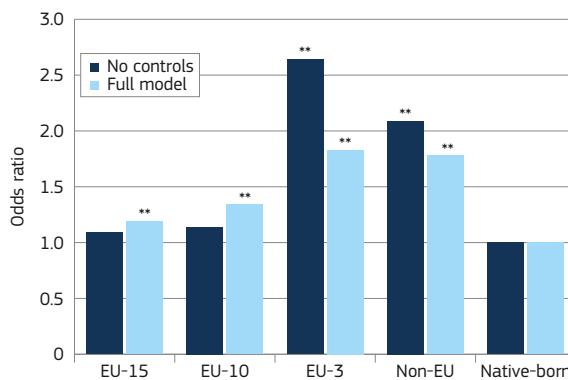
Chart 10: Ordinal logistic regression: odds ratio for a transition from unemployment and inactivity into employment, relative to natives (=1), comparison 2006-2007 and 2012-2013, by region of birth – uncontrolled model



Source: DG EMPL calculations based on Eurostat EU-LFS 2006-2007 and 2012-2013 micro-data.

Note: \*\* and \* denote: coefficient is statistically significant below 1% and 5%, resp.

Chart 11: Ordinal logistic regression: odds ratio for a transition from employment into unemployment between 2011-2012 and 2012-2013, relative to native-born people (=1), by region of birth



Source: DG EMPL calculations based on Eurostat EU-LFS 2012 and 2013 micro-data (merged).

Note: \*\* and \* denote: coefficient is statistically significant below 1% and 5%, resp.

significantly slower in the case of EU-10 and EU-3 mobile people who continue to see higher chances of entering into employment than natives for some time. In the case of third-country nationals, lower labour market dynamics than in the case of native people seems to be a lasting phenomenon with little convergence to the native population over time.

Together with the information gained from the previous section, these findings imply that third-country migrants, together with mobile EU-3 people, stand a much lower chance of **being in employment** than natives. However, unlike mobile EU-3 people, third-country migrants' chance of **finding employment** is relatively low, so there is a great risk that they stay out of employment for a longer time. Contrary to that, EU-15 and EU-10 mobile people stand a greater chance of being in employment than natives **and** show strong positive dynamics into employment.

### *EU-3 mobile people' dynamics into employment seem to have slowed down since 2006*

In order to provide evidence on whether the crisis or the restrictions to freedom of movement have changed positive labour market dynamics, the same regression is repeated, but now applied to 2006-2007 LFS data instead of 2012-2013 as before. That is, the analysis considers transitions out of unemployment or inactivity between 2005-2006 and 2006-2007 – only shortly after the 2004 enlargement (with still restrictions to mobility in place in a number of countries), but before the onset of the crisis, see Chart 10.

Coefficients for EU-10 and EU-3 mobile people are based on few observations. As many countries still had restrictions to EU mobility in place, in 2006-2007 there were only half as many EU-10 and EU-3 people of working age either unemployed or inactive *and* residing in another EU

country as six years later. Bearing these caveats in mind and comparing them to the more recent situation (2012/13), the following findings hold:

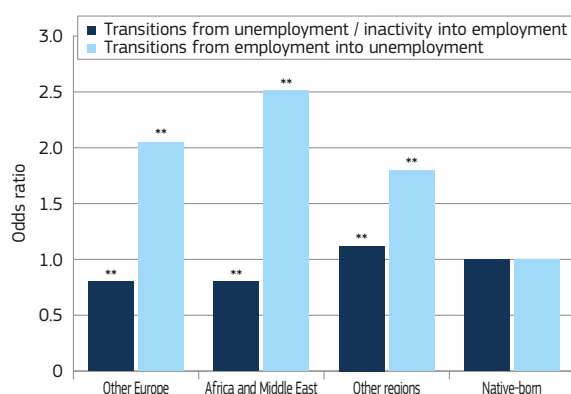
- In 2006-2007, chances for mobile EU-15 people to transit into employment seem to have been at the level of nationals, whereas more recently there has been more significant positive dynamics.
- The sample period includes the year 2007, the year of Romania's and Bulgaria's accession to the EU. The immediate effect of accession seems to have triggered labour market dynamics of many people from Romania and Bulgaria in that particular year although in 2007 the most important receiving Member States (notably Spain and Italy) still had made use of transitional restrictions to free movement. Relative to the native population, mobile people from EU-3 countries stood a greater chance of transiting out of unemployment or inactivity than 6 years later in 2012-2013. The crisis may have substantially reduced their labour market dynamics. For example, in 2013 the unemployment rate amongst EU-3 mobile people in Spain had risen to 37% (from 12% in 2007). The situation led Spain to re-introduce restrictions to free movement for Romanian citizens in 2011 (after having opened the labour market and applied EU law on free movement of workers from 1 January 2009).

### *Higher risk of losing job for all foreign workers...*

Transitions from employment into unemployment reflect the risk of losing one's job which is influenced by a variety of potential drivers. Controlling for the same individual socio-demographic characteristics and country-effects as before (see Box 1), the following picture emerges (see Chart 11):

All categories of international migrants stand a greater risk of losing their job than do natives. But whereas the difference compared to native-born people in the uncontrolled model is insignificant in the case of EU-15 and EU-10 mobile EU people, people from EU-3 and third-country nationals seem to face similar and much more severe problems: Their risk of entering into unemployment is at least twice as high as is the natives' risk.

Chart 12: Ordinal logistic regression: odds ratio for a labour market status transition between 2011-2012 and 2012-2013, third-country migrants, by region of birth – uncontrolled model



Source: DG EMPL calculations based on Eurostat EU-LFS 2012 and 2013 micro-data (merged).

Note: \*\* and \* denote: coefficient is statistically significant below 1% and 5%, resp.

In addition, the pronounced difference compared to the fully controlled model implies that the individual characteristics and/or country-effects strongly drive mobile EU-3 people's risk of entering into unemployment. Annex 5 gives the detailed overview over a number of regressions that includes the control variables one by one. As before in the case of transition into employment, the main finding is that education, country fixed effects, and age are the variables which have the strongest impact on the odds of becoming unemployed. In detail:

- For EU-3 mobile people and third-country migrants the odds of falling into unemployment in the controlled model are significantly decreased as education is being included as a control variable. This implies that these groups' particular educational mix increases their risk of becoming unemployed (which is included in the uncontrolled odds).
- The country-fixed effects capture, to a large extent, the host-country-specific labour market situation. In the case of EU-3, the general risk strongly translates into a high individual risk of becoming unemployed. This is because workers from this region are quite strongly concentrated in Member States where unemployment is relatively high (especially Spain and Italy)<sup>(37)</sup>. With EU-15 and (especially) EU-10 mobile people it is the opposite: they are to a larger extent present in

countries where the labour market is more stable and the risk of being fired correspondingly low (mainly the United Kingdom and Germany).

- Younger age significantly increases the risk of becoming unemployed. As a result, controlling for age reduces the odds of mobile EU people (except mobile EU-15 people) and third-country migrants of transiting into unemployment. This is because on average they are younger than native populations of working age. Therefore, they generally face a higher risk of losing their job.

#### ... and persisting problems for third-country migrants from certain regions.

The explanatory power of the above odds of entering or exiting employment may be limited in the case of third-country nationals as it hides substantial differences between regions of origin. In order to maintain acceptable group-specific sample sizes, Chart 12 introduces the broad regions of origin for third-country migrants.

The above shows that the total of migrants from third-countries face lower chances of entering employment but much higher risk of losing their job. The majority of third-country migrants included in the above regressions is represented by people from Europe (outside the EU) and Africa/Middle East<sup>(38)</sup>.

They stand a lower chance of ascending from unemployment or inactivity into work than the native population after controlling for individual characteristics and country-differences. On the other hand, the dynamics of moving into employment is relatively pronounced for migrants from Latin and South America (they are the majority included in the 'Other regions'), probably reflecting lower language barriers when taking up work – often in Spain or Portugal.

The risk of moving into unemployment is much higher for people from all regions – more than twice as high for workers from Africa/Middle East and 'Other Europe' as for native workers. This is reflected by the fact that many of them come for reasons other than work, with particularly low employment rates (see Section 3.2).

#### Contractual labour market segmentation may explain part of the dynamics.

The findings obtained so far suggest that relative to the host countries' native populations, especially mobile EU-3 people and third-country migrants tend to face a higher risk of losing their job. On the other hand, mobile EU people stand a better chance of finding a new job. Higher labour market dynamics in both directions may be due to some extent to more frequent use of non-standard employment contracts facilitating both hiring and firing ('easy hire, easy fire'), see Table 4.

Table 4: Ordinal logistic regression: odds ratio for being on temporary employment and being on part-time employment, relative to natives, 2012-2013, by region of birth

	Temporary	Part-time
EU-15	1.20 **	1.03
EU-10	1.43 **	0.93
EU-3	1.62 **	1.40 **
non-EU	1.49 **	1.32 **

Source: DG EMPL calculations based on Eurostat EU-LFS 2012 and 2013 micro-data (merged).

Note: \*\* and \* denote: coefficient is statistically significant below 1% and 5%, resp.

Controlling for the same individual characteristics and country fixed effects as before (Box 1) one finds that EU-15 and EU-10 mobile people do not differ significantly from native-born workers in terms of taking up part-time jobs. However, mobile EU people and third-country migrants stand a significantly

<sup>(37)</sup> Excluding Germany as potential host country for data availability reasons, Spain and Italy combine one third of all third-country migrants in the EU and two thirds of all EU-3 mobile workers.

<sup>(38)</sup> 68% of third-country migrants who were inactive or unemployed a year before the survey were from Other Europe or Africa/Middle East. For those who were in employment the share is 59%.

higher chance of ending up in temporary employment, all other parameters being the same. Within the group of mobile EU people, those who come from Member States which joined the EU in 2004 and after are more affected by temporary employment contracts than EU-15 mobile people, as the latter group contains a much lower share of people who were mobile more recently (i.e. a higher share of longer-established mobile people)<sup>(39)</sup>. The higher prevalence of temporary contracts amongst foreign-born people in the EU is a clear contributory factor to both high entry and high exit rates into/from employment. It is also complementary to frequent findings suggesting that immigrants face greater job insecurity and are more likely to experience significantly worse working-conditions than their native-born peers<sup>(40)</sup>.

### 3.4. Conclusion

#### *Good performance and higher labour market dynamics through intra-EU mobility...*

Section 3 provides a micro-data analysis on the driving factors of mobility within the EU. It also analysed mobile EU people' and third-country migrants' labour market performance in EU host countries. The analysis confirms earlier evidence provided by the Commission that the individual labour market situation in the source country is a strong determinant in people's decision to cross borders within the EU. On the other hand, a strong-performing labour market in the potential host country is a pull-factor (positive selection effect). Once in the host country, the positive selection effect helps mainly two groups of mobile EU people to perform well on the labour market: relative to natives, mobile people from EU-15 and EU-10 stand higher chances of being in employment and, once unemployed or inactive, of re-joining employment. Other reasons for their good performance are their high formal education and their young age.

<sup>(39)</sup> Looking at people aged between 15 and 64 years, the 2014 share of those resident for up to 2 years in the eight major host countries (Belgium, Germany, Spain, France, Italy, the Netherlands, Austria, United Kingdom) is 12% for mobile EU-15 citizens and 39% for mobile citizens from the EU-3/EU-10.

<sup>(40)</sup> For example Eurofound (2007); Giuntella (2014) concludes that immigrants, by occupying more hazardous jobs, give room for native people to take up higher-quality jobs – improving their well-being on the job.

A positive selection effect cannot be found in the case of EU-3 mobile people as relatively many of them live in countries where unemployment is relatively high at the moment.

#### *... but much of the potential is left untapped...*

Enhancing internal labour mobility could make a significant contribution to overall employment growth, given large differences in labour market conditions across Member States which have been further amplified during the recent crisis<sup>(41)</sup>. Available estimates suggest that up to a quarter of an asymmetric labour market shock could be absorbed by migration within a year<sup>(42)</sup>. Intra-EU labour mobility could already have played an equilibrating role during the crisis that is already sizable when compared to the low labour mobility<sup>(43)</sup>.

This highlights the large untapped economic potential for intra-EU labour mobility. Today, only 4% of the EU's working-age population (aged between 15 and 64 years) are mobile in another EU country. This figure compares modestly in the light of citizens' perception on mobility: one in four (25%) EU citizens say they would definitely (8%) or probably (17%) consider working in another EU country in the next 10 years<sup>(44)</sup>. This discrepancy highlights the potential of labour mobility and the need to enhance it, in particular by clarifying and streamlining existing rules.

#### *... while third-country nationals may often not have the chance to perform better.*

Third-country nationals face a much lower employment probability and have lower chances to find a (new) job if not in employment. Much of this result may thus be explained by other (unobserved) determinants such as the channel of migration (family unification, education, international protection), but also

discrimination or legal restrictions to taking up employment. These external factors reduce third-country migrants' labour market return on higher education.

#### *Both groups often face segmented labour markets.*

The risk of getting fired is higher for all groups of mobile EU people and third-country migrants. These findings support the thesis of 'easy hire, easy fire', given the strong prevalence of fixed term contracts amongst foreign-born people. However, higher job-finding dynamics, coupled with a high level of employment are a resource for improving factor allocation across Europe through mobility in the EU, particularly in the case of mobile EU people from EU-10 countries as they enjoy particularly pronounced labour market transitions out of unemployment or inactivity into new jobs. During the crisis this phenomenon may have helped to prevent even stronger hikes in unemployment. It offers significant growth potential in terms of a more efficient factor allocation. Section 4 will further elaborate on the extent to which Member States make use of that potential and the obstacles they face.

## 4. THE WIDER ECONOMIC IMPACT OF EU MOBILITY AND THIRD-COUNTRY MIGRATION

The end of the transitional restrictions on access of workers to the labour market of EU Member States for Romanian and Bulgarian citizens (beginning of 2014) has once more spurred the public debate on the wider economic impact of international migration from the host-countries' perspective. One concern is the effect on the host economy's labour market, another one is the fiscal effect that freedom of movement may have on the welfare system.

Literature on the wider economic impact of international migration is extensive and concentrates on the EU and the United States as receiving countries. The majority of studies conclude that domestic employment levels and wages would be affected only marginally, and mainly in the short term<sup>(45)</sup>. In the long run, capital adjusts to immigration: Firms would invest a higher share of their profits in new equipment which is more complementary

<sup>(41)</sup> The divergence in unemployment rates across Member States suggests that in some countries there is an oversupply of labour when compared to the labour demand. In addition, skills mismatches and shortages have increased in many Member States, in part due to the crisis, but also to, inter alia, the ageing process.

<sup>(42)</sup> Jauer et al. (2014) and European Commission (2015:1).

<sup>(43)</sup> Chaloff (2012).

<sup>(44)</sup> Special Eurobarometer 398 – Internal Market, October 2013.

<sup>(45)</sup> Bratsberg and Raaum (2012).

to the immigrants' skill mix, whatever that mix would be. Stronger investment will increase demand for workers, so that wage-declines which may have occurred in the short run, would level out in the long run<sup>(46)</sup>. Those who find more significant enduring effects tend to outline the importance of the international migrants' educational mix. From a receiving country's perspective: the more the educational composition of immigrants and natives are substitutes for each other, the more likely it would be to have adverse effects on local labour market<sup>(47)</sup>.

Section 4.1 looks at the extent to which the allocation of mobile EU people and third-country migrants across sectors is complementary to the local economies' existing industrial structure in order to gain a better understanding of whether the current pattern of intra-EU mobility and third-country migration helps or rather hinders optimal cross-EU factor-allocation. It then looks at over-qualification as one major reason why foreign workers often fail to capitalise on their formal education. Section 4.2 continues with a model-simulation of higher immigration, based on DG EMPL's Labour Market Model – making the semi-theoretical assumption of purely low-educated and purely high-educated immigration in 14 Member States. The analysis reveals that the migrants' mix of qualification is crucial to growth. Finally, Sections 4.3 and 4.4 consider what intra-EU mobility and third-country migration could imply for the host-country's wage level and touch upon their potential impact on public finances and the notion of 'welfare dependency'.

#### 4.1. Intra-EU mobility, third-country migration and efficient human resource allocation

Understanding the economic impact of international migration requires understanding to what extent it contributes to the objective of (optimal) human resource allocation **across economic sectors**.

The cross-country, cross-sector picture is so diverse that it makes sense to establish country-profiles for typical receiving EU Member States. Such profile is being presented for those countries

which receive the most migrants. Then, a simple indicator for the efficiency of labour allocation through intra-EU mobility and third-country migration is being developed:

To what extent do foreign nationals join the fastest-growing sectors in a country? To the extent that those sectors attract people from abroad, this would hint towards higher complementarity of human resources from abroad to the local labour market needs and represent strong evidence that international migration will improve the allocation of human capital across the EU and hence its growth potential.

Contrary to the baseline in this chapter and especially to the micro-data analysis presented earlier, the analysis in this section takes on board the concept of 'nationality' instead of 'country of birth' when defining mobile EU people or third-country migrants. This is because the analysis here relies on aggregate data from the Labour Force Survey (and National accounts) which is not provided for Germany to the extent that it refers to 'country of birth'.

##### 4.1.1. Sectoral allocation of mobile EU workers and third-country migrants from the growth perspective

There is strong theoretical and empirical evidence that international migration, no matter how it is defined, will contribute to better allocation of human resources. Workers who are free to move from region to region or from sector to sector, from the European perspective contribute to growth by 'reducing labour market imbalances, improv[ing] skill matches in an integrated market ... and [by generating] higher levels of innovation and entrepreneurship'<sup>(48)</sup>. One can assume that these positive economic externalities are the stronger when a greater foreign workforce joins those sectors which offer the highest growth potential. This section examines the sectoral allocation of mobile EU-workers and third-country migrants in the EU. It concludes that there may be scope for using intra-EU mobility and third-country migration as tools to enhance a country's growth potential through re-allocation of human resources across sectors.

##### 4.1.1.1. Taking stock: A simple composite indicator for allocative efficiency

Box 3 develops a simple index for the allocative efficiency of intra-EU mobility and third-country migration. The aim is to derive a synthetic index for the extent a country manages to get its foreign workforce to join those sectors, which, during a given reference period would have seen the fastest economic expansion. It is hence composed of two sub-indices:

1. **the sector's growth performance:** The average annual percentage increase of real gross value added per sector over the reference period.
2. **the sectoral migrant representation index:** The difference (in percentage points) between the share of native workers and mobile EU people/third-country nationals working in a given sector at a given point in time. The aim is to look at how foreign workers are distributed across sectors and then compare the distribution to the one of nationals<sup>(49)</sup>. If the share of foreign workers in a given sector is higher than the share of native workers, this would imply an 'over-representation' of international migrants in that sector.

The analysis cannot include interactions between foreign workers and nationals. For example, low-skilled services in private households provided by foreign people may facilitate labour market participation of high-skilled nationals. However, even despite these limitations a strong and persistent 'over-representation' of foreign workers in many fast-growing sectors could be strong evidence that international migrants actually help the country in question to improve its human resource allocation.

Before presenting the indicator the section starts with a descriptive part on the sub-indices it is composed of. Chart 14

<sup>(49)</sup> As for data reliability reasons the analysis operates on stocks rather than flows, it looks at the sectoral migrant representation at the end of the reference period. That is, it is implicitly assumed that labour migrant stocks adjust to long-term economic trends with a time-lag so that the sectoral representation index reflects the developments in the reference period to ascertain extent.

<sup>(46)</sup> European Commission (2008), p. 54.

<sup>(47)</sup> Peri (2014). For an overview see Kerr and Kerr (2011).

<sup>(48)</sup> Bonin et al. (2008), p. 6.



shows the two indices for the EU as a whole: The sector's migrant representation index by nationality (bars), and its recent growth profile (blue line) over the period 2000 to 2013. Both indices are standardised. That is, they are given as indices with a value of zero implying national average.

Positive (negative) values represent positive (negative) deviation from the national average<sup>(50)</sup>. To improve reliability, the analysis considers only the broad 10-sector breakdown.

The sectoral allocation of employed foreign workers has to be seen in the context of a country's overall employment rate which is given in a supplementary chart. People not in employment are not in the position to contribute to a country's performance (as measured by GDP). This is particularly relevant for third-country migrants, given their large employment-rate gap towards the nationals (-8 % pts). This section, however, intends to extend the debate on mobile EU people' and third-country migrants' growth contribution towards the objective of allocating employed human resources towards fast-growing sectors.

Chart 13 suggests that there is scope to increase efficiency as the sectors' growth performance across the EU is far from reflecting international migrants' sectoral employment allocation. This tends to be true for all four categories of international migrants

Apart from public administration (included in O-Q), the strongest deviation of actual migrant workforce allocation from the current sectoral growth pattern is shown for the ICT sector (J), growth of which has been far above average. Yet, migrants in the ICT sector are only slightly over-represented for EU-15 mobile people, or even under-represented for the other three categories of foreign nationals. On the other hand, due to the crisis, the construction sector (F) has shown negative growth. Yet, it strongly over-represents people from EU-10 and EU-3.

Traditional services, i.e. sales/accommodation/food services sectors (G-I), have also seen relative over-representation of international migrants, particularly of

<sup>(50)</sup> More concretely, the scaling represents the number of standard-deviations from the national average.

### Box 3: Efficient allocation of mobile EU citizens and third-country migrants – a simple indicator

Be  $E_{ij}$  the number of employed people in country  $i$  by nationality  $j$ , distinguishing only two groups: people whose nationality is that of the reporting country ('nationals',  $j=0$ ) and foreign workers (mobile EU people or third-country migrants) living there ( $j=1$ ). Be  $E_{ijk}$  the number of those nationals or foreign workers who are employed in sector  $k$ . In order to avoid too small sub-samples the analysis considers the broad sectoral division of NACE, rev.2, one digit which distinguishes ten economic activities.

The first sub-index is the degree of over- or under-representation of foreign workers in a certain sector  $r_{ik}$ . For that purpose:

$$(1) \quad r_{ik} = \frac{E_{i1k}}{E_{ij}} - \frac{E_{i0k}}{E_{ij}}$$

That is,  $r_{ik}$  is positive (negative) if the share of foreign workers employed in sector  $k$  is higher (lower) than the share of nationals employed in that sector. This situation is plotted against a sector's growth of gross value added (volumes) over a reference period ( $g_{ik}$ ) which ends in the year for which  $r_{ik}$  is calculated.

Next, both  $r_{ik}$  and  $g_{ik}$  are standardised, using the standard transformation:

$$(2) \quad r_{ik}^s = \frac{r_{ik} - \mu(r)}{\sigma(r)}, \quad g_{ik}^s = \frac{g_{ik} - \mu(g)}{\sigma(g)}, \quad \text{for } k = 1, \dots, 10 \text{ in country } i.$$

$\mu(\cdot)$  and  $\sigma(\cdot)$  are the average and the standard deviations of representation factor  $r$  and growth rate  $g$ , respectively.

Be  $w_{ik}$  the sector-specific weight reflecting the percentage share of sector  $k$  in total current gross nominal value added, then the country's composite indicator is described by

$$(3) \quad A_i = \sum_{k=1}^{10} (|r_{ik}^s - g_{ik}^s| \cdot w_{ik}).$$

as a potential index for EU mobility's or migration's allocative efficiency in country  $i$ .  $A_i$  is the mean difference between foreign workers' standardised sectoral representation index and the standardised sectoral economic expansion.  $A_i = 0$  would imply perfect growth-compatibility of foreign workers' cross-sector distribution in country  $i$ . A value of 1 would imply the absolute difference to be exactly one standard deviation in either direction.

Interpretation of  $A_i$  would then be straightforward: Higher  $A_i$  would imply lower allocative efficiency of foreign human resources. In other words: The more workers from other countries are concentrated in fastest-growing sectors, the more will the index approach a value of zero.

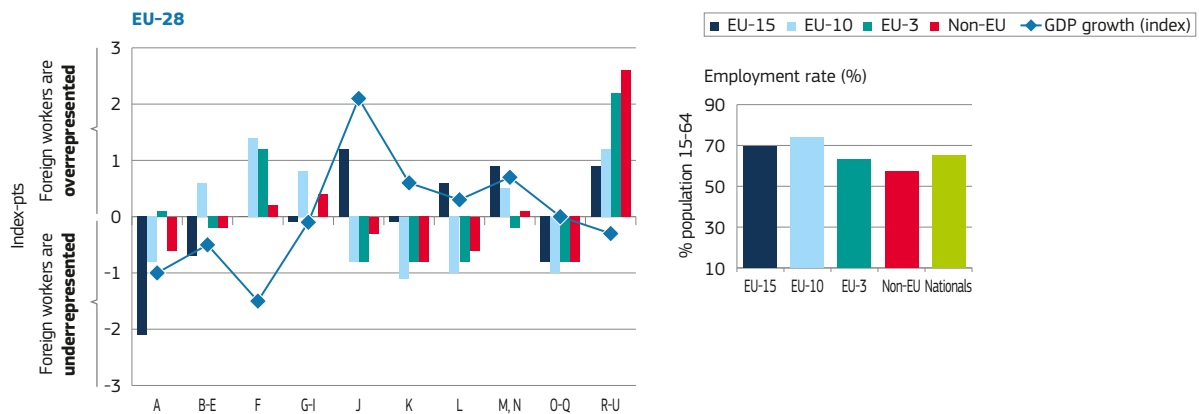
mobile workers from EU-10 and third-country nationals. Contrary to that, service sectors R-U have shown below-average growth over the period in question. The strong over-representation of international migrants in those sectors is mainly due to their employment in households as employers. It is very pronounced as concerns mobile EU workers from EU-3 as well as third-country nationals. A large number of them work in private households in **Spain** and **Italy**, and, to a lesser extent, **France** and **Belgium**. This can be seen in Chart 14 below, which for the six EU countries with the highest stock of international migrants in employment provides strong evidence that the EU aggregate hides pronounced cross-country differences in human resources sectoral allocation.

**Germany** shows a strong over-representation of international migrants in the (shrinking) construction sector and in traditional services. Strong growth of ICT activities, on the other hand, fails to translate into a higher share of international migrants in the sectors' employment.

The **United Kingdom's** international migrant workforce allocation across sectors tends to best reflect the sectoral growth-performance in the case of third-country nationals and mobile workers from EU-15 – but not for workers from the New Member States. The profiles of **Spain, Italy, and France** still show important signs of the financial crisis: a shrinking construction sector with pronounced over-representation particularly



Chart 13: Sectoral representation of international migrants 2014 (by nationality) and sectoral growth contribution over the period 2000-2013 (standardised), employment rate (15-64 years), EU-28



Source: DG EMPL calculations based on Eurostat EU-LFS and National Accounts.

Legend (abbreviations used for the 10 broad sectors according to NACE, rev 2)<sup>(1)</sup>:

- A Agriculture, forestry and fishing
- B-E Industry (except construction)
- F Construction
- G-I Wholesale and retail trade, transport, accommodation and food service activities
- J Information and communication
- K Financial and insurance activities
- L Real estate activities
- M, N Professional, scientific and technical activities; administrative and support service activities
- O-Q Public administration, defence, education, human health and social work activities
- R-U Arts, entertainment and recreation; other service activities; activities of household and extra-territorial organizations and bodies.

<sup>(1)</sup> NACE: Statistical Classification of Economic Activities in the European Community. See [http://ec.europa.eu/competition/mergers/cases/index/nace\\_all.html](http://ec.europa.eu/competition/mergers/cases/index/nace_all.html)

of EU-13 migrants and (related to that) strongly growing real-estate activities with a strong under-representation of all international migrants. In **Belgium, the United Kingdom, France and Germany** traditional services show strong over-representation of third-country nationals which by far exceeds the sectors' growth performance in those countries. In **Belgium and the United Kingdom**, recent growth in professional, scientific, and technical activities experiences some support by strong representation of all international migrant categories except EU-13 in the United Kingdom.

Overall, there seems to be room for a more growth-oriented use of international migrant's human resources, especially by attracting them for fast-growing

activities such as ICT and professional services that require adequate skills and higher formal qualifications.

Charts 13 and 14 suggest that the allocation of migrant workforce across the different sectors may to a large extent still be influenced by the crisis – given the relatively weak growth in industrial production and traditional services, the shrinking of construction and the associated over-representation of international migrants in those sectors. One would suggest that the economy's adjustment to such a pronounced economic shock took time and materialised on a country's international migrant sectoral allocation profile only with a considerable time-lag – with part of these adjustments yet to come.

Therefore, to better reflect upon the potential impact of the crisis to international migrant workers' allocation across the sectors, the synthetic indicator described above will be applied to two alternative reference periods: the pre-crisis period 2000-2008 and the period which includes the financial crisis, i.e., 2008-2014<sup>(51)</sup>.

Box 3 above describes the simple methodology used to condense the international migrant representation index and sectors' growth performance index down to one measure which should inform to what extent a country's cross-sectoral allocation of economic growth reflects the allocation of international migrant human resources. A value close to zero would imply only small differences

<sup>(51)</sup> As the crisis started in 2008, the latter period should well capture the impact on the stocks of migrants employed in the different sectors to a considerable extent, even if adjustments are imperfect and sluggish.

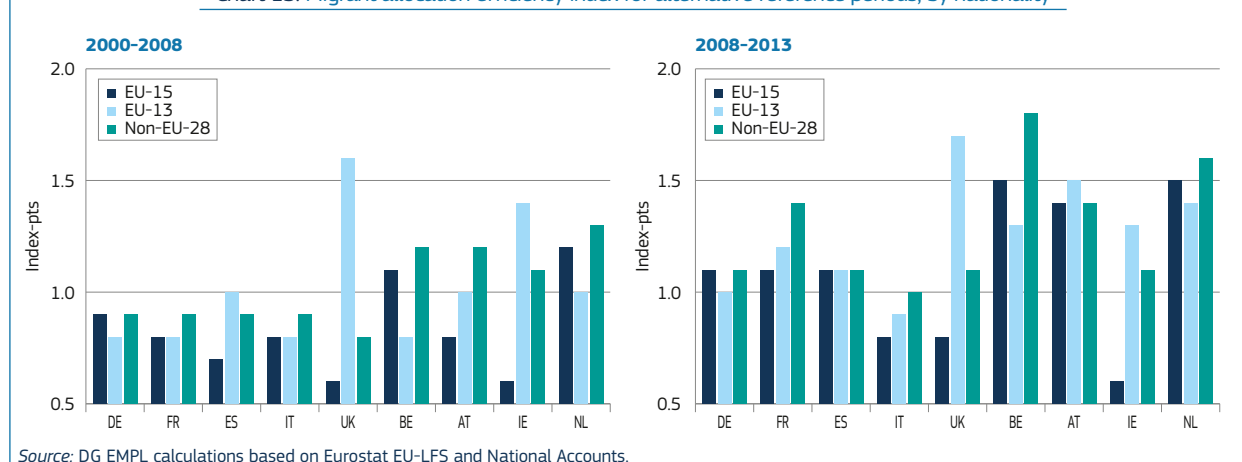
Chart 14: Sectoral representation of migrants 2014 (by nationality) and sectoral growth contribution over the period 2000-2013 (standardised); employment rate (15-64 years)



Source: DG EMPL calculations based on Eurostat EU-LFS and National Accounts.

Note: Because of data reliability problems, the analysis is restricted to the six Member States with the biggest number of mobile EU people. Furthermore, migrant representation data is aggregated for EU-3 and EU-10 (to EU-13); 1 Number or standard-deviations from national average.

Chart 15: Migrant allocation efficiency index for alternative reference periods, by nationality



between those two indicators, i.e., a good match between growth and international migrant human resource allocation. The higher the value, the less perfect the match would be.

Chart 15 shows the international migrant allocation efficiency index for both periods, adding Austria, Ireland and the Netherlands to the list of countries despite data-reliability problems. The Chart supports four main findings:

- Of all three groups of international migrants, EU-15 mobile people' sectoral allocation seems to support growth the most, with third-country migrants it tends to be the opposite.
- The chart outlines the particular profile of the United Kingdom (and to a lesser extent Ireland) as a country where the allocation of mobile EU-15 workers and third-country migrants appears to be particularly growth-friendly. In sharp contrast to that, mobile workers from the Member States which joined the Union in 2004 or after are much more concentrated on relative lower-growth activities than is the case in the other countries.
- In the other countries except Spain, allocation of third-country migrants tends to be the least growth-friendly.
- At least from the point of view of sectoral human-resource allocation, the crisis has undoubtedly reduced growth-friendliness of international migrant workforce allocation across the board as shown on the right-hand side of the chart. All countries and all categories of international migrants tend to show

much stronger deviations of sectoral allocation from the centres of growth than was the case before the crisis. This is strong evidence that people tend to accept low-pay low-profile jobs to a much larger extent as times get harder.

#### 4.1.1.2. The dynamics of sectoral allocation

Hence, one main finding is that the recent (2014) allocation of both mobile EU workers' and third-country migrant human resources across sectors may not reflect those sectors' growth performance as seen since the beginning of the century. The analysis is static in the sense that it does not reflect upon factor-reallocation in the course of taking up residence: Once they have entered their host country, mobile EU people and third-country migrants may start out in low-growth sectors but change to other sectors once they have established themselves, after acquiring necessary country-specific skills or getting their formal qualification recognised<sup>(52)</sup>.

To capture the dynamics of sectoral allocation, a similar approach is being applied as above in Section 3.3 which elaborated on the odds of a transition from and into employment. The difference is that the analysis now asks for sectoral transitions towards growing sectors *within* employment.

Exploring sectoral dynamics is tricky as the core Labour Force Survey (for which the number of observations would be

<sup>(52)</sup> The sections below present evidence that acquiring country-specific skills is a significant determinant on whether foreign-born people manage to gain a foothold on the host country's labour market.

sufficient when it comes to breaking the sample down into country of birth or nationality) does not follow people over a longer period time. However, the LFS question about a person's current activity (NACE-sector) has a retrospective counterpart which refers to the situation one year before the survey. This allows to explore transitions from one group of NACE sectors to another one during the last year prior to the survey, and to do this for different residence periods. In reality, higher sectoral dynamics in the case of mobile EU workers and third-country migrants would be reflected by a higher probability of changing from lower-growth to growing sectors, relative to the native population, after they had resided in the host country for some time.

Sectors of destination regroup the NACE activities J (ICT), K (Financial and insurance activities), M (Professional, scientific, technical activities) and P (Education). Though this regrouping is arbitrary it combines the activities that had seen the fastest growth EU-wide since the year 2000 or that usually require higher qualification levels. The origin sector combines all remaining activities except public administration (O) and extraterritorial organisations (U).

In the tradition of the micro-data analysis of labour status transitions shown earlier, the analysis turns back to the concept of 'region of birth' instead of 'nationality' (except for Germany). It now considers transitions from sector of origin (the year before) to the sector of destination (currently) as the dependent variable in an ordinal regression. The analysis gives the odds for mobile EU people and third-country

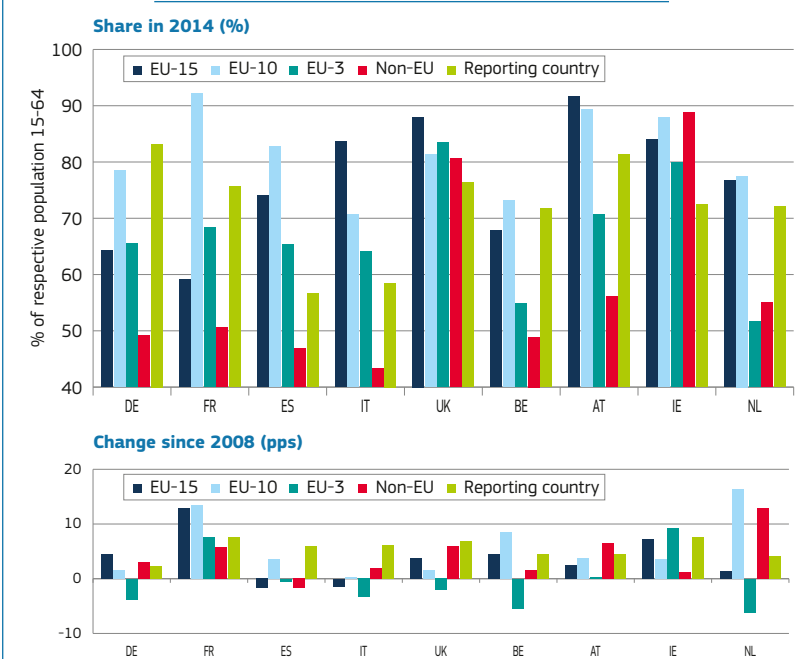
Table 5: Ordinal logistic regression: odds ratio for a transition into NACE activities J, K, M, and P between 2011/2012 and 2012/2013, by region of birth, relative to native-born people (=1)

	All foreign-born	Resident for more than 1 year	Resident for more than 10 years
EU-15	1.52 **	1.49 **	1.52 *
EU-10	0.88	0.90	0.54
EU-3	1.17	1.11	0.81
non-EU	1.00	1.01	1.03

Source: DG EMPL calculations based on Eurostat EU-LFS 2012 and 2013 micro-data (merged).

Note: \*\* and \* denote: coefficient is statistically significant below 1% and 5%, resp.

Chart 16: Share of people aged 15-64 years holding at least upper secondary education by nationality in percent (2014)



Source: DG EMPL calculations based on Eurostat EU-LFS.

migrant workers of having undergone such transition during the year before the survey, relative to the native population. Different periods of residence in the host country are being considered. Further control variables are age, sex, education level, fixed country effects and the reference year of the survey.

Table 5 presents evidence that the above notion of significantly higher mobility into higher-growth sectors is a reality for EU-15 mobile people. They seem to show significantly stronger dynamics into the higher-growth destination sectors than is the case for native-born group.

The odds-ratios for the other categories stay below statistical significance, mainly due to the low number of observations. However, evidence for an equally strong upward-mobility for those groups is weak. The analysis to follow reveals that this phenomenon goes hand in hand with significant over-qualification.

#### 4.1.2. Mobile EU and third-country workers' qualifications and their ability to capitalise on them

For a more concrete picture about mobile EU and third-country workers' growth potential it is necessary to also take into account the qualifications they bring and the kind of employment they are engaged in. Chart 16 shows the share of employed people by nationality who have attained at least upper secondary education.

*Many mobile EU people tend to be (formally) well-qualified, less so the third-country migrants...*

Generally, most receiving countries show a comparable or even higher share of EU-10 and EU-15 mobile people with at least upper secondary education than the national population. The situation for mobile EU-3 people tends to be mixed.

On the other hand, the share of third-country migrants with at least upper secondary education is way below average, except in the United Kingdom and Ireland. Third-country migrants' gap compared to nationals exceeds 20 percentage points in Belgium, Austria and France, and even 30 percentage points in Germany – the country that has shown the strongest overall labour market performance in recent years. Relative to its native workers, the qualification profile of foreign people in Germany appears less favourable across the board. Germany's highly competitive industrial base seems to recruit its qualified staff mainly from its well-educated and trained domestic workforce with little reliance on foreign workers' qualifications.

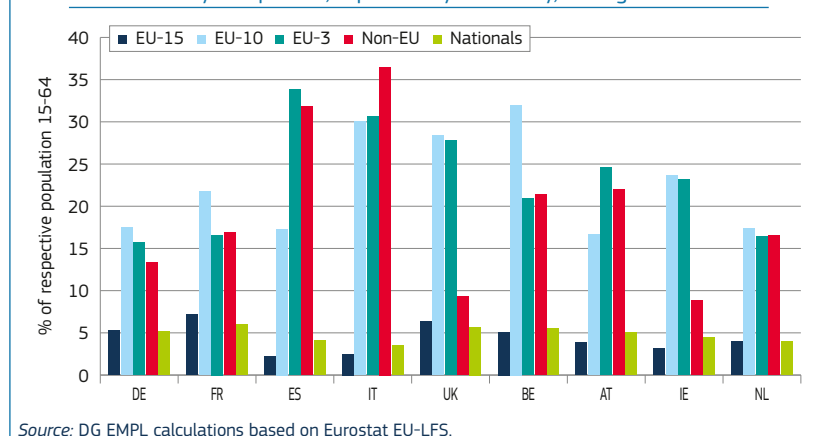
Educational levels seem to have made substantial progress over recent years. Both mobile EU citizens and third-country migrants have increased their share of at least medium educated people of working age. One exception is the educational profile of EU-3 mobile citizens which saw either a stagnation or a decline in that share, except in France (where their number is low).

Mobile EU workers from EU-10 and EU-3 New Member States in the United Kingdom and Ireland may stand lower chances to join the fastest-growing sectors as demonstrated above. However, at the same time, they tend to be extremely well educated: All categories of mobile EU people and third-country migrants in those two countries show a higher share with at least upper secondary education than the native workforce. In the context of EU-15 mobile people, Belgium and the Netherlands seem to be other examples of countries in which a significant number of well-qualified foreign workers engage in low-growth sectors.

Literature suggests that a high share of well-educated mobile EU people may indicate strong prevalence of over-qualification which – from the point of view of a country's growth potential – can be considered a suboptimal allocation of resources similar to the less supportive sectoral distribution of international migrants as shown in the previous section. Numerous indicators were designed to capture the prevalence of qualification mismatches<sup>(53)</sup>, and EU

<sup>(53)</sup> Technical measures can be found in Bonfanti and Xenogiani (2014), pp. 274-75.

Chart 17: Share of people with at least upper secondary education working in elementary occupations, in percent by nationality, average 2009-2014



Source: DG EMPL calculations based on Eurostat EU-LFS.

Commission services have examined them extensively<sup>(54)</sup>. For the purpose of demonstration two broad approaches are being distinguished.

### ... but formal qualifications do not always pay...

**Firstly**, the share of the employed workforce having attained at least upper secondary education, working in 'elementary occupations' according to the International Standard Classification of Occupations (ISCO) is shown in Chart 17. These activities do not require any particular formal education but 'consist of simple and routine tasks which mainly require the use of hand-held tools and often some physical effort'<sup>(55)</sup>. For data reliability reasons the average is built over the years 2009-2014.

The Chart shows that in the main receiving countries over-qualification amongst international migrants is a widespread and pronounced phenomenon. With the exception of EU-15 mobile workers, the share of all other categories of at least medium-educated international migrants who work in elementary jobs tends to be a significant multiple of the nationals' share. Its share exceeds 30% in Spain and Italy for third-country migrants.

The degree of over-qualification is most remarkable in the case of well-qualified employed workers from EU-10 and EU-3 Member States – the difference to nationals being enormous in all countries considered.

<sup>(54)</sup> The 2012 edition of this review devoted a chapter to skill mismatches in Europe. See European Commission (2012), Chapter 6. See also European Commission (2013:1).

<sup>(55)</sup> ILO definition, see <http://www.ilo.org/public/english/bureau/stat/isco/isco88/9.htm>.

**Secondly**, over-qualification is not a mere statistical phenomenon but may well be a matter of perception. The analysis is therefore complemented by making use of micro-data from Eurofound's 5<sup>th</sup> European Working Conditions Survey (EWCS) from 2010<sup>(56)</sup>. The EWCS captures a question on self-perceived over-qualification as the respondents were to subscribe or not subscribe to the statement: "I have the skills to cope with more demanding duties." In another ordinal logistic regression the response is taken as the dependent variable in a regression. A number of individual characteristics are the explanatory variables: gender, age, the size of the organisation one works in, the sector (private, public, others), the type of contract (indefinite, fixed-term, temporary agency, others) and our target variable: having a foreign background (either oneself or parents having been born in another country). Data does not allow distinguishing the region of origin, though. There is a very strong statistical significance (far below 1%) that a foreign-background increases one's risk of ending up over-qualified in the EU, the odds being at +11% compared to people without a migratory background. This result is very robust with respect to all control variables mentioned.

### ... as both mobile EU people and third-country migrants often lack country-specific skills needed to reap the fruits of higher education ...

These findings are confirmed by a number of sources and reflect the observation that foreign people face many more problems capitalising their qualifications in the form of better job-matches

<sup>(56)</sup> See <http://www.eurofound.europa.eu/european-working-conditions-surveys-ewcs>.

and/or adequate wages. There is evidence that foreign-born people often take up work from the extremes of the skills spectrum which is not desired by locals<sup>(57)</sup>. An obvious reason for the high incidence of over-qualification is language skills. For example, based on the migration-related ad-hoc module of the 2008 Labour Force Survey, Damas de Matos and Liebig (2014) found that the incidence of language problems significantly reduces foreign-born people's employment rate in the EU<sup>(58)</sup>. Apart from that, they find that the place of acquisition of the highest qualification is a strong determinant of over-qualification rates. Other authors confirm these findings<sup>(59)</sup>. Indeed, one popular conclusion is that experience in the host-country counts a lot whereas experience outside seems to not pay to the same extent<sup>(60)</sup> – as also found in Section 3.2 above in relation to the chances of mobile EU people and third-country migrants to be in employment. The reasons may well be partly supply-side related to the extent that international migrants, despite being formally well educated, still lack specific skills needed on the labour market of the very host country they have moved to (including soft skills). Indeed, a substantial impediment to capitalise one's formal qualification on the job is the lack of relevant skills – see Box 4.

### ... but imperfect recruitment policies may play a role as well as problems of recognition

However, wrong measurement or a systematic underestimate of qualifications acquired abroad may play a role as well as unobserved demand factors such as discrimination of foreigners compared to native workers<sup>(61)</sup>. These

<sup>(57)</sup> Giuntella (2014), European Commission (2014:2). Cancedda (2015) analyses the impact of EU mobility in four EU Member State cities selected because of their 'substantial migrant populations'. It is confirmed that mobile EU people are well educated compared to local populations, but continue to face higher exposure to the risks of being hired at low qualification levels, of detrimental working conditions and of exploitation. The increased labour supply would exercise pressure on wages mainly in the low-skilled segment.

<sup>(58)</sup> Damas de Matos and Liebig (2014), p. 210.

<sup>(59)</sup> For example: Bonfanti and Xenogiani (2014), esp. 279-288.

<sup>(60)</sup> Damas de Matos (2014) lists evidence on p. 165. Using experimental data, Carlsson and Rooth (2006) find evidence that ethnic discrimination in is a widespread phenomenon amongst Swedish recruiters.

<sup>(61)</sup> Damas de Matos (2014), pp. 174-5.



findings indicate a substantial prevalence of labour market segmentation 'pushing [even well-qualified] migrants towards the bottom end of occupational hierarchy' (62).

In order to use human capital efficiently, policy action is needed all the more as relative to the United States, the EU seems to offer little opportunities to international migrants to move up the job ladder once engaged in low-skilled activities (63). Findings in Section 4.1.1.2 have demonstrated that there is indeed scope for improvement.

For European citizens, these findings reveal the important contribution that freedom of movement when studying or working abroad can make when it comes to acquiring the skills necessary for fully capitalising one's qualification on the European labour market. With a view on the labour market integration of third-country migrants they also call for 'the need to encourage recognition and certification of experience [and] qualifications obtained abroad' (64). Immigrants who apply for recognition stand a much better chance of not ending up over-qualified on the host-country's labour market – but there is also evidence that few do apply (65).

### *As a result: Potential of mobile EU people is not fully exploited*

Today, while third-country migrants are still over-represented around low qualifications. In the case of mobile EU people the situation is very different. Their qualification mix is often above host-country standards. This finding reflects stronger demand for higher qualification by the host economies but also a genuine educational progress in the countries of origin.

However, formal qualification of both mobile EU people and third-country migrants has generally made progress in the last decade. They could hence be a valuable source of future productivity growth, feeding the main receiving economies' skill needs and supporting their long-term growth potential.

(62) International Organization of Migration (2012), p. 19.

(63) Ibidem, p. 20.

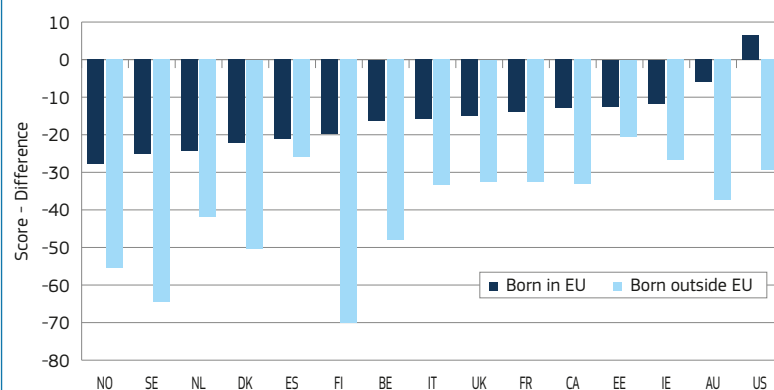
(64) Bonfanti and T. Xenogiani, OECD (2014), p. 302.

(65) Damas de Matos and Liebig, pp. 212, 213.

#### Box 4: Literacy-skill-performance of third-country migrants and mobile EU citizens

Based on the OECD's 2012 Adult Education Survey (PIAAC), Bonfanti and Xenogiani (2014) reckon that around 30% of the difference in over-qualification rates between natives and foreign-born people in 17 OECD countries is due to significantly lower literacy performance of the latter group.

Chart 18: Difference between the literacy score of foreign-born people and natives, PIAAC 2012, by region of birth



Source: Bonfanti and Xenogiani (2014), p. 266; controlled for sex, age, educational attainment and parents' education.

Smaller countries with rarely-spoken languages seem to have a comparative disadvantage as of the literacy skills of their migrant population. Moreover, the skill-disadvantage is particularly pronounced in the case of non-EU migrants. However, the authors show that the difference in the performance of migrants relative to natives tends to be substantially smaller if one looks at longer-residing people and those who immigrated at child-age. This is particularly true in countries with less popular languages. Indeed, there is strong evidence that mastery of the host-country's language is one of the main contributors to good literacy skills (though probably over-emphasised in PIAAC as the tests are taken in the language of the host country) (Bonfanti and Xenogiani (2014), pp. 266ff).

Based on the same 2012 PIAAC micro-data, a regression analysis in the 2014 Employment and Social Developments in Europe review confirms that, apart from literacy, foreign-born people also perform significantly less favourably in the numeracy and problem-solving disciplines which are equally as important for people's labour market performance – after controlling for sex, age, educational attainment and other characteristics (European Commission (2014:1), Chapter 2, pp. 121, 122).

### Conclusion

Apart from low employment performance of third-country migrants in the EU, two major obstacles keep the host economies from reaping the full potential of EU-mobility and third-country migration. One is the sub-optimal sectoral allocation of both mobile EU people and third-country migrants when it coincides with labour shortages in high-growth sectors. The other, partly related, is the under-use of their qualifications. Both phenomena go at the expense of the host country's long-term growth prospect and need adequate policy response if host-countries are to fully exploit that potential. Indeed, there is a gap between the rich pool of existing well-qualified workers (especially mobile EU people) on the one

hand and its productive use on the other hand which 'signifies a degree of downskilling and possibly brain-waste' (66).

The potential of international migrant qualifications, if fully exploited, will be demonstrated in a model simulation presented in the next section.

## 4.2. International migrants' qualification and economic growth: evidence from the Labour Market Model

Earlier simulation exercises with DG EMPL's Labour Market Model (LMM), a general-equilibrium model with a particular focus

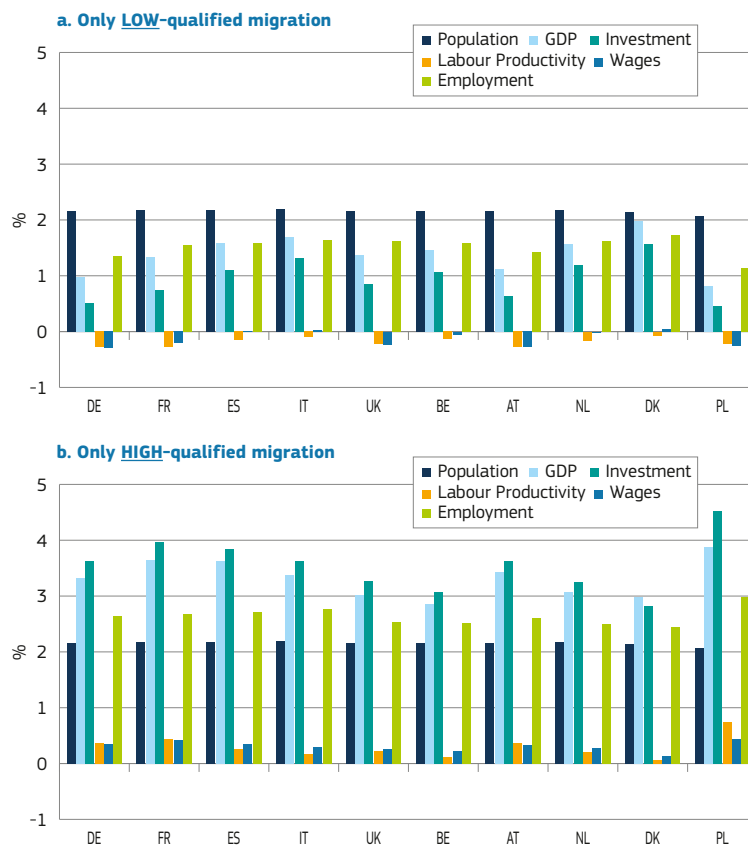
(66) Kahanec (2013), p. 143.

on labour market institutions<sup>(67)</sup>, outline the significance of the workforce's skill-composition<sup>(68)</sup> to the economy's long-term growth potential and the labour market. As a result, in line with literature, the impact of international migration on the host economy will strongly depend on the skill-mix of international migrants<sup>(69)</sup>, as shown European Commission (2013)<sup>(70)</sup> for Germany.

It was demonstrated that, in the long run, the additional workforce would trigger employment without noteworthy wage effects because investment would be stepped up, the extent of the shift depending on the skill-mix of the incoming international migrants. This is because firms try to re-establish the equilibrium capital intensity – which remains largely unchanged if the incoming people would not change the skill mix of the total workforce, or, in other words, if the skill-composition of the new migrant workforce is the same as the native workforce's (skill-neutral international migration). However, investment reacts sharply as the assumption on incoming people's skill composition is changed, given LMM's strong pronunciation of the capital-skill-complementarity: assuming only high-skilled international migration would change the workforce's skill mix to the higher end, strongly triggering investment and hence speeding up growth and employment as well as of lower-skilled workers<sup>(71)</sup>.

As country-specific demographics and institutional labour market settings vary greatly across Member States, this section extends the earlier analysis to eight EU countries which are very different in that respect. In line with ESDE 2013, an increase of (net) international migration is simulated, equivalent to 0.1% of the population aged between 25 and 49 years every year. However, the two theoretical borderline cases will be compared here: The additional international migrants are assumed to be either all low-qualified or

Chart 19: Simulation with DG EMPL's Labour Market Model: Net migration shifts each year by 0.1 percent of the population aged between 25 and 49, percentage change in selected core-magnitudes in the very long run.



Source: DG EMPL simulations with the Labour Market Model.

all high-qualified. These strong assumptions do not claim to become realistic scenarios but help to demonstrate the importance of international migrant qualifications' complementarity to the domestic needs of qualifications and understanding their full growth potential. The results provide strong evidence that the notion of growth-enhancing high-qualified international migration holds true even in very different demographic contexts and institutional environments. Chart 19 shows the long-term impact on the macro-economic and labour market magnitudes of interest.

All countries show the strong impact of international migrants' skills on their long-term labour market and growth prospects. Following the changing skill-mix of the total workforce, low (high) qualified international migration tends to lower (increase) average labour productivity and hence wages. As, in line with literature<sup>(72)</sup>, capital is assumed

to be more complementary to higher than to lower qualifications, firms step up investment much more pronouncedly in case of high-skilled international migration. Higher investment will lead to stronger labour demand across all skill levels, supporting the notion that better conditions for high-skilled jobs also bring more low and medium-skilled jobs. As a result, the overall employment effect is stronger in the case of high-skilled international migration. Both stronger employment growth and higher capital intensity will fuel higher growth of real GDP.

The findings provide evidence for the earlier-mentioned complementarity argument stressed by literature<sup>(73)</sup>: To the extent the international migrants' skill mix resembles that of the domestic workforce, the impact on total employment, investment and GDP tends to be lower as the international migrants' qualification are less complementary to the domestic industry's skill demand:

High-skilled international migration tends to have stronger positive effects

<sup>(67)</sup> The model was made for DG EMPL by the Austrian Institute for Advanced Studies and the University of St. Gallen. See Berger et al. (2009).

<sup>(68)</sup> In this section the terms 'skills' and 'qualifications' are used synonymously. They refer to the educational attainment level, measured as described in the next footnote.

<sup>(69)</sup> LMM distinguishes low-, medium and high-skilled workforce according to the ISCED-classification, i.e., the term 'skills' in the context of 'skill-mix' being the equivalent to formal educational attainment in the model.

<sup>(70)</sup> Chapter 1 of the 2013 Employment and Social Developments in Europe review (ESDE).

<sup>(71)</sup> European Commission (2013:2), Chapter 1, esp. Sec. 6.2.

<sup>(72)</sup> For example, see Goldin and Katz (1998) and Krusell et al. (2000). In economic modelling it is quite common to reflect the notion of complementarity between high-skilled workers and capital formation. This is the case in DG EMPL's Labour Market Model, see Berger et al., p. 33.

<sup>(73)</sup> For example: Kahanec et al. (2009), pp. 3-5.

on total employment and GDP in countries where the share of high-skilled in employment tends to be relatively low.

Overall, however, high-skilled international migration will lead to more pronounced gains in total employment and much higher investment activity due to the skill-composition effect towards the higher end. Hence, high-skilled international migration, if efficiently used by the host economy, can contribute to higher productivity and higher growth. This finding is in line with earlier analysis and emphasises that the economic impact of international migration crucially depends on the skill-mix of international migrants and on how capital reacts to the additional supply of workers and their qualifications<sup>(74)</sup>. It is also in line with recent evidence provided by Fassio et al. (2015), who find for Germany, France and the United Kingdom that it is high-qualified international migration which has a positive impact on growth via innovation, at least to the extent they join high-tech sectors<sup>(75)</sup>.

### 4.3. Impact on wages

The simulation also reveals that the international migrants' qualification level is a strong determinant of how wages react to immigration. There are two effects at work: as wages increase with skill-level, low-skilled international migrants will reduce and high-skilled international migrants increase average wages, following the simple wage composition effect. The second effect affects labour demand. As mentioned before, the model assumes a complementarity between skills and capital accumulation – the latter being a strong driver of both productivity and labour demand. Hence, it is a matter of fact that low-skilled international migration would tend to rather dampen wage development whereas high-skilled international migrants will stimulate wage shifts from the demand side of the labour market.

Indeed, for the labour demand effect, the bulk of literature stresses the importance of complementarity, confirming a strong link between international migrants' qualification-mix and the one prevailing in the host country. For example, as Borjas (1999) puts it, 'relative supplies

<sup>(74)</sup> D'Auria et al. (2008).

<sup>(75)</sup> Fassio et al. (2015), p. 19.

do affect relative prices'. If the skill-mix of foreign-born people resembles the one of the native workforce, one can expect stronger competition between the two with potential downward-pressure on wages. If, in the case of high-skilled international migration to modern industrialised economies, their skills are complementary to the local workforce, responding to the needs of the local economy, this would give room to stronger wage shifts, along with higher productivity growth and stronger economic growth<sup>(76)</sup>. Indeed, even if in the very long run capital investment adjusts to low-skilled international migration<sup>(77)</sup>, there is strong empirical evidence for the link between the international migrants' skill-mix and their impact on the local labour market, wages in particular<sup>(78)</sup>.

However, apart from these macro-economic considerations, whether or not foreign workers reduce average wage levels also depends on their individual capacity to capitalise their experience or skills in the form of adequate wages in the host country. A negative composition effect from international migration tends to be the stronger the more foreign-born people receive below-average wages at given individual characteristics such as education or experience.

#### *Significant wage penalty, particularly for mobile workers from EU-13 Member States and third-country migrants...*

In order to demonstrate the impact of being born in another country on wages, a regression is run based on the 2012 PIAAC<sup>(79)</sup> micro-data as this includes hourly earnings, contrary to the Labour Force Survey. Hourly earnings (excluding bonuses for wage and salary earners) of the employed population are the dependent variable in a regression. Hourly wages are given in deciles. That is, the sample is divided in ten classes, each representing an equal number of respondents. The first (tenth)

<sup>(76)</sup> Borjas (1999), p. 47.

<sup>(77)</sup> Firms' capital investment may adjust to the situation in the long run, complementing low-skilled workers with the latest techniques in an attempt to maximise their profits so that labour demand and wages may again catch up to some extent. European Commission (2008), p. 54.

<sup>(78)</sup> For example: European Commission (2008), Ruhs and Vargas-Silva (2014).

<sup>(79)</sup> OECD's Programme for the International Assessment of Adult Competencies (PIAAC), see <http://www.oecd.org/site/piaac/surveyofadultskills.htm>.

decile represents those 10% having the lowest (highest) earnings. As the dependent variable is classified, another ordinal logistic regression is run, with the following main explanatory variables:

- the region of birth, distinguishing four cases: born in the reporting country, born in EU-15, born in EU-13, born outside the EU.
- the country where the highest education was gained, same classification (origin of education).
- an interaction between the place of birth and the main language (foreign or native language).

A number of other relevant variables are controlled for: gender, educational level, the type of contract (indefinite contract; fixed-term contract; temporary agency contract; apprenticeship or training; no contract), the sector one works in (private, public, non-profit), and the age group.

The regression is restricted to a sample of 11 EU-countries<sup>(80)</sup>. For the region of birth and the origin of education, the following odds-ratios result from the regression (relative to people born / educated in the reporting country):

Table 6: Ordinal logistic regression: Odds ratio for a shift in wages by one decile, relative to people born in the reporting country (=1)

	Born in...	Education gained in...
EU-15	0.75 *	1.12
EU-13	0.48 ***	0.56 *
non-EU	0.40 ***	0.73 *

Source: DG EMPL calculations based on OECD PIAAC 2012 micro-data.

Note: \*\*\*, \*\* and \* denote: coefficient is statistically significant below 1%, 5%, and 10%, resp.

There tends to be a significant wage penalty resulting from being born outside the reporting country. Considering people from the Member States which joined from 2004 and people born outside the EU: their chance of climbing up the wage-ladder by one decile is less than half of what it is

<sup>(80)</sup> Those are Austria, Belgium, Czech Republic, Denmark, Estonia, France, the Netherlands, Poland, Slovak Republic, Spain and the United Kingdom, as those are the EU countries reporting on the country of birth.

for those born in the reporting country. Interestingly, the wage penalty for mobile EU-15 people is much lower and only significant at 10% level. Relative to mobile EU-13 people, this finding may reflect the fact that amongst mobile EU-15 people the share of those longer established in the host country is much higher<sup>(81)</sup>. This is in line with the above-presented<sup>(82)</sup> finding of a lower upward mobility towards growing sectors or high-qualification activities in the case of mobile EU-13 people and third-country migrants. The second column confirms that having an education in the reporting country helps to improve wages in the case of people educated in EU-13 and outside the EU. On the other hand, in the case of international migrants with qualification gained in the EU-15 there is a positive, yet insignificant, difference compared to those who gained their degree in the reporting country.

#### *... but language skills and experience abroad do help.*

The statistical significance of the 'place of education' variable is relatively low because there is some correlation to the third variable of interest: the language. International migrants speaking the language of the reporting country as the main language stand a 19% greater chance of joining a higher wage-group compared to those without this language. For native-born people the main language makes no significant difference.

A recent OECD analysis<sup>(83)</sup> confirms these findings. Also based on PIAAC 2012 micro data, Bonfanti and Xenogiani (2014) calculate the average wage difference to native workers for three categories of international migrants: mobile EU workers, third-country workers, and a separate regression on tertiary educated foreign-born workers. They control for the years of experience, the years of schooling, gender, and a dummy variable indicating part-time work. Their analysis reveals that all those wage differentials are significant in most countries – mostly so for highly educated workers. In Italy, the Netherlands and Spain, tertiary

educated foreign-born workers earn at least 20% less than their native peers. For mobile EU people, only France and the Netherlands see no negative difference. However, the authors find that the overall wage differences become insignificant in most countries if, besides the usual individual characteristics, one also controls for the country in which the highest qualification was acquired, the years of residence in the host country (less or more than 5 years), the PIAAC literacy score, and language skills.

As already outlined above, those variables capture relevant host-country-specific experience and language skills. Together with recognition and validation of foreign qualifications, these are very strong predictors of whether or international migrants manage to receive a return on their qualification in the host country. They also contribute to the pronounced wage-difference in the case of tertiary-educated people. Even if wages increase with international migrants' education levels, so does the probability of working below the qualification level.

#### 4.4. Fiscal impact

The ability to capitalise on one's qualification is also the main predictor when it comes to assessing the net fiscal impact of international migration in the host country. A number of studies have been performed on European countries recently. Depending on the methodology applied, they come to different conclusions. However, overall, the net effect seems to be modest in most OECD countries – hardly ever exceeding 1% of GDP in both directions – and it crucially depends on the labour status of immigrants – the impact of labour migration on the host country's tax-benefit systems tending to be favourable in general<sup>(84)</sup>.

There are basically two methods to calculate the net fiscal impact of international (im)migration:

**Cross-sectional (static)** models tend to ignore the long-term dynamics of one and the same generation of international migrants. Most of

the studies account for today's immigrant population's contribution to the local tax-benefit system or the production of public goods against the expenditure and the consumption of public goods.

For the United Kingdom, Rowthorn (2008) reckons that 'net fiscal contribution of past international immigration normally lies within the range  $\pm 1$  per cent of GDP'<sup>(85)</sup>, the sign of the impact in his model depending on the prevalence of 'unfavourable adjustments', i.e., extra cost imposed by extra medical expenses or asylum support as outlined in an earlier study by Gott and Johnsson (2002). For Germany, Löffelholz et al. (2004) expected that international immigrants provided a net contribution of around 1% of GDP, mainly because they create additional domestic demand, and hence income and jobs. Public households would take advantage, not least because of Germany's high share of public expenditure. In the long run, higher international immigration led to higher investment, better allocation of labour and stronger productivity growth<sup>(86)</sup>.

**Dynamic models**, including generational balancing, try to consider the streams of contributions and expenditure over a longer period – which seems to be more accurate but also suffers from numerous uncertainties associated to the projection of revenue and expenditure which depends on, inter alia, future discount rates, consumption profiles, or tax rates. However, Bonin's (2014) recent generational-accounting study ('Bertelsmann-Studie') has triggered public debate on the net fiscal impact of international immigration in Germany. In line with most sources, he finds that the future balance of immigrants for public budgets crucially depended on their skills<sup>(87)</sup>. The currently positive balance could actually be much more significant if more was invested in the facilitation of their educational progress and their labour market integration than is actually the case<sup>(88)</sup>.

<sup>(81)</sup> See footnote 39 above.

<sup>(82)</sup> See Section 4.1.1.2.

<sup>(83)</sup> Bonfanti and Xenogiani (2014).

<sup>(84)</sup> OECD International Migration Outlook (2013), p. 128.

<sup>(85)</sup> Rowthorn (2008), p. 577. See also Bødker, Højbjerg Jacobsen and Skaksen (2013); Baas and Brücker (2012).

<sup>(86)</sup> Löffelholz et al. (2004), pp. 43–45.

<sup>(87)</sup> See also Fassio et al. (2015).

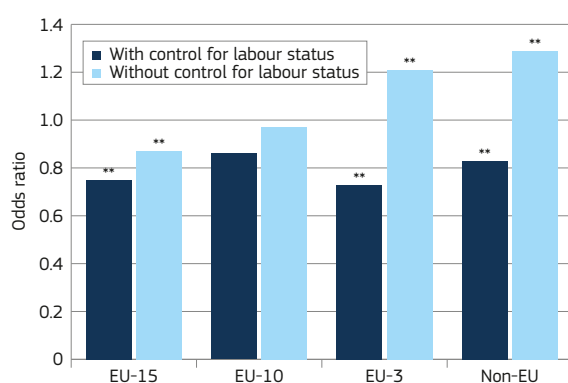
<sup>(88)</sup> Bonin (2014), pp. 1–2.



### Box 5: Dependence on benefits or assistance, with and without controlling for the labour status

In an ordinal regression analysis the analysis makes use of the LFS variable REGISTER which captures if a person is registered at the public employment service and if they receive some kind of benefit or assistance. The question is put to all the people, not only to the unemployed. The probability of receiving benefits or assistance is the dependent variable in a regression, with the country of birth as the explanatory variable, controlling for sex, age, education level, marital status, family context, and the reference year (see Box 1). Two separate regressions are being run: one with, one without controlling for a person's labour status (employed vs. unemployed).

Chart 20: Ordinal logistic regression: odds ratio for receiving some benefit or assistance relative to the native-born population (=1)



Source: DG EMPL calculations based on Eurostat EU-LFS 2012/2013 micro-data.

Note: \*\* and \* denote: coefficient is statistically significant below 1% and 5%, resp.

The light blue bars indicate the odds ratios of receiving benefits or assistance without controlling for a person's labour status. EU-3 mobile citizens and third-country migrants face higher odds of receiving benefits or assistance than the native population. However, this finding goes into the extreme reverse if one controls for the labour status, i.e., if one takes into account that mobile EU-3 citizens and migrants are much more strongly affected by unemployment (dark blue bars). This finding supports many studies which claim that there is no per se higher welfare dependency of foreign-born people in the EU.

The simulation with DG EMPL's Labour Market Model of low-skilled and high-skilled international migration presented earlier in Section 4.2 confirms this important finding. It was implicitly assumed that any impact of higher international migration on public budgets be balanced out through lump-sum taxes or lump-sum transfers from/to private households – an assumption which has an influence on the simulation results<sup>(89)</sup>. However, international migrants' skills have a very strong budget impact in any case. In the long run, for the countries considered in the simulation with the Labour Market Model, an additional inflow of low-skilled international migration by an annual 0.1% of the population aged 25-49 would imply that

<sup>(89)</sup> Unlike labour taxes or VAT, lump-sum levies/transfers are assumed to 'have no incentive effects other than shifting income from the private to the public sector' (Berger et al., 2009, p. 9) and would hence not change resource allocation of neither firms nor households.

net transfers to private households be very modest, ranging from -0.2% to +0.2% of GDP in the countries considered. For high-skilled international migration the impact is +0.4% to +0.9%. It depends crucially on the overall total effect on employment and GDP which, as outlined above, is considerably stronger in the case of high-skilled international migration.

Indeed, there is evidence that the employment effect may be the main determinant of the budget implications of international migration. For example, the regression analysis in Box 5 shows that dependency of mobile EU-3 people and third-country migrants is higher than for the native-born population. However, this result reverses if one controls for the labour status, i.e., if one takes into account that third-country migrants and EU-3 mobile people are much more exposed the risk of unemployment. The finding confirms earlier analysis by the

European Commission on the impact of intra-EU mobility that found mobile EU workers to have higher activity rates and be less likely to draw on social benefits<sup>(90)</sup>.

A recent comprehensive cross-country study was done by the OECD (2013)<sup>(91)</sup>. It applies the cross-sectional (static) approach, exploring the direct fiscal net position of international immigrant households in several OECD countries. It concludes that their net fiscal position is positive in most of the countries, the net-yield, though, being lower than for native-born households<sup>(92)</sup>. For the big receiving countries, France and Germany, where the contribution is found to be negative, the study concludes that 'immigrant populations are relatively old and thus overrepresented among the population receiving pension'. However, the recent refugee crisis could change this picture significantly.

As of the difference to native-born people, the main explanatory factor is employment, i.e., the likelihood of being employed which tends to be lower on average for international migrants than for natives. In fact, half of the difference to the fiscal position of natives stems from the employment effect, mainly lower female employment: lower taxes and social security contributions follow lower employment rates.

OECD (2013) concludes that overall, the contribution side (via employment) is much stronger a determinant of international migrants' net fiscal position than the expenditure side. This is mainly because their dependence on social security benefits tends to be lower, mainly because they are often not fully eligible. On the other hand, international migrants do rely more on social assistance than the native population.

In line with most studies, the OECD study concludes that the positive net contribution of international migrants tends to

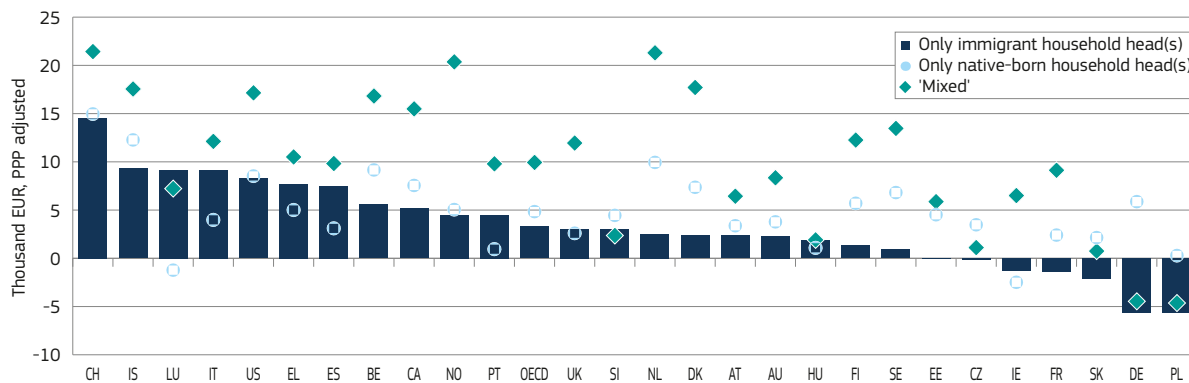
<sup>(90)</sup> European Commission (2013:3). See [http://europa.eu/rapid/press-release\\_IP-13-1151\\_en.htm](http://europa.eu/rapid/press-release_IP-13-1151_en.htm).

<sup>(91)</sup> OECD (2013), Chapter 3: The fiscal impact of immigration in OECD countries.

<sup>(92)</sup> That is, both native and immigrant households contribute more to the fiscal budget than they receive, the net balance being less favourable for immigrants. This is not due to higher dependency on benefits but almost exclusively because immigrants contribute lower levels of social contributions and taxes on average than native-borns (OECD (2013), p. 125).

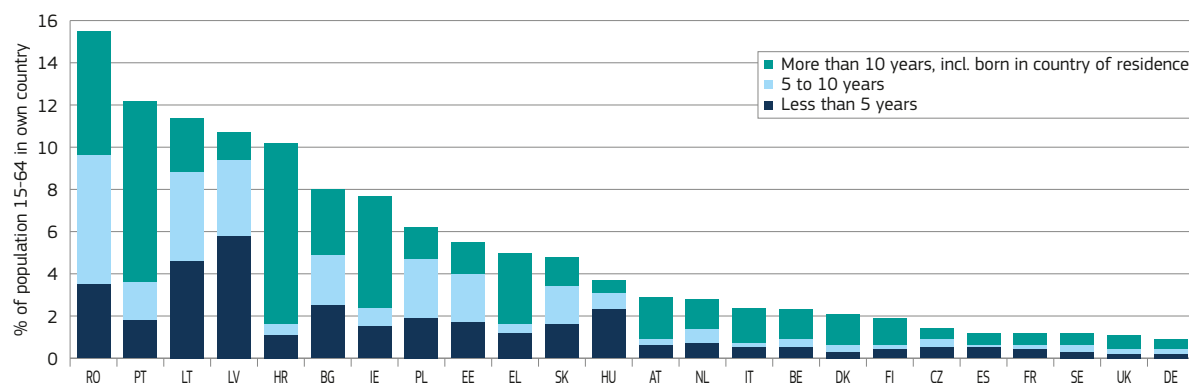


Chart 21: Average net direct fiscal contribution of households by migration status of the household head, 2007-2009 average, as estimated by OECD



Source: OECD (2013), p. 147.

Chart 22: Mobility rate by country: a country's working age citizens living in another EU country, by years of residence (age group 15-64, 2014, as a percentage of the working age population of the country of citizenship)



Source: DG EMPL calculations based on Eurostat EU-LFS.

Notes: The mobility rate is the number of working-age citizens living in another Member State in 2014, as a percentage of the working-age population of the country of citizenship. Figures for Cyprus, Luxembourg, Malta and Slovenia are too small to be reliable. Figures for Denmark, Estonia, Finland and Hungary are of limited reliability due to the small size of the sample.

be the higher the younger they are when they immigrate, and the better educated – nonetheless this is because those two factors mainly determine the long-term outcome on the labour market. However, as the difference to the native population's net contribution to the public budgets is higher for higher educated people, here again the deficit to capitalise on international migrant's qualification emerges. To the extent they work below their qualification, they have to accept lower wages and contribute less to the public budgets (see previous section on wages).

#### 4.5. The perspective of EU countries of origin

The increase in intra-European labour mobility led to particularly strong flows out of some countries that recently joined the EU and, to a lesser extent, countries that were heavily affected by the crisis. This development has raised concerns about these countries' growth potential, demographic balance, public finances,

and the risk of a brain drain. This section briefly examines the size of outflows from these EU countries to other EU countries, their demographic impact, their skills composition, their fiscal and social impact, as well as their impact on GDP – including through remittances.

Following successive intra-EU mobility flows, people in the EU living in another Member State now represent more than 10% percent of the working-age population of Romania, Portugal, Lithuania, Latvia and Croatia (Chart 22). On the contrary, the number of working age emigrants represents less than 2% in Germany, the United Kingdom, Sweden, France, Spain, the Czech Republic and Sweden. This reflects the above-mentioned finding that a relatively low level of GDP and a relatively high level of unemployment are important drivers of mobility, in line with European Commission (2015:1). Over time, the pace of outmigration can change considerably. While Portugal was a major

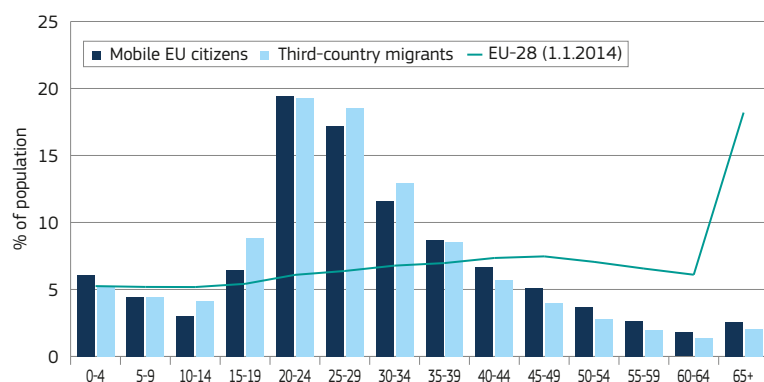
source of outflows in the 1970s and Croatia in the 1990s, outflows from these countries have levelled down considerably more recently.

The balance of in and outflows also changes with changes in relative development – e.g. traditional sending countries such as Italy and Spain have become important destinations.

#### Demography of emigration: young drain while return migration softens the picture

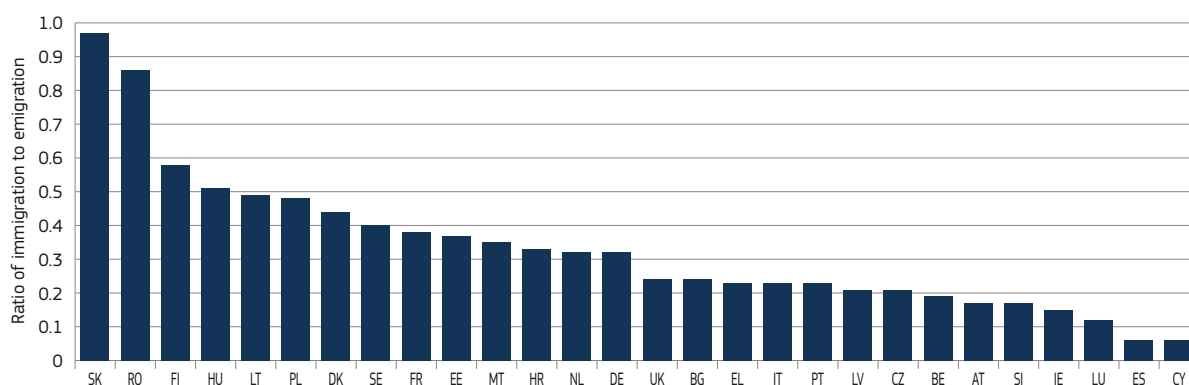
As shown in Section 3.1, young people are geographically more mobile than older people; consequently they are significantly overrepresented among the movers, often dubbed as “young drain”. In the EU the share of 20-29 year old among those having moved is about three times their share in the general population – while very few elderly move. (Chart 23). The young are similarly overrepresented for both those

Chart 23: Age profile of the EU-28-population, plotted against that of mobile EU citizens and third-country migrants, 2013



Source: Eurostat [migr\_imm3ctb\_1] and [demo\_pjangroup\_1].

Chart 24: Return migration relative to emigration flows, 2013



Source: Eurostat [migr\_imm1ctz] and [migr\_emi1ctz].

Note: The particularly good or particularly bad economic situation of some countries in 2013 of course strongly influences the proportion shown in the graph.

moving within the EU and third-country migrants moving from outside the EU. Looking at the country level, young are strongly overrepresented among leavers in all EU countries except the United Kingdom – their share among those who leave the country is usually double their share in the national population. While 0.5% of young people in the EU-28 and EFTA have left their country of citizenship in 2012, five countries had a much higher share of young people leaving: Romania had a 1.4% outflow, medium-sized Ireland had 2.2% and countries with a smaller population like Lithuania and Latvia had 2.9% and 1.9% respectively<sup>(93)</sup>. From a static point of view, this pattern is a possible source of a double demographic cost for the sending society: young people of working age leave, raising their children abroad which in turn makes re-settling back in the country of origin less likely.

The population living abroad represents a labour reserve with a high affinity

<sup>(93)</sup> Canetta et al. (2014).

towards returning to their home country. Return flows are sizeable indeed for many important sending countries. (Chart 24)

Nevertheless, comparing to stocks of nationals residing in other EU countries, usually less than 10% of those who left their home country at some stage actually return home in a year.

#### *Well-qualified emigrants bring up the question of brain drain*

Different skills are used in the labour market in a complementary way: low-skilled professions depend on high-skilled professions to form a working unity, and people in various professions – including the often quoted doctors, nurses, engineers, but also masons, mechanics, cooks – are all needed to make an economy work. Shortages in one job type have repercussions on other linked areas in the economy. For this reason, if emigration from a country leads to labour shortages that are hard to remedy, welfare losses can be the result, at least until a new

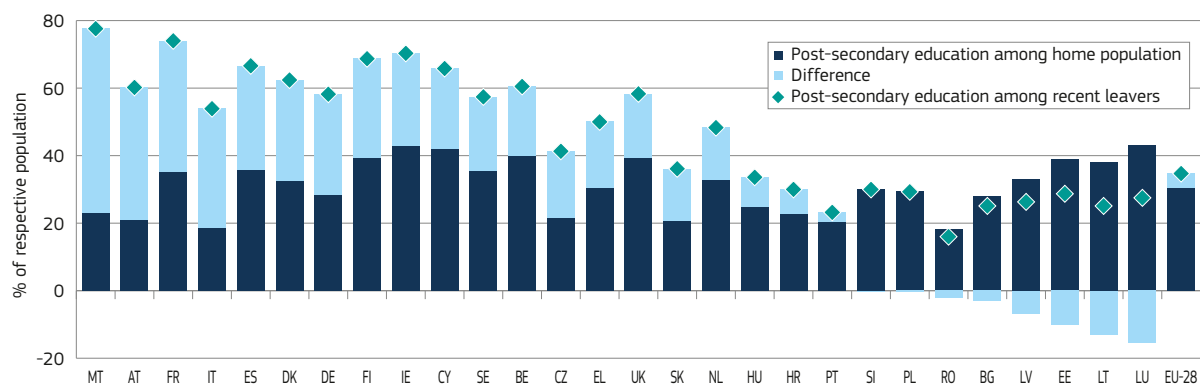
person is trained to fill the gap<sup>(94)</sup>. The simulation exercise in Section 4.2 with the Labour Market Model has revealed that high educated immigration may bring higher wages, higher productivity gains and bigger welfare surpluses than is the case with low-skilled migrants.

Turning this finding around, in the case of emigration wage, productivity, and welfare losses may be bigger if a higher-educated person leaves, where education is more timely and costly (“brain drain”). Higher educated people are indeed overrepresented among those leaving in most EU countries (Chart 25). Countries with the highest rate of active, highly educated people of their total population having left within the past ten years are Romania (9%), Lithuania (7.2%), Slovakia (6.5%), Latvia (6.2%) and Poland (6.2%). With the exception of Slovakia, these are also the countries with the highest overall rate of recent active EU movers<sup>(95)</sup>.

<sup>(94)</sup> Grubel and Scott (1966).

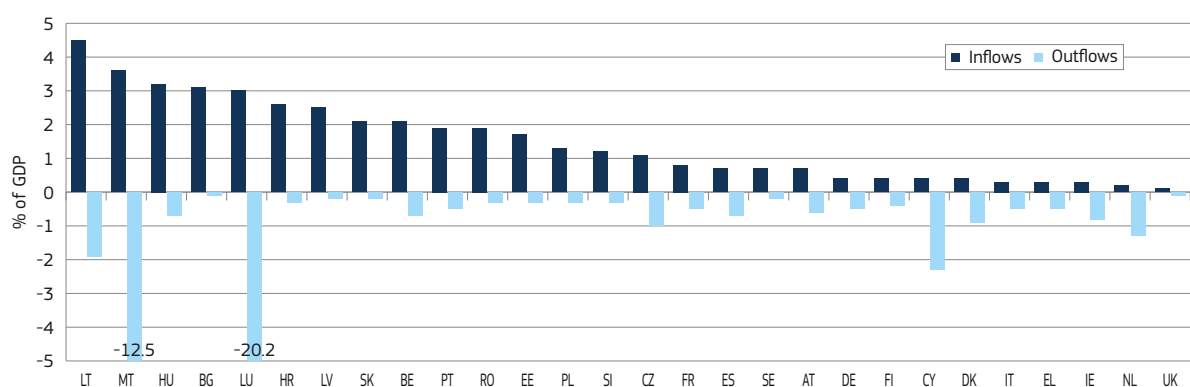
<sup>(95)</sup> Canetta et al. (2014).

Chart 25: Share of a country's population with a post-secondary degree among all people and among those who recently settled abroad (living for less than 10 years in another EU MS), 2013



Source: Labour Force Statistics, extraction by Eurostat.

Chart 26: Remittance inflows and outflows, as a share of GDP



Source: World Bank Annual Remittances Data (updated as of Apr. 2015).

However, there are second-round effects not taken on board by the Labour Market Model. The wage reduction in the case of high-educated emigration may be counterbalanced by the increased scarcity of workers. In addition, the "drain" effect may also be balanced out to the extent the emigrant acquires human capital abroad before returning, or if the prospects of emigrating incentivises more people to study, of whom only a fraction eventually emigrates (a dynamic effect of 'brain gain')<sup>(96)</sup>. Tertiary attainment rates have been increasing across the EU, which has mitigated the negative impact of relatively higher educated people leaving.

### Emigration helps to better allocate labour

As mentioned earlier, the European Commission (2015:1) found that labour mobility helps adjust to negative labour market shocks. While unemployment and inactivity are still the main reactions to a labour demand shock affecting only one country in the EU, mobility plays an increasing role in absorbing the shock, and

mobility flows within the euro-area have become more sensitive to differences in the unemployment rate. Without the mobility reversals in Spain and Ireland, the hikes in unemployment would have been even higher in those countries.

As people emigrate, relative scarcity of labour increases. This may have a beneficial effect on unemployment and wages. As young workers represent the majority of emigrants, the decrease in the number of young workers increases the wage of remaining young workers. Hence, the wage distribution between old and young workers may change to the benefit of the young<sup>(97)</sup>. At the same time, as the workforce becomes older on average, this structural effect may pull up average wage levels because older workers tend to have higher wages than their younger peers.

### Remittances often important source of income

Financial resources transferred by emigrants to their home country

(remittances) provide significant income flows to emigrants' families and are often very important sources of finance to the migrants' countries of origin. Inflows can be compared to current account deficits and exceed 1% of GDP in half of the EU Member States. Remittances tend to increase after leaving the home country, but eventually decrease with a migrant's duration of stay in the host country. This development reflects the fact that emigrants are increasingly detached from their home country as they continue residing in the in the destination country. This 'detachment effect' tends to outweigh the positive impact of gradually increasing wages on remittances<sup>(98)</sup>. This pattern is also evident in the EU where remittance flows tend to be higher where the share of recently established emigrants is higher (Chart 26).

### Impact on GDP: potentially negative

Following the (reversed) conclusions of Section 4.2 which had shown a simulation of higher immigration with the Labour Market Model for typical receiving

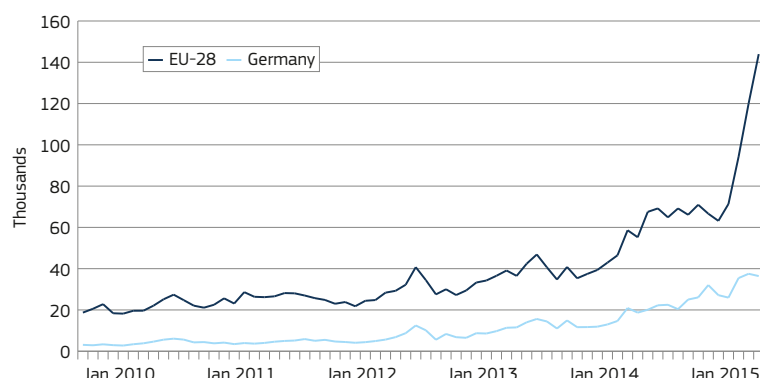
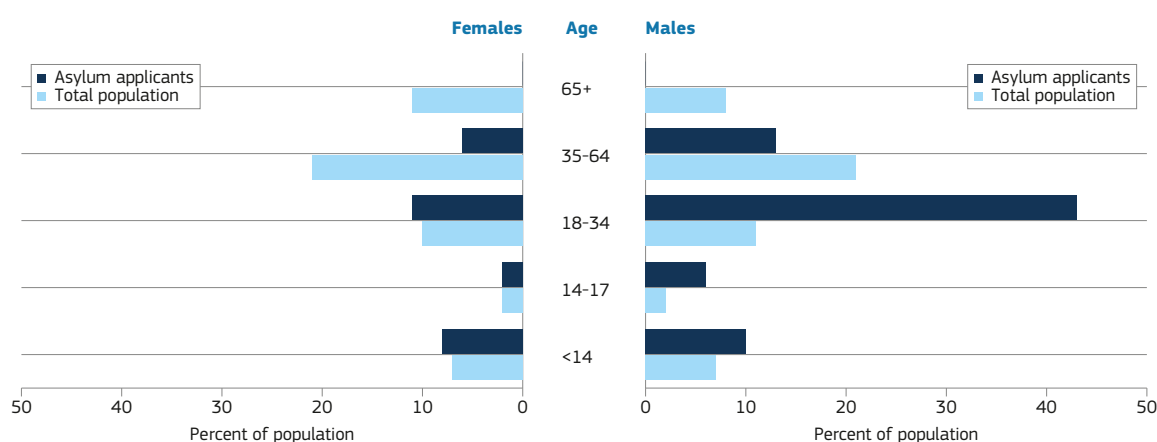
<sup>(96)</sup> Beine et al. (2001).

<sup>(97)</sup> Elsner (2013).

<sup>(98)</sup> Carling (2008).

Chart 27: Current flows of asylum applicants in the EU

## a. monthly flows since 2010

b. age structure of asylum applicants, 1<sup>st</sup> half of 2015 and total population in 2015, EU-28

Sources: Eurostat migration statistics [migr\_asyappctzm] and Europop 2013 demographic projections.

countries, emigration may lead to lower labour input, and consequently lower aggregate GDP – the extent crucially depending on the emigrants' qualification-mix. There is evidence that remittances tend to compensate for the loss only partially and in the short term. For example, outflows between 2004 and 2009 were estimated by Holland et al. (2011) to reduce potential output by 5% to 11% in the most affected countries: Bulgaria, Romania, and Lithuania. The same study found the impact on GDP per capita to be significantly smaller, while still negative in most of the sending countries. GDP per capita may have declined over the same period by 0.5% to 3% for Romania, Bulgaria, Latvia, Estonia, Lithuania and Slovakia.

#### 4.6. Impact of the current refugee crisis

The current refugee crisis has triggered unprecedented flows of asylum seekers into the EU. Already in 2014 almost 630 000 asylum applicants in the EU meant an increase of nearly 50% compared to 2013. In 2015 that

number had already been exceeded in August. One third of the 2015 applications were for Germany. Many of the current asylum applicants are young, with males strongly over-represented, as seen in Chart 27 which plots the age structure of asylum seekers who arrived during the first half of 2015 against the total population.

Compared to other third-country migrants, refugees face a number of particular barriers to accessing the labour market. These obstacles include the 'loss of identity documentation and qualification certificates, non-acceptance of qualifications or educational attainment, trauma and uncertainty, anxiety over family separation, the long period of inactivity in the asylum system, and limited social networks' (99). These problems usually lead to their strong under-employment in the host countries. As a result, the employment rate amongst those third-country migrants who came to the EU seeking international protection

(99) UNHCR (2013), p. 9.

is much lower than for all migrants (100). However, it is too early to analyse in-depth the impact of the sudden flow of migrants on Member States' labour markets. Much will depend on whether the current trend continues and on the share of refugees who stay in the EU after a potential political stabilisation in their home countries.

*In the short run: impact on government budgets may be more sizable in certain countries...*

The European Commission's Autumn Economic Forecast (101) provides a first assessment of the economic impact of the current refugee inflow. In the short run, additional public expenditure could increase GDP (albeit by less than the population). For the EU as a whole, this impact is projected to be moderate,

(100) According to the 2008 special EU-LFS module on migration, amongst those third-country migrants (aged 25-64 years) who established in the last 10 years, their employment rate was only 41%. As a comparison: For all third-country migrants it was 65%. See Section 3.2 above.

(101) European Commission (2015:3), pp. 48-52.

while it could be more sizeable in some Member States, depending on the size of the flows received, whether these flows will transit or stay, the recognition rate of asylum seekers, the different conditions for accessing the labour market as well as the economic structure of the country. One of these Member States is Germany where a negative impact on the government balance until 2020 may amount to 0.2-0.3% of GDP if the assumption holds that Germany will see its population increase by 700 000 in 2015, 530 000 in 2016 and 255 000 in 2017, and all refugees are low-qualified.

Likewise, the German Council of Economic Experts (*Sachverständigenrat*) estimates in its 2015/16 report that the current flows of refugees to Germany will incur extra direct public expenditure which may amount to 0.2-0.3% of GDP in 2015 and 0.3-0.5% of GDP in 2016 under different scenarios. The Council confirms that labour market integration is a crucial prerequisite to societal integration and calls for reducing obstacles to entering the labour market. With a view to the refugees' young age and their low average education, the Council sees a 'significant need for qualification' <sup>(102)</sup>.

As for the short-term labour market impact, initial estimates by the German Institute for Employment Research (IAB) show that a potential inflow of 1 million refugees to Germany, both in 2015 and 2016, could increase unemployment in Germany by an annual average of 130 000 people (+ 4.5%) in 2016 <sup>(103)</sup>. However, past German experience also shows that the employment rates of refugees tend to increase fast during the first five years of residence: from below 10% in the year of arrival to almost 50% <sup>(104)</sup>. In the past, people benefitting from international protection tended to have a gradual catch-up to the employment rate of other migrants, although never quite reaching the employment rate of labour migrants <sup>(105)</sup>. Over-qualification – finding only a job below one's qualifications – tended to remain a problem <sup>(106)</sup>.

<sup>(102)</sup> Sachverständigenrat (2015), p. 2.

<sup>(103)</sup> Institut für Arbeitsmarkt- und Berufsforschung (2015:2), p. 5.

<sup>(104)</sup> Institut für Arbeitsmarkt- und Berufsforschung (2015:1), p. 10.

<sup>(105)</sup> OECD (2015), Fig 5. Employment rate by immigrant categories and duration of stay in European OECD countries, 2008.

<sup>(106)</sup> OECD-European Union (2015).

### *In the long run, the impact is likely to depend a lot on qualifications...*

For those refugees who will stay in the EU, the analysis in this chapter shows that their qualifications are crucial for their successful integration into the labour market. Indeed, the model simulation in Section 4.2 made alternative assumptions of migrants being either only low-qualified or only high-qualified. It showed that the long-run impact of migration on the labour market and the economy crucially depends on migrants' mix of qualifications: Highly qualified migration will lead to higher investment, higher productivity, and more jobs in the long run <sup>(107)</sup>. However, the analysis has also shown that this positive impact of higher formal qualifications requires their efficient use by removing the factors that hinder better labour market performance of third-country migrants. These include tackling shortages of specific skills, reducing restrictions to labour market access as well as tackling discrimination and non-acceptance of qualifications.

Currently, however, there is little statistical evidence about the current asylum seekers' qualification mix. According to very preliminary estimates for Germany (the country receiving the highest number of asylum seekers), based on figures provided by the Federal Office for Migration and Refugees (BAMF) <sup>(108)</sup>, current asylum seekers' average qualification is below that of other groups of foreign people: Almost a third of those asked in 2015 claimed they had 'attended' either only elementary school or no school at all – though the share varies widely across the origin countries of the asylum applicants <sup>(109)</sup>. Therefore, in line with the conclusions of the German Council of Economic Experts, some countries are expected to see a more significant budgetary impact of the current refugee flows in the medium term, with the extra expenditure including higher investment in the refugees' qualifications. In the long run, Section 4.2

<sup>(107)</sup> This finding is also confirmed by Peri (2014).

<sup>(108)</sup> Institut für Arbeitsmarkt- und Berufsforschung (2015:1). Neske (2015) presents figures from 2014.

<sup>(109)</sup> In particular, the 2014 share of Syrian asylum applicants in Germany who 'attended at least upper secondary education' (*Universität, Fachhochschule, Gymnasium*) was much higher (49%) than for asylum applicants from Eritrea (25%), the average being 31% (Neske (2015)). See also OECD (2015), p. 8.

showed that these investments can actually pay in terms of higher employment and higher growth. In addition, as seen in Section 2.2, employment rates of third-country migrants tend to increase fast over the duration of residence in the host country <sup>(110)</sup>.

All current estimates are subject to high uncertainty and should be interpreted with due care. However, high refugee streams to the EU may not only be a temporary phenomenon. In that case, given the low qualification mix of refugees and the importance of qualification for the German and the EU labour markets in general, investment in their language skills and qualifications seems to be key to integrate those migrants into the labour market.

## 4.7. Conclusion: Make better use of existing resources

The economic impact of both intra-EU mobility and third-country migration crucially depends on the qualification mix that foreign people supply to the host economies. The analysis shows that in most typical receiving EU countries formal qualification of mobile EU people tends to be even higher compared to the respective native population. However, the incidence of over-qualification is enormous especially amongst mobile EU workers from the Member States that joined in 2004 and after. It coincides with these workers often working in low-growth sectors and showing little mobility towards stronger growing sectors in the course of time. From the perspective of growth these findings imply that they tend to be a rich resource of which the EU and its Member States fail to make more efficient use.

Informal, host country specific skills can be a lever enabling foreign-born workers to capitalise more efficiently on existing formal skills – not only in the form of better employment prospects but also by reducing the currently enormous wage penalty. If used effectively, well-qualified international migrants would improve both the host-country's employment potential and its labour productivity. Their net-contribution to growth and

<sup>(110)</sup> Annex 1 also shows that third-country migrants' employment rates vary greatly across Member States, indicating that some may have more effective policies in place to facilitate their access to the labour market.



public finance would be positive. To the extent that today mobile workers from EU-3 and third-country migrants show stronger dependency on benefits or assistance, this is exclusively due to the fact that they are much more affected by unemployment.

## 5. CHAPTER CONCLUSIONS

With the impact of demographic change starting to be felt across Member States, there is little doubt that both intra-EU mobility and third-country migration can contribute to maintaining the EU's long-term growth potential. Qualified third-country migrants would contribute to cushion the impact of the EU-wide workforce decline whereas higher mobility within the EU will help make more efficient use of the existing, ever scarcer human resources. Hence, in the light of its demographic prospects, the current gap in terms of growth compared to its main global competitors, and sluggish productivity growth, the EU will need to rely on both EU mobility and third-country migration to generate future growth. Whereas both the labour market performance and the qualification-mix of third-country migrants in the host country remain sub-optimal, there has been considerable progress, especially in the case of mobile EU people from Member States which joined the EU in 2004 (EU-10).

Most importantly, the chapter finds:

- Due to workforce shrinkage, dependency on the economically active part of the population will increase. Given the extent of the challenge, third-country migration alone will not solve the problem. However, migration from outside the EU, especially well-qualified migrants, can help in tackling human resource bottlenecks.
- While the EU's working-age population continues declining, only 4% of today's working-age population live in another EU country. That is, intra-EU mobility is a largely untapped resource of higher employment and higher growth as it contributes to improving labour allocation within the EU, helping reduce unemployment in times of crises which typically hit some Member States more than others.
- Indeed, the analysis on micro data reveals that a person's labour market status is a strong determinant of moving from one EU country to another. Mobile EU people of working age who are not in employment stand a much higher chance to cross EU borders than employed people. In other words, being out of the labour market is a strong push-factor for going abroad. On the other hand, the labour market situation in the host country is a strong pull-factor. Within the EU, mobile EU people (especially from the EU-10) tend to be attracted by countries where unemployment is low. This positive selection effect improves their personal labour market situation in the host country. These 'factors of gravity' help to make best use of the available human resources in the EU as workers move out of unemployment or inactivity by seeking employment opportunities abroad.
- Once in the host country, the positive selection effect especially benefits two groups of mobile EU people: those from the pre-2004 Member States (EU-15) and those from the Member States that joined in 2004 (EU-10). Relative to natives, they stand a greater chance of being in employment and, if not in employed, of re-joining the labour market. Other reasons for their good performance are their formal education which tends to be above host-country level as well as (in the case of mobile EU-10 people) their young age.
- Yet challenges remain as many EU mobile workers are unable to fully capitalise on their good formal qualifications. Apart from systematically lower wages, this affects over-qualification which is a particular problem especially for mobile people from the Member States that joined in 2004 and after (EU-13). The analysis shows that higher qualification does well translate into better job prospects. But it pays much less if obtained outside the host-country. At the same time, experience in the host country and country-specific skills are positive levers to make foreign qualification pay in the host country.
- Migration from outside the EU still tends to provide a lower qualification mix, coupled with low employment performance, including lower dynamics from non-employment into employment and lower wages.
- The qualification bias towards the low end seems to continue, as the current refugee crisis is triggering unprecedented refugee flows towards the EU. The number of asylum applicants in the first 10 months of 2015 reached almost 1 million. Initial evidence suggests that many of the current refugees are very young, but also low-educated, though the average education level varies largely across countries of origin.
- Low employment performance and low job-finding dynamics of third-country migrants – and to a lesser extent, mobile EU-3 citizens – are stable findings with little variation when controlling for individual characteristics such as education. This implies that their labour-market return on higher education is particularly limited.
- It also implies that other (exogenous, non-observed) factors strongly contribute to explaining their lower employment performance. One factor is the channel of migration. The majority of third-country migrants come to the EU for reasons other than work, namely family unification, education or international protection. These groups show very low employment rates. In addition, it is likely that other unobserved factors such as discrimination by potential employers, non-acceptance of formal qualifications and legal obstacles to employment keep both third-country migrants and mobile EU-3 people from performing better on EU labour markets.
- Both mobile EU people and third-country migrants in the EU seem to be strongly affected by labour market segmentation. Compared to native workers, they face significant wage penalties and stand a greater risk of working under non-standard employment contracts. Likewise, they tend to stand a significantly greater risk of losing job than native-born people.
- Model-simulations with DG EMPL's Labour Market Model show that the impact of international migration on the host economies crucially depends on the mix of qualifications migrants they can supply. **If efficiently used**, higher qualifications will lead to higher productivity,

trigger more investment and higher employment across all qualification levels. Hence, encouraging mobility across the EU and high-qualified migration from outside are crucial to growth.

- The EU and its Member States could further enhance their growth potential by better allocating both mobile EU people and third-country migrants to sectors with the biggest growth potential. Apart from EU-15 mobile people, they tend to be over-represented in low-growth activities and show little upward mobility over the course of time.
- The belief that mobile EU workers and third-country migrants are more dependent on welfare is not strongly supported by the literature<sup>(111)</sup>. The chapter presented further evidence that dependence on benefits or assistance is lower in the case of EU-15 and EU-10 mobile people. In the case of third-country migrants

and mobile people from Romania, Bulgaria or Croatia it is higher only to the extent that they are much more affected by unemployment. Controlling for the employment status, dependency of all groups of international migrants is way below that of native-born people.

The findings call for higher mobility across intra-EU borders, but also for well-qualified external migration for which global competition will intensify. To the extent mobile EU people and third-country migrants are to supply a qualification mix complementary to host economy's needs, they can be part of a win-win situation. However, to the extent that they cannot make a more significant contribution to growth in the host country, this is due to a large extent to the fact that labour market access is restricted, that activation policies fail, that qualifications are not efficiently used or allocated to fast-growing sectors, and/or that they are wasted due to over-qualification.

This chapter deals with the general economic and labour market aspects of intra- EU mobility third-country migration. The analysis also responds to the European Commission's European Agenda on Migration<sup>(112)</sup> which calls for a new policy on legal migration from the longer-term, strategic perspective. With a view to attracting talent and high-qualified workers, one of the new policy's priorities is a review of the Blue Card Directive which is currently under way.

However, the current refugee crisis makes more analytical work necessary to look thoroughly at problems related to the labour market and social integration, especially of third-country migrants. It should also focus on immediate action necessary to manage unprecedented current refugee flows as the New Agenda on Migration also aims at reducing the incentives for irregular migration from third-countries, a more effective border-management and a strong common asylum policy<sup>(113)</sup>.

<sup>(111)</sup> Wadsworth (2012); Giuletti and Wahba (2012).

<sup>(112)</sup> European Commission (2015:2).

<sup>(113)</sup> See [http://ec.europa.eu/dgs/home-affairs/what-we-do/policies/european-agenda-migration/index\\_en.htm](http://ec.europa.eu/dgs/home-affairs/what-we-do/policies/european-agenda-migration/index_en.htm).

## ANNEX 1: LABOUR MARKET PERFORMANCE AND CHARACTERISTICS OF POPULATION BY COUNTRY OF BIRTH AND YEARS OF RESIDENCE

### Activity rates, employment rates, unemployment rates of natives, mobile EU citizens and third-country migrants in the EU by country, 2014

#### a) Total stock

##### Activity rate 15-64

	Total	Native-born	Mobile EU citizens			Third-country migrants	
			All	EU-15	EU-10		EU-3
BE	67.7	68.5	70.1	69.0	77.2	69.4	59.7
BG	68.8	68.8	:	:	:	:	(64.6)
CZ	73.7	73.7	74.3	:	74.3	(73.1)	78.8
DK	78.1	78.9	84.3	84.0	84.0	86.3	67.6
DE*	77.7	78.5	81.7	82.4	81.7	79.7	68.7
EE	75.2	75.3	73.0	:	73.7	:	75.1
IE	69.8	69.5	74.4	69.2	80.6	76.6	63.9
EL	67.4	66.5	74.0	70.1	62.8	81.7	77.5
ES	74.3	73.6	80.4	76.4	82.7	83.9	77.3
FR	71.3	71.9	73.2	72.8	75.3	76.3	65.6
HR	66.1	66.1	68.2	69.8	(64.7)	:	65.9
IT	63.9	63.1	71.4	65.8	67.7	74.2	69.1
CY	74.3	72.7	78.1	70.5	81.4	87.7	81.5
LV	74.6	74.8	67.1	(75.7)	65.2	:	72.9
LT	73.7	73.6	:	:	:	:	76.9
LU	70.5	64.3	77.9	77.4	84.0	90.7	72.0
HU	67.0	66.8	77.0	74.0	(66.2)	78.4	68.6
MT	66.3	66.0	69.4	69.4	:	:	70.5
NL	79.4	80.8	77.4	77.9	77.3	71.5	67.7
AT	75.4	76.1	78.9	78.2	79.0	79.7	67.6
PL	67.9	67.8	72.1	(65.9)	(78.8)	:	71.4
PT	73.2	72.5	85.3	85.3	:	85.5	78.6
RO	65.7	65.7	:	:	:	:	:
SI	70.9	71.4	63.8	77.5	:	59.4	67.9
SK	70.3	70.3	70.0	:	67.0	:	74.7
FI	75.2	75.2	86.1	86.0	85.7	(89.3)	68.6
SE	81.5	82.9	82.4	82.6	80.9	84.9	73.7
UK	76.6	77.0	83.3	79.7	86.3	83.6	70.2
EU-28	72.3	72.2	78.7	77.2	81.5	78.8	69.8

##### Employment rate 15-64

	Total	Native-born	Mobile EU citizens			Third-country migrants	
			All	EU-15	EU-10		EU-3
BE	61.9	63.8	62.6	62.5	69.7	56.4	45.7
BG	60.8	60.8	:	:	:	:	(59.5)
CZ	69.1	69.1	67.7	:	67.2	(64.4)	75.2
DK	72.8	74.2	76.1	77.8	73.9	72.9	58.3
DE*	73.8	74.9	77.2	78.6	76.1	74.8	61.9
EE	69.6	69.8	71.7	:	71.4	:	67.6
IE	61.7	61.9	64.5	59.9	70.1	66.3	55.0
EL	49.4	49.3	53.3	50.8	43.7	59.4	49.5
ES	56.1	56.7	57.4	60.9	70.8	52.7	50.0
FR	63.9	65.1	66.9	68.2	63.7	56.0	52.8
HR	54.6	54.8	57.1	57.0	(57.6)	:	52.5
IT	55.7	55.3	60.1	56.9	56.4	62.0	57.6
CY	62.1	60.4	65.6	57.9	73.7	74.4	70.7
LV	66.3	66.5	62.3	:	60.5	:	64.4
LT	65.7	65.6	:	:	:	:	68.6
LU	66.2	61.2	73.2	72.9	77.7	78.6	63.0
HU	61.8	61.6	72.5	71.5	(55.6)	74.1	64.3
MT	62.3	62.2	65.1	65.1	:	:	64.2
NL	73.9	75.8	71.3	72.5	69.4	66.1	58.1
AT	71.1	72.6	72.7	73.7	71.4	72.3	59.5
PL	61.7	61.7	64.2	(54.7)	(75.3)	:	62.5
PT	62.6	62.2	73.8	75.4	:	62.2	64.2
RO	61.0	61.0	:	:	:	:	:
SI	63.9	64.5	56.9	68.7	:	53.4	58.6
SK	61.0	60.9	64.4	:	60.8	:	70.3
FI	68.5	68.8	75.6	76.5	74.2	(74.6)	56.2
SE	74.9	77.7	74.9	76.9	70.7	74.6	59.5
UK	71.8	72.3	78.3	74.5	81.6	77.8	64.7
EU-28	64.8	65.2	70.3	70.9	74.9	64.3	57.9

##### Unemployment rate 15+

	Total	Native-born	Mobile EU citizens			Third-country migrants	
			All	EU-15	EU-10		EU-3
BE	61.9	63.8	62.6	62.5	69.7	56.4	45.7
BG	60.8	60.8	:	:	:	:	(59.5)
CZ	69.1	69.1	67.7	:	67.2	(64.4)	75.2
DK	72.8	74.2	76.1	77.8	73.9	72.9	58.3
DE*	73.8	74.9	77.2	78.6	76.1	74.8	61.9
EE	69.6	69.8	71.7	:	71.4	:	67.6
IE	61.7	61.9	64.5	59.9	70.1	66.3	55.0
EL	49.4	49.3	53.3	50.8	43.7	59.4	49.5
ES	56.1	56.7	57.4	60.9	70.8	52.7	50.0
FR	63.9	65.1	66.9	68.2	63.7	56.0	52.8
HR	54.6	54.8	57.1	57.0	(57.6)	:	52.5
IT	55.7	55.3	60.1	56.9	56.4	62.0	57.6
CY	62.1	60.4	65.6	57.9	73.7	74.4	70.7
LV	66.3	66.5	62.3	:	60.5	:	64.4
LT	65.7	65.6	:	:	:	:	68.6
LU	66.2	61.2	73.2	72.9	77.7	78.6	63.0
HU	61.8	61.6	72.5	71.5	(55.6)	74.1	64.3
MT	62.3	62.2	65.1	65.1	:	:	64.2
NL	73.9	75.8	71.3	72.5	69.4	66.1	58.1
AT	71.1	72.6	72.7	73.7	71.4	72.3	59.5
PL	61.7	61.7	64.2	(54.7)	(75.3)	:	62.5
PT	62.6	62.2	73.8	75.4	:	62.2	64.2
RO	61.0	61.0	:	:	:	:	:
SI	63.9	64.5	56.9	68.7	:	53.4	58.6
SK	61.0	60.9	64.4	:	60.8	:	70.3
FI	68.5	68.8	75.6	76.5	74.2	(74.6)	56.2
SE	74.9	77.7	74.9	76.9	70.7	74.6	59.5
UK	71.8	72.3	78.3	74.5	81.6	77.8	64.7
EU-28	64.8	65.2	70.3	70.9	74.9	64.3	57.9

## b) Established before the crisis 2008 (residing more than 6 years)

## Activity rate 15-64

	Total	Native-born	Mobile EU citizens				Third-country migrants
			All	EU-15	EU-10	EU-3	
BE			67.7	67.1	74.4	66.2	61.3
BG			:	:	:	:	(70.0)
CZ			74.6	:	74.9	(73.2)	82.4
DK			86.6	87.5	84.3	86.5	67.6
DE*			82.9	83.6	82.4	81.1	72.2
EE			75.8	:	73.5	:	75.1
IE			73.9	68.3	81.9	70.9	70.2
EL			78.4	72.2	74.8	84.7	78.6
ES			80.7	76.0	83.6	84.6	78.6
FR			73.5	73.3	75.0	75.4	68.5
HR			68.6	71.2	(61.7)	:	66.2
IT			72.0	65.7	67.4	75.8	72.2
CY			77.9	71.6	83.2	87.4	77.8
LV			65.3	:	63.1	:	72.9
LT			:	:	:	:	77.1
LU			75.3	74.9	82.6	86.2	73.0
HU			77.9	75.3	(63.5)	79.2	69.5
MT			72.9	72.9	:	:	70.7
NL			79.2	77.7	83.3	79.9	68.9
AT			78.6	79.5	75.4	80.3	70.3
PL			(66.0)	(58.3)	:	:	77.3
PT			85.9	85.6	:	89.3	81.1
RO			64.1	77.9	:	60.0	70.6
SI			67.3	:	64.8	:	78.1
SK			87.7	87.6	88.1	:	75.1
FI			82.2	82.6	79.6	87.2	77.1
SE			82.4	80.3	85.0	76.3	74.0
UK			78.7	77.5	80.9	79.7	72.7
EU-28			78.7	77.2	81.5	78.8	69.8

## Employment rate 15-64

	Total	Native-born	Mobile EU citizens				Third-country migrants
			All	EU-15	EU-10	EU-3	
BE			61.1	61.2	67.3	50.2	48.5
BG			:	:	:	:	(65.4)
CZ			68.6	:	68.3	(67.4)	78.5
DK			78.3	80.1	76.2	(69.4)	58.1
DE*			78.9	80.1	77.3	77.2	65.3
EE			75.4	:	72.8	:	67.9
IE			63.7	58.9	70.9	60.1	61.2
EL			57.0	51.9	51.7	63.1	50.2
ES			57.4	59.7	70.7	53.8	51.7
FR			68.0	69.1	(64.6)	56.6	56.2
HR			56.9	58.1	(53.5)	:	52.9
IT			61.1	57.0	56.4	63.7	61.1
CY			64.7	58.5	75.4	73.0	62.6
LV			59.9	:	58.1	:	64.6
LT			:	:	:	:	68.9
LU			71.2	70.7	78.0	81.3	64.1
HU			73.5	72.4	(61.6)	74.5	65.3
MT			70.0	70.0	:	:	64.9
NL			73.9	72.4	78.1	75.1	59.5
AT			73.4	75.0	68.9	75.3	62.1
PL			(54.8)	(43.5)	:	:	68.8
PT			75.1	76.0	:	66.7	66.7
RO			57.8	69.2	:	54.4	61.9
SI			62.3	:	59.4	:	71.7
SK			79.6	78.3	81.7	:	61.4
FI			75.5	77.2	70.1	78.7	65.5
SE			78.3	76.2	80.9	73.1	68.4
UK			70.3	71.2	74.5	64.4	60.8
EU-28			70.3	70.9	74.9	64.3	57.9

## Unemployment rate 15+

	Total	Native-born	Mobile EU citizens				Third-country migrants
			All	EU-15	EU-10	EU-3	
BE			9.6	8.6	(9.6)	(23.9)	20.8
BG			:	:	:	:	:
CZ			7.9	:	8.5	:	(4.7)
DK			9.5	(8.4)	:	:	14.0
DE*			4.7	4.0	6.1	4.8	9.4
EE			:	:	:	:	9.1
IE			13.6	13.6	13.4	:	12.6
EL			27.1	27.9	30.5	25.3	36.3
ES			28.8	21.2	15.4	36.4	34.4
FR			7.4	(5.6)	:	:	17.7
HR			(16.9)	(18.4)	:	:	19.7
IT			15.1	13.0	16.1	15.8	15.3
CY			16.8	18.1	:	16.5	19.3
LV			:	:	:	:	10.9
LT			:	:	:	:	(10.4)
LU			5.5	5.5	:	:	12.0
HU			(5.5)	:	:	(5.9)	:
MT			:	:	:	:	(8.1)
NL			7.3	7.8	(6.2)	:	13.5
AT			6.5	5.6	(8.2)	(6.2)	11.6
PL			:	:	:	:	:
PT			12.7	11.2	:	:	17.6
RO			(9.5)	(11.0)	:	(9.0)	12.2
SI			:	:	:	:	:
SK			(9.2)	(10.4)	:	:	18.3
FI			8.0	6.1	12.6	(9.5)	15.0
SE			4.8	4.9	4.8	:	7.6
UK			10.5	7.9	7.8	19.0	16.3
EU-28			70.3	70.9	74.9	64.3	57.9

## c) Movers since the onset of the crisis 2008 (residing 6 years or less)

## Activity rate 15-64

	Total	Native-born	Mobile EU citizens				Third-country migrants
			All	EU-15	EU-10	EU-3	
BE			74.0	73.7	79.3	70.6	55.8
BG			:	:	:	:	:
CZ			72.5	:	70.8	:	66.4
DK			84.8	83.4	85.5	86.3	64.5
DE*			77.4	75.0	80.0	76.7	46.5
EE			:	:	:	:	(76.0)
IE			76.3	74.0	76.6	83.9	53.7
EL			50.6	(44.9)	:	68.7	68.9
ES			77.9	80.1	76.7	76.1	67.5
FR			71.4	69.6	:	(78.3)	49.4
HR			:	:	:	:	(56.4)
IT			68.1	66.5	70.9	68.0	53.6
CY			78.6	67.3	(78.6)	88.2	86.4
LV			:	:	:	:	(56.9)
LT			:	:	:	:	:
LU			84.3	83.7	86.0	95.2	69.6
HU			70.6	:	:	71.0	:
MT			57.8	57.8	:	:	70.0
NL			71.1	79.4	66.8	:	51.8
AT			79.4	75.4	85.6	78.4	54.0
PL			:	:	:	:	(57.4)
PT			75.9	:	:	:	57.8
RO			(60.4)	(74.8)	:	(48.9)	55.0
SI			(90.7)	:	:	:	:
SK			85.8	(97.1)	74.4	:	53.5
FI			83.0	83.0	83.7	80.9	64.6
SE			84.8	78.0	88.1	86.7	59.2
UK			78.5	75.8	82.8	76.6	56.2
EU-28			78.7	77.2	81.5	78.8	69.8

## Employment rate 15-64

	Total	Native-born	Mobile EU citizens				Third-country migrants
			All	EU-15	EU-10	EU-3	
BE			65.1	65.7	71.6	58.8	38.6
BG			:	:	:	:	:
CZ			62.8	:	60.6	:	63.9
DK			74.7	76.3	73.2	74.0	53.3
DE*			71.0	69.3	73.3	69.7	39.9
EE			:	:	:	:	(69.9)
IE			66.9	64.7	67.3	73.8	44.7
EL			33.9	:	:	43.6	43.4
ES			57.8	72.8	(71.7)	41.3	37.9
FR			60.7	62.2	:	:	33.5
HR			:	:	:	:	(38.2)
IT			55.0	59.6	57.2	54.4	39.4
CY			67.5	56.2	(71.2)	76.4	81.5
LV			:	:	:	:	:
LT			:	:	:	:	:
LU			78.3	78.4	77.3	75.8	60.6
HU			64.5	:	:	70.3	:
MT			(49.4)	(49.4)	:	:	62.0
NL			61.9	75.0	53.3	:	39.9
AT			71.2	71.0	76.1	65.8	46.0
PL			:	:	:	:	(47.4)
PT			54.9	:	:	:	43.8
RO			(46.0)	(65.1)	:	(36.7)	42.4
SI			:	:	:	:	:
SK			71.6	(80.6)	(67.0)	:	43.7
FI			73.1	75.7	72.2	66.7	43.7
SE			78.2	70.0	82.6	79.8	53.8
UK			70.1	68.8	75.7	64.0	43.6
EU-28			70.3	70.9	74.9	64.3	57.9

## Unemployment rate 15+

	Total	Native-born	Mobile EU citizens				Third-country migrants
			All	EU-15	EU-10	EU-3	
BE			12.0	10.9	(9.6)	16.8	30.7
BG			:	:	:	:	:
CZ			(13.3)	:	(14.5)	:	:
DK			11.9	(8.5)	(14.4)	:	17.4
DE*			8.2	7.5	8.3	9.1	14.2
EE			:	:	:	:	:
IE			12.3	(12.5)	12.2	:	16.7
EL			(32.9)	:	:	(36.5)	36.9
ES			25.8	(9.2)	:	45.7	43.8
FR			(14.9)	:	:	:	32.3
HR			:	:	:	:	(32.2)
IT			19.1	:	(19.3)	19.9	26.5
CY			14.1	(16.5)	:	(13.4)	(5.6)
LV			:	:	:	:	:
LT			:	:	:	:	:
LU			7.1	6.3	:	:	13.6
HU			:	:	:	:	:
MT			:	:	:	:	:
NL			(12.9)	:	(20.2)	:	23.1
AT			10.3	:	(11.1)	(16.0)	14.8
PL			:	:	:	:	:
PT			:	:	:	:	24.1
RO			:	:	:	:	(22.8)
SI			:	:	:	:	:
SK			:	:	:	:	(18.4)
FI			11.9	8.8	13.7	(17.6)	32.3
SE			7.7	10.3	6.3	(8.0)	9.1
UK			10.8	9.2	8.6	16.4	22.3
EU-28			70.3	70.9	74.9	64.3	57.9

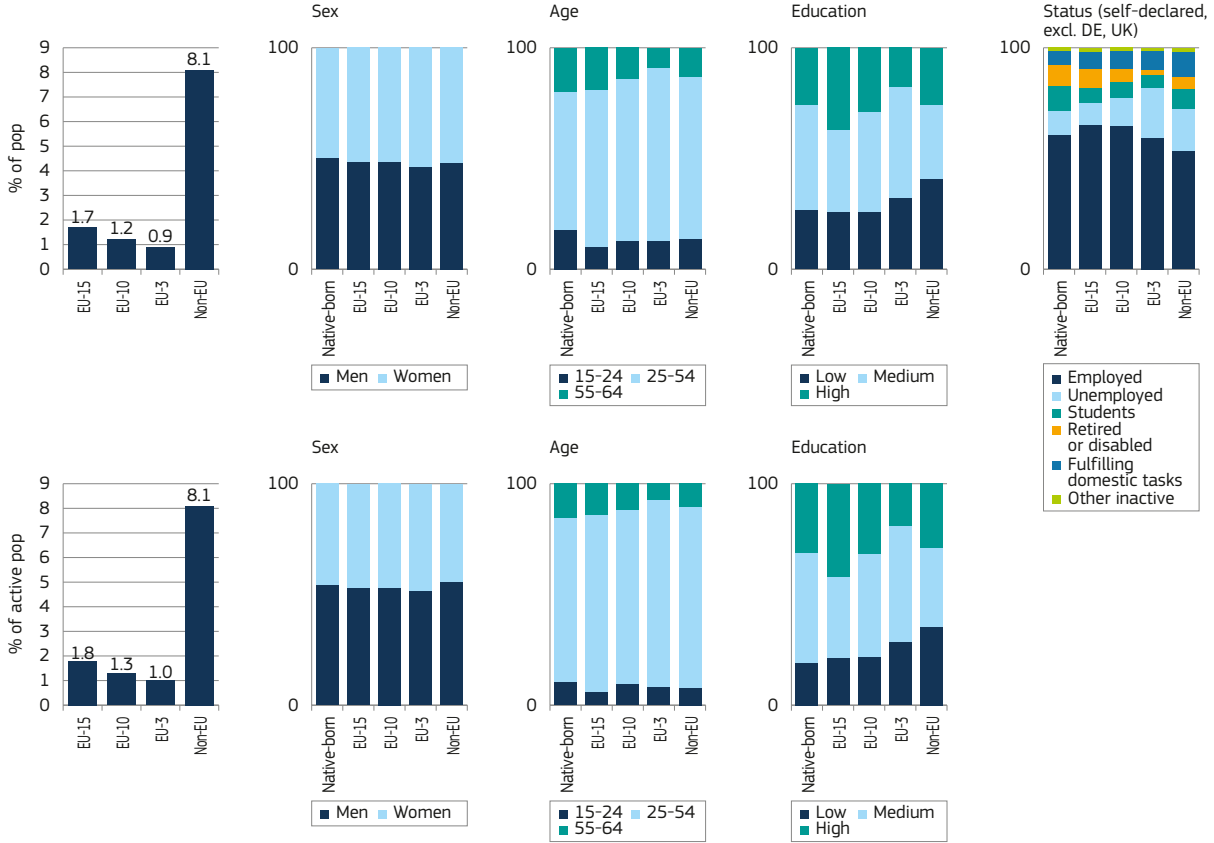
Source: DG EMPL calculations based on Eurostat EU-LFS.

Note: \* DE estimate (distribution of mobile people/migrants based on nationality). ':' data not available due to very small sample size, data in brackets uncertain due to small sample size.

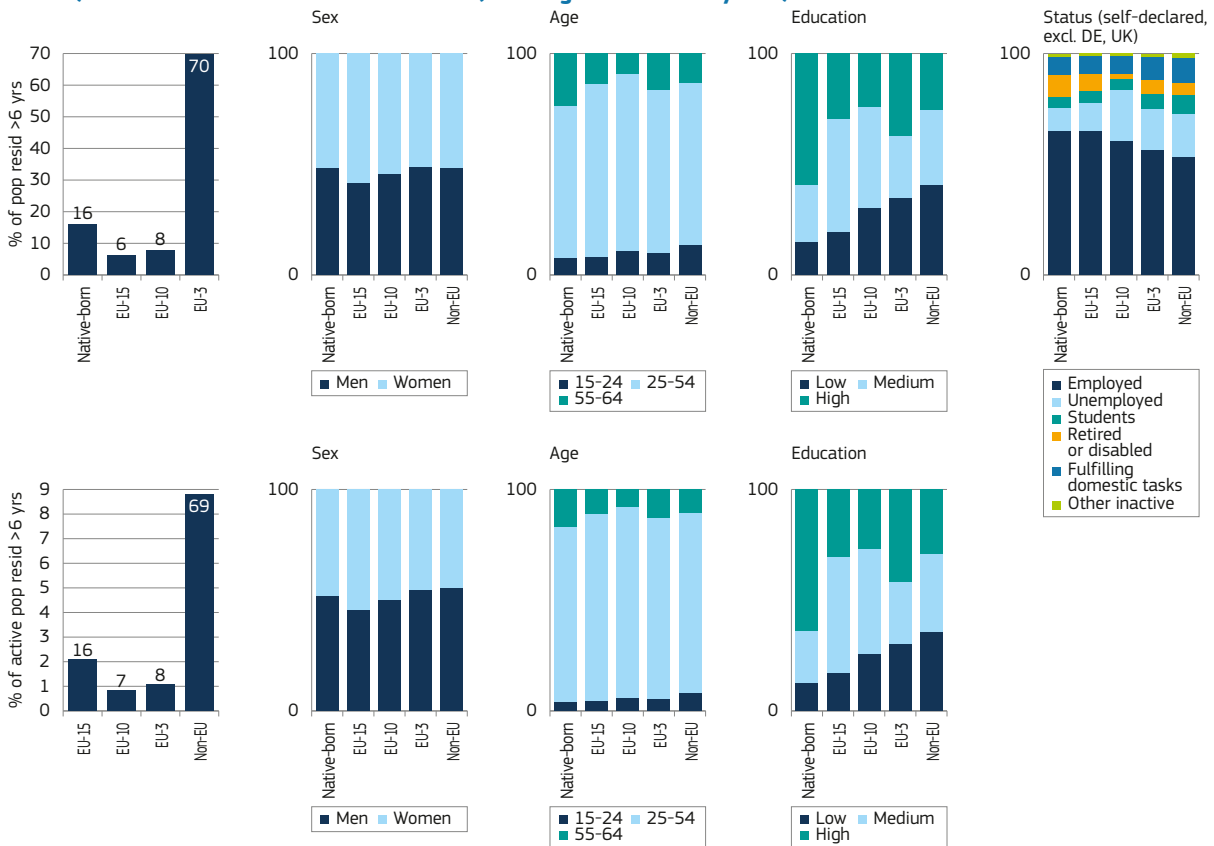


**Socio-demographic characteristics of foreign-born population (pop) and labour force (LF) aged 15-64 in the EU-28, 2014**

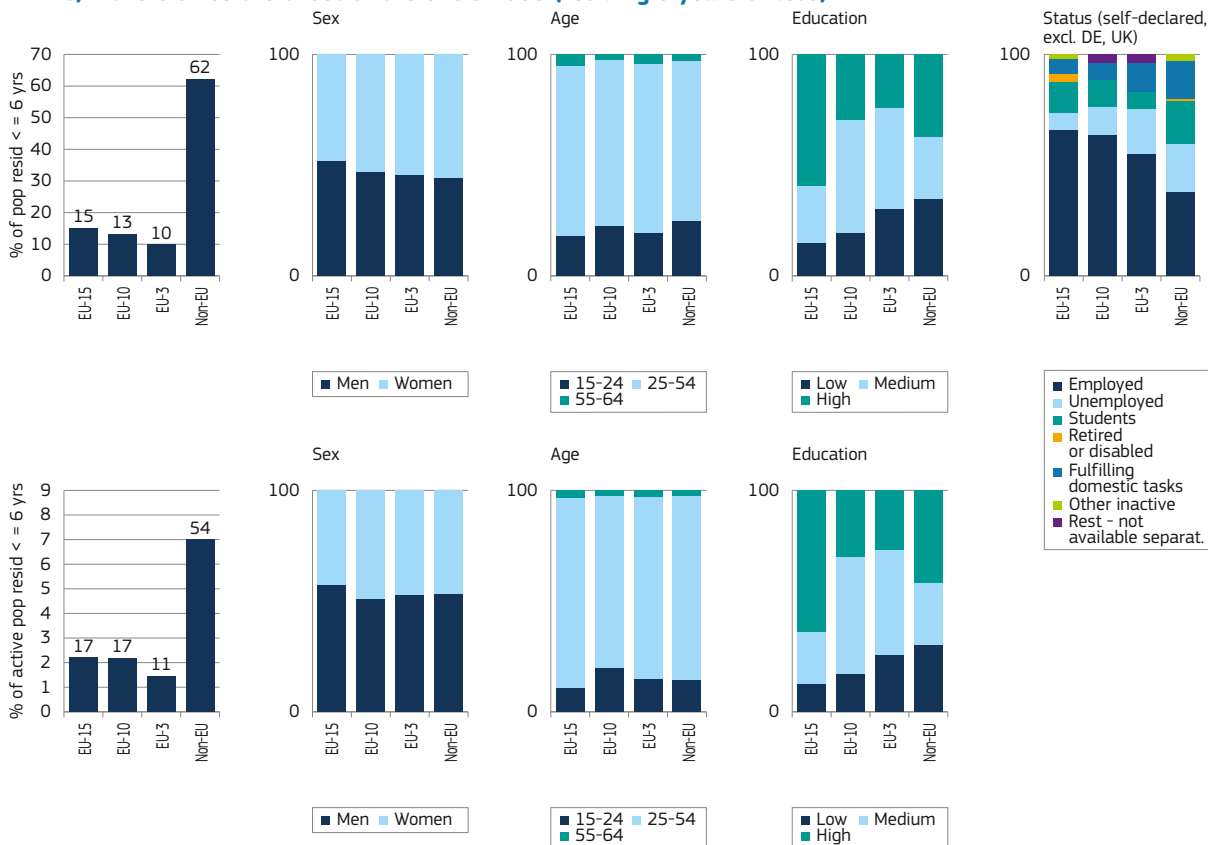
**a) Total stock**



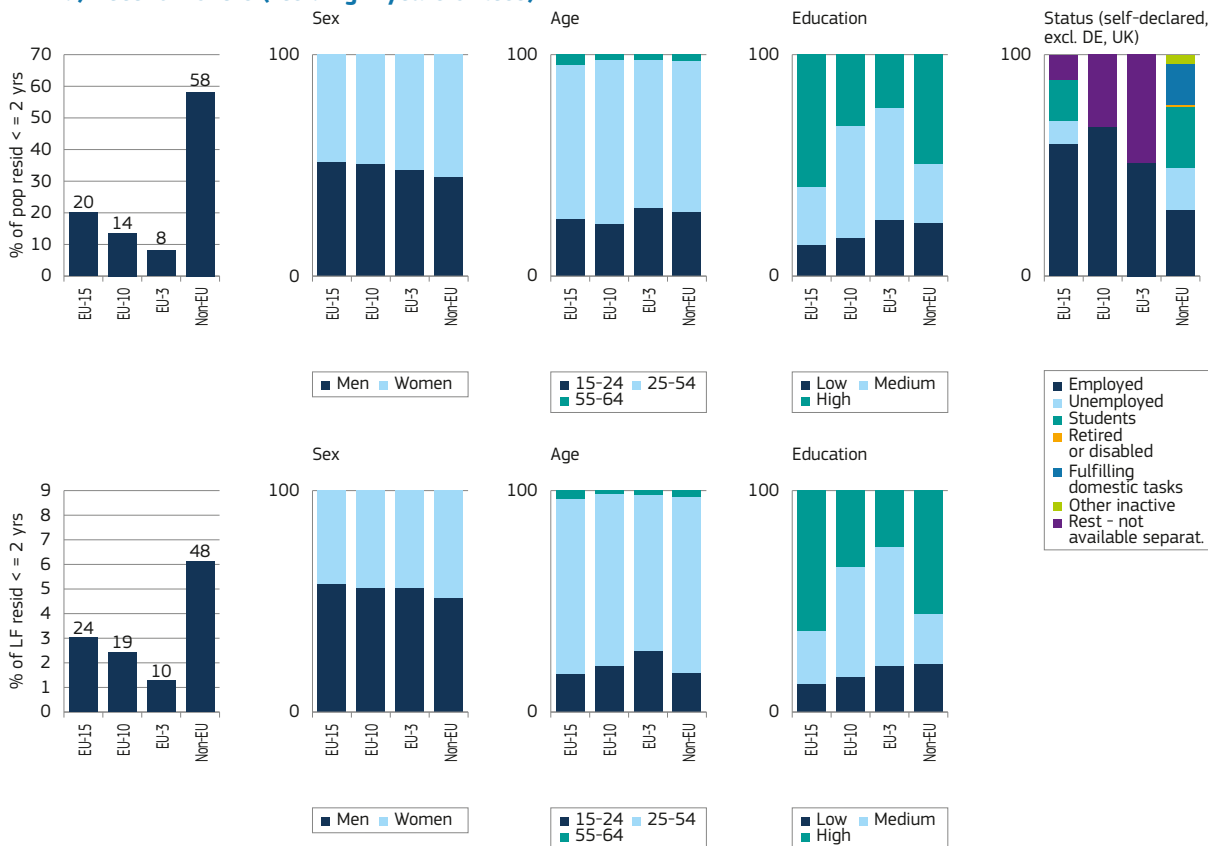
**b) Established before the crisis 2008 (residing more than 6 years)**



**c) Movers since the onset of the crisis 2008 (residing 6 years or less)**



**d) Recent movers (residing 2 years or less)**



Source: DG EMPL calculations based on Eurostat EU-LFS.

Note: EU aggregate based on estimates for DE (distribution of mobile people/migrants based on nationality). In the case of recent movers (b) and movers since the onset of the crisis 2008 (c) some 'work status' categories are aggregated ('Rest - not available separate.') when the sample sizes were very small.

**Explanation:** The first column of charts indicates for each group of foreign-born people its share in total population (first row) and the labour force (employed plus unemployed, second row) for the age-group 15-64 years. The shares add up to the respective total share of foreign-born people. From column 2 to 5 the charts show the different categories of foreign-born people in the EU by sex (column 2), age (column 3), highest education (column 4) and self-declared work status (last column).

## ANNEX 2: ORDINAL LOGISTIC REGRESSION: ODDS RATIO FOR HAVING MOVED FROM ONE TO ANOTHER EU COUNTRY

### EU country is destination. Odds relative to respective reference group (=1)

Specification		1	2	3	4	5	6	7	8 (full)
Control variable	Status								
			Sex						
				Sex					
				Educ					
					Marit stat				
						Childr			
							Elderly		
							Age		
								Country-cluster	
Age covariate (coefficient)								neg.	neg.
<b>Odds ratios</b>									
Labour status	Unemployed / Inactive	2.26	2.41	2.95	2.78	2.74	2.84	2.62	3.40
	Employed	1	1	1	1	1	1	1	1
Sex	Males		1.3	1.4	1.3	1.3	1.3	1.3	1.4
	Females		1	1	1	1	1	1	1
Education	High			2.1	2.0	2.1	2.0	2.1	2.1
	Low			0.8	0.8	0.8	0.8	0.9	1.1
	Medium			1.0	1	1	1	1	1
Country-fixed effects 1)	Anglo-Saxon (UK, IE)								3.2
	North-Western								3.1
	Southern								0.5
	Eastern (EU-13)								1.0
Marital status	Wid./divorc.				1.4	1.5	1.5	1.8	1.6
	Single				2.3	2.3	2.3	0.9	0.9
	Married				1.0	1.0	1	1	1
Children in h'hold	One					1.0	0.9	0.7	0.7
	Two					1.1	1.0	0.7	0.7
	Three+					1.2	1.1	0.8	0.6
	None					1.0	1.0	1	1
Older people in h'hold	No						3.0	2.5	1.8
	Yes						1.0	1.0	1
Reference year	2012	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	2013	1	1	1	1	1	1	1	1

Source: DG EMPL calculations based on Eurostat EU-LFS 2012/2013 (merged).

1) North-Western cluster: AT, DE, NL, SE, FI, LU, DK, BE

Southern cluster: ES, PT, FR, GR, IT, FR

**How to read this chart:** Take the variable 'Sex' as an example. Females are defined as the reference class. That is, the odds for females of crossing EU borders is normalised to 1. The odds for males are then 1.13. That is, the odds (chance or risk) of males crossing EU borders are 13% higher than they are for females, all other variables being equal.

## ANNEX 3: ORDINAL LOGISTIC REGRESSION: ODDS RATIOS FOR BEING EMPLOYED

## Relative to respective reference group (=1)

Third-country migrants and mobile EU citizens, aged between 20 and 64 years, living in their host countries for up to ten years. Odds ratios relative to the reference group (=1), different model specifications

Specification		1	2	3	4	5	6
Control variables			Sex	Sex Educ	Sex Educ Country	Sex Educ Country Family	Sex Educ Country Family Age
Age covariate (coefficient)							neg.
<b>Odds ratios</b>							
Country of birth	EU-15	1.20	1.19	1.01	0.77	0.83	0.74
	EU-10	1.45	1.49	1.31	0.97	1.01	0.86
	EU-3	0.81	0.84	0.82	0.80	0.83	0.69
	Non-EU	0.53	0.54	0.54	0.47	0.47	0.39
	Nationals	1.0	1.0	1.0	1.0	1.0	1.0
Sex	Males		1.73	1.81	1.84	1.94	1.97
	Females		1	1	1	1	1
Education	High			2.18	2.18	2.17	2.18
	Low			0.48	0.53	0.52	0.55
	Medium			1	1	1	1
Foreign education	No			0.98	0.81	0.90	0.83
	Yes			1	1	1	1
Education level x Foreign education x Foreign born	High			0.59	0.56	0.57	0.58
	Low			1.54	1.52	1.53	1.44
	Medium			1	1	1	1
Country-fixed effects	AT				1.03	1.05	1.05
	BE				0.68	0.68	0.68
	BG				0.52	0.51	0.50
	CY				0.68	0.65	0.64
	CZ				0.77	0.74	0.73
	DE				1.05	1.09	1.11
	EE				0.74	0.74	0.75
	ES				0.50	0.49	0.48
	FR				0.72	0.73	0.75
	GR				0.37	0.36	0.35
	HR				0.41	0.39	0.39
	HU				0.51	0.50	0.50
	IE				0.53	0.52	0.53
	IT				0.56	0.54	0.53
	LT				0.60	0.58	0.56
	LU				0.76	0.76	0.74
	LV				0.65	0.63	0.62
	MT				0.72	0.69	0.67
	NL				1.14	1.15	1.16
	PL				0.52	0.48	0.47
PT				0.84	0.79	0.77	
RO				0.59	0.54	0.52	
SI				0.61	0.61	0.63	
SK				0.54	0.52	0.51	
UK				1	1	1	
Marital status	Wid., divorc. etc					0.84	0.86
	Single					0.73	0.53
	Married					1	1
Children in h'hold	One					1.60	1.38
	Two					1.57	1.30
	Three+					0.96	0.78
	None					1	1
Older people in h'hold	No					0.86	0.83
	Yes					1	1
Reference year	2012	1.00	1.00	1.02	1.01	1.01	1.01
	2013	1	1	1	1	1	1

Source: DG EMPL calculations based on Eurostat EU-LFS 2012/2013 (merged).

## ANNEX 4: ORDINAL LOGISTIC REGRESSION: ODDS RATIOS FOR THE TRANSITION FROM UNEMPLOYMENT OR INACTIVITY INTO EMPLOYMENT

### Relative to respective reference group (=1)

Third-country migrants and mobile EU citizens' odds ratios relative to the reference group (=1), to transit from either unemployment or inactivity into employment, different model specifications

Specification		1	2	3	4	5	6	7	8 (full)
		None	Sex	Sex Age	Sex Age Educ	Sex Age Educ Country	Sex Age Educ Country Marital	Sex Age Educ Country Marital Children	Sex Age Educ Country Marital Children Elderly
Age covariate (coefficient)				neg.	neg.	neg.	neg.	neg.	neg.
<b>Odds ratio</b>									
Country of birth	EU-15	1.23	1.27	1.43	1.34	1.17	1.17	1.18	1.16
	EU-10	1.78	1.97	1.71	1.56	1.19	1.18	1.17	1.17
	EU-3	1.29	1.32	1.15	1.16	1.27	1.26	1.24	1.22
	Non-EU	0.90	0.91	0.86	0.90	0.80	0.80	0.82	0.82
	Nationals	1	1	1	1	1	1	1	1
Sex	Males		1.91	1.76	1.86	1.85	1.86	1.85	1.85
	Females		1	1	1	1	1	1	1
Education	High				1.7	1.6	1.6	1.5	1.5
	Low				0.6	0.6	0.6	0.6	0.6
	Medium				1	1	1	1	1
Country-fixed effects	AT					0.8	0.8	0.8	0.8
	BE					0.5	0.5	0.5	0.5
	BG					0.4	0.4	0.4	0.4
	CY					0.5	0.5	0.5	0.5
	CZ					1.5	1.4	1.4	1.4
	DE					0.8	0.8	0.8	0.8
	EE					0.8	0.8	0.7	0.7
	ES					0.6	0.6	0.6	0.6
	FR					0.8	0.8	0.8	0.8
	GR					0.2	0.2	0.2	0.2
	HR					0.3	0.3	0.3	0.3
	HU					0.7	0.7	0.7	0.7
	IT					0.4	0.4	0.4	0.4
	LT					0.8	0.8	0.8	0.8
	LU					0.7	0.7	0.7	0.7
	LV					1.1	1.1	1.1	1.1
	MT					0.4	0.4	0.4	0.4
	NL					0.7	0.7	0.8	0.8
	PL					0.5	0.6	0.5	0.5
PT					0.6	0.6	0.6	0.6	
RO					0.2	0.2	0.2	0.2	
SI					0.5	0.5	0.5	0.5	
SK					0.5	0.5	0.5	0.5	
UK					1	1	1	1	
Marital status	Wid./divorc.						1.2	1.2	1.2
	Single						1.0	0.9	1.0
	Married						1	1	1
Children in h'hold	One							1.0	1.0
	Two							0.9	0.9
	Three+							0.6	0.6
	None							1	1
Older people in h'hold	No								1.4
	Yes								1
Reference year	2012	1.01	1.01	1.01	1.03	1.02	1.02	1.01	1.01
	2013	1	1	1	1	1	1	1	1

Source: DG EMPL calculations based on Eurostat EU-LFS 2012/2013 (merged).



## ANNEX 5: ORDINAL LOGISTIC REGRESSION: ODDS RATIOS FOR THE TRANSITION FROM EMPLOYMENT INTO UNEMPLOYMENT

Specification		1	2	3	4	5	6	7	8 (full)
		None	Sex	Sex Age	Sex Age Educ	Sex Age Educ Country	Sex Age Educ Country Marital	Sex Age Educ Country Marital Children	Sex Age Educ Country Marital Children Elderly
Age covariate (coefficient)				neg.	neg.	neg.	neg.	neg.	neg.
<b>Odds ratio</b>									
Country of birth	EU-15	1.09	1.09	1.12	1.11	1.19	1.20	1.19	1.19
	EU-10	1.14	1.15	1.01	1.00	1.35	1.37	1.34	1.34
	EU-3	2.64	2.65	2.37	2.09	1.75	1.85	1.84	1.83
	Non-EU	2.09	2.09	2.04	1.80	1.70	1.80	1.78	1.78
	Nationals	1	1	1	1	1	1	1	1
Sex	Males		1.11	1.11	1.04	1.04	1.04	1.04	1.04
	Females		1	1	1	1	1	1	1
Education	High				0.6	0.6	0.6	0.6	0.6
	Low				1.9	1.5	1.5	1.5	1.5
	Medium				1	1	1	1	1
Country-fixed effects	AT					1.1	1.1	1.1	1.1
	BE					1.3	1.3	1.3	1.3
	BG					1.5	1.6	1.6	1.6
	CY					2.9	3.2	3.1	3.1
	CZ					1.5	1.5	1.5	1.5
	DE					0.8	0.8	0.8	0.8
	EE					1.5	1.5	1.5	1.5
	ES					3.0	3.0	3.0	3.0
	FR					2.1	2.0	2.0	2.0
	GR					2.8	2.9	2.9	2.9
	HR					2.6	2.7	2.7	2.7
	HU					1.9	2.0	1.9	1.9
	IT					1.7	1.7	1.7	1.7
	LT					1.9	2.0	2.0	2.0
	LU					0.9	0.9	0.9	0.9
	LV					2.3	2.3	2.3	2.3
	MT					0.4	0.5	0.4	0.5
	NL					1.0	1.0	1.0	1.0
	PL					1.7	1.9	1.8	1.8
	PT					3.0	3.1	3.1	3.1
RO					0.4	0.5	0.5	0.5	
SI					2.0	2.0	2.0	2.0	
SK					1.5	1.6	1.5	1.5	
UK					1	1	1	1	
Marital status	Wid./divorc.						1.6	1.5	1.5
	Single						1.6	1.5	1.5
	Married						1	1	1
Children in h'hold	One							1.0	1.0
	Two							0.9	0.9
	Three+							1.1	1.1
	None							1	1
Older people in h'hold	No								1.0
	Yes								1
Reference year	2012	0.99	0.99	0.99	0.98	0.97	0.97	0.97	0.97
	2013	1	1	1	1	1	1	1	1

Source: DG EMPL calculations based on Eurostat EU-LFS 2012/2013 (merged).

## REFERENCES

- Van Ark, B., Chen, V., Colijn, B., Jaeger, K., Overmeer, W. and Timmer, M.: 'Recent Changes in Europe's Competitive Landscape – How the Sources of Demand and Supply Are Shaping Up', *European Economy*, Economic Papers 485, April 2013.
- Arpaia, A., Kiss, A., Palvolgyi, B. and Turrini, A., 'Labour mobility and labour market adjustment in the EU', *European Economy*, Economic Papers 539, December 2014.
- Artola, C. and Bell, U.-L., *Identifying Labour Market Dynamics Using Labour Force Survey Data (2001)*. ZEW Discussion Paper No. 01-44.
- Baas, T. and Brücker, H., 'The macro-economic consequences of migration diversion: evidence for Germany and the UK', *Structural Change and Economic Dynamics*, 3:2, NORFACE ERA-NET (Project TEMPO), 2012, pp. 180-194.
- Backhaus, K., Erichson, B., Plinke, W. and Weiber, R., *Multivariate Analysemethoden*, 12. Auflage (2008).
- Beine, M., Docquier, F. and Rapoport, H., 'Brain drain and economic growth: theory and evidence', *Journal of development economics*, 64(1), 2001, pp. 275-289.
- Berger, J., Keuschnigg, C., Keuschnigg, M., Miess, M., Strohner, L. and Winter-Ebmer, R., *Modelling of Labour Markets in the European Union*, 2009, Final Report. Part II - Documentation of the Model is available at <http://ec.europa.eu/social/BlobServlet?docId=4276&langId=en>.
- Bødker, S., Højbjerg Jacobsen, R. and Skaksen, R., *Fiscal Costs and Benefits of High-Skilled Migration to a Generous Welfare State*, NORFACE ERA-NET (Project TEMPO), 2013.
- Borjas, G. J., *The economic analysis of immigration*, 1999.
- Bonfanti, S. and Xenogiani, T., 'Migrants' skills: Use, mismatch and labour market outcomes – A first exploration of the International Survey of Adult Skills (PIAAC)', *Matching Economic Migration with Labour Market Needs*, OECD/European Union, OECD publishing, 2014, Chapter 8.
- Bonin, H., *Der Beitrag von Ausländern und künftiger Zuwanderung zum deutschen Staatshaushalt*, Bertelsmann-Stiftung, 2014.
- Bonin, H., Eichhorst, W., Florman, C., Hansen, M. O., Skiöld, L., Stuhler, J., Tatsiramos, K., Zimmermann, K. F., *Geographic Mobility in the European Union: Optimising its Economic and Social Benefits*, IZA Research Report No 19, Institut zur Zukunft der Arbeit, July 2008.
- Bratsberg, B. and Raaum, O., 'Immigration and Wages: Evidence from Construction', *The Economic Journal*, 122, NORFACE ERA-NET (Project MI3), 2012, pp. 1177-1205.
- Cancedda, A., Curtarelli, M., Hoorens, S., Viertelhaugen, T. and Hofman, J., *Socio-economic inclusion of migrant EU workers in 4 cities*, Synthesis report for the European Commission, May 2015.
- Canetta, E., Fries-Tersch, E. and Mabilia, V., *Annual report on statistics on intra-EU movers*, Network Statistics FMSSFE, European Commission, 76 p, September 2014.
- Carling, J., 'The Determinants of Migrants' Remittances', *Oxford Review of Economic Policy*, 24(3), 2008, pp. 581-98.
- Carlsson, M. and Rooth, D.-O., *Evidence of Ethnic Discrimination in the Swedish Labor Market Using Experimental Data*, IZA Discussion Paper No 2281, Forschungsinstitut zur Zukunft der Arbeit, Bonn, September 2006.
- Cedefop (European Office for the Development of Vocational Training), *Skill Forecast 2015*, available at <http://www.cedefop.europa.eu/en/publications-and-resources/data-visualisations/labour-force>.
- Chaloff, J., *The Impact of International Students and Post-Graduation International Mobility: An Analysis of Student Mobility and Retention Rates*, Working Paper for the 2<sup>nd</sup> OECD-EU Dialogue on International Migration and Mobility, (DELSA/ELSA/MI (2015)7), Paris, 12 June 2015.
- Chaloff, J., Jauer, J., Liebig, T. and Puhani, P., 'Free labour mobility and economic shocks: the experience of the crisis', *Free Movement of Workers and Labour Market Adjustment: Recent Experiences from OECD Countries and the European Union*, OECD Publishing, 2012.
- D'Auria, F., McMorrough, K. and Pichelmann, K., 'Economic impact of migration flows following the 2004 EU enlargement process: A model based analysis', *European Economy*, Economic Papers 349, European Commission, November 2008.
- Damas de Matos, A., 'Immigrant skills, their measurement, use and return: A literature overview', *Matching Economic Migration with Labour Market Needs*, OECD/European Union, OECD publishing, 2014, Chapter 5.
- Damas de Matos, A. and Liebig, T., 'The qualifications of immigrants and their value in the labour market: A comparison of Europe and the United States', *Matching Economic Migration with Labour Market Needs*, OECD/European Union, OECD publishing, 2014, Chapter 6.
- Elsner, B., 'Emigration and wages: The EU enlargement experiment', *Journal of International Economics*, 91(1), 2013, pp. 154-163.
- Fassio, C., Montobbio, F. and Venturini, A., *How Do Native and Migrant Workers Contribute to Innovation? A study on France, Germany and the UK*, IZA Discussion Paper No 9062, Forschungsinstitut zur Zukunft der Arbeit, Bonn, May 2015.
- Eurobarometer 82, *Public Opinion in the European Union, First results*, December 2014.
- Eurobarometer 398, *Internal Market*, October 2013.
- European Commission, 'The labour market situation and impact of recent third-country migrants', *Employment in Europe 2008*, 2008, Chapter 2.
- European Commission, *Europe 2020 – A strategy for smart, sustainable and inclusive growth*, Communication from the Commission, COM(2010), 2020 final, Brussels 3.3.2010.
- European Commission (2013:1), 'Labour Market Developments in Europe', Economic and Financial Affairs DG, *European Economy*, No 6, 2013.

- European Commission (2013:2), 'EU employment in a global context', *Employment and Social Developments in Europe 2014*, Employment, Social Affairs and Inclusion DG, Chapter 1.
- European Commission (2013:3), *Free movement of EU citizens and their families: Five actions to make a difference*, COM (2013) 837 final.
- European Commission (2014:1), 'Investing in human capital and responding to long-term societal challenges' *Employment and Social Developments in Europe 2014*, Employment, Social Affairs and Inclusion DG, Chapter 2.
- European Commission (2014:2), *Evaluation of the impact of the free movement of EU citizens at local level*, study commissioned by the DG Justice, Final Report, January 2014.
- European Commission (2015:1), 'Labour mobility and labour market adjustment in the EU', *Labour Market and Wage Developments in Europe 2015*, Employment, Social Affairs and Inclusion DG, Part II, Chapter 1.
- European Commission (2015:2), *A European Agenda on Migration*, Commission Communication COM(2015) 240 final, Brussels, 13.05.2015.
- European Commission (2015:3), 'European Economic Forecast, Autumn 2015', *European Economy*, Institutional Paper 011, November 2015.
- Eurofound (European Foundation for the improvement of Living and Working Conditions), *Employment and working conditions of migrant workers*, Dublin 2007.
- Fotakis C. and Peschner, J., *Demographic change, human resources constraints and economic growth – the EU challenge compared to other global players*, European Commission, DG EMPL, Working Paper 1/2015.
- Giulletti, C. and Wahba, J., *Welfare Migration*, NORFACE-MIGRATION (Project CHOICES), 2012.
- Giuntella, O., *Do immigrants improve the health of native workers?*, IZA World of Labor 2014: 102.
- Goldin, C. and Katz, L., 'The Origins of Technology-Skill Complementarity', *Quarterly Journal of Economics*, 113 (3), 1998, pp. 693-732.
- Gott, C. and Johnston, K., *The Migrant Population in the UK: Fiscal Effects*, RDS Occasional Paper, No 77, 2002.
- Grečić, V. and Kaludjerović, J., *Social Impact of Emigration and Rural-Urban Migration in Central and Eastern Europe*, 2012.
- Grubel, H. B. and Scott, A. D., 'The international flow of human capital', *The American Economic Review*, 1966, pp. 268-274.
- Guzi, M., Kahanec, M. and Kureková, L. M., *How Immigration Grease Is Affected by Economic, Institutional and Policy Contexts: Evidence from EU Labor Markets*, IZA Discussion Paper No 9108, Forschungsinstitut zur Zukunft der Arbeit, Bonn, June 2015.
- Gubert, F. and Senne, J.-N., *Is the European Union attractive for potential migrants? An investigation of migration intentions across the world*, OECD Background Paper, 2015.
- Holland D., Fic, T., Rincon-Aznar, A., Stokes, L. and Paluchowski, P., *Labour mobility within the EU – The impact of enlargement and the functioning of the transitional arrangements*, Study commissioned by the Directorate-General for Employment, Social Affairs and Equal Opportunities, NIESR, London, 2011.
- Institut für Arbeitsmarkt-und Berufsforschung (2015:1), Aktuelle Berichte 14/2015, Flüchtlinge und andere Migranten am deutschen Arbeitsmarkt: Der Stand im September 2015.
- Institut für Arbeitsmarkt-und Berufsforschung (2015:2), IAB Kurzbericht 15/2015, Johann Fuchs et al.
- International Organization of Migration, *Labour Market Inclusion of the Less Skilled Migrants in the European Union*, 2012.
- Jauer, J., Liebig, T., Martin, J. P. and Puhani, P. A., *Migration as an Adjustment Mechanism in the Crisis? A Comparison of Europe and the United States*, IZA Discussion Paper No 792, Institut zur Zukunft der Arbeit, January 2014.
- Kaczmarczyk, P. and Tyrowicz, J., *Winners and Losers among Skilled Migrants: The Case of Post-Accession Polish Migrants to the UK*, Institute for the Study of Labor (IZA), No 9057, 2015.
- Kahanec, M., Zaicewa, A. and Zimmermann, K. F., *Lessons from Migration after EU Enlargement*, IZA Discussion Paper No 4230, Forschungsinstitut zur Zukunft der Arbeit, Bonn, June 2009.
- Kahanec, M., 'Labor mobility in an enlarged European Union' in Constant, A. F. and Zimmermann, K. F. (eds.) in *International Handbook on the Economics of Migration*, Cheltenham, UK, Northampton, MA, US, 2013.
- Kahanec, M., Pytliková, M. and Zimmermann, K., *The Free Movement in an Enlarged European Union: Institutional Underpinning of Economic Adjustment*, IZA Discussion Paper No 8456, Forschungsinstitut zur Zukunft der Arbeit, Bonn, September 2014.
- Kerr, S. P. and Kerr, W., *Economic Impact of Immigration: A Survey*, Harvard Business School Working Paper 09-013, 2011.
- Krusell, P., Ohanian, L. E., Rios-Rull, J. V. and Violante, G. L., 'Capital-Skill Complementarity and Inequality: A Macroeconomic Analysis', *Econometrica*, 68 (5), 2000, pp. 1029-1053.
- Lemaître, G., 'The demography of occupational change and skill use among immigrants and the native-born', *Matching Economic Migration with Labour Market Needs*, OECD publishing, 2014.
- Von Löffelholz, H. D., Bauer, T., Haisken-DeNew, J. and Schmidt, C., 'Fiskalische Kosten der Zuwanderer', *Endbericht zum Forschungsvorhaben des Sachverständigenrates für Zuwanderung und Integration*, Rheinisch-Westfälisches Institut für Wirtschaftsforschung, Essen, 27 February 2004.
- Mestres, J., 'Current and future skills and the workforce: The demography of educational attainment and the role of migration', *Matching Economic Migration with Labour Market Needs*, OECD publishing, 2014. Mohsen, J. and Pendakur, K.,

'Fiscal Effects of Immigrants in Canada', *Journal of International Migration and Integration*, Volume 15, Issue 4, November 2014, pp. 777-797.

Neske, M., *Asylbewerber/Flüchtlinge/ Bleibeberechtigte und deren Chancen auf Integration in den Arbeitsmarkt*, presentation at the Expert Conference, Volkswirtschaftliche Wirkungen der Zuwanderung: Potentielle Nutzen', Vertretung des Landes Nordrhein-Westfalen bei der Europäischen Union, Brussels, 14 September 2015.

OECD (2013), *International Migration Outlook 2013*, OECD Publishing.

OECD (2015), *Is this humanitarian migration crisis different?* Migration Policy Debates No 7, September 2015.

OECD-European Union (2015), *Indicators of Immigrant Integration 2015: Settling In*, OECD Publishing, Paris.

Orrenius, P. M. and Zavodny, M., 'Immigrants in risky occupations', *International Handbook on the Economics of Migration*, Cheltenham, UK, Northampton, MA, US, 2013.

Peri, G., *Do immigrant workers depress wages of native workers?*, IZA World of Labor, 42, 2014.

Peschner, J., 'Exploring conditions for EU growth given a shrinking workforce', in OECD (2012), *Free Movement of Workers and Labour Market Adjustment, Recent Experiences from OECD countries and the European Union*, 2012, pp. 213-233.

Peschner, J. and Fotakis, C., *Growth potential of EU human resources and policy implications for future economic growth*, European Commission, DG EMPL, Working Paper 3/2013, 2013.

Rincon-Aznar, A., Foster-McGregor, N., Pöschl, J., Stehrer, R., Vecchi, M. and Venturini, F., *Reducing Productivity and Efficiency Gaps: the Role of Knowledge Assets, Absorptive Capacity and Institutions*, *The Vienna Institute for International Economic Studies*, Research Report 396, September 2014.

Rowthorn, R., 'The fiscal impact of immigration on the advanced economies', *Oxford Review of Economic Policy*, Vol. 24, No 3, 2008, pp. 560-580.

Ruhs, M. and Vargas-Silva, C., *The Labour Market Effects of Immigration*, Briefing, The Migration Observatory of the University of Oxford, March 2014.

Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung,

'Zukunftsfähigkeit in den Mittelpunkt', Jahresgutachten 2015/16.

Stibbard, P., *Labour market dynamics: A global survey of statistical activity*, International Labour Organization (ILO), Employment and Training Papers 38, 1999.

The Economist, August 29, 2015, 'Looking for a Home'.

Titu, M., Banu, I. and Banu I.-M., 'Demographic and Economic Dependency Ratios – Present and Perspectives', *International Journal of Economics and Finance*, Vol. 4, No 12, 2012, pp. 214-223.

UNHCR, *A New Beginning, Refugee Integration in Europe*, September 2013.

Wadsworth, J., *Mustn't Grumble. Immigration, Health and Health Service Use in the UK and Germany*, NORFACE-MIGRATION (Project MI3), 2012.

# Social dialogue <sup>(1)</sup>

## 1. INTRODUCTION <sup>(2)</sup>

Social dialogue is considered a building block of the European social model <sup>(3)</sup> and a prerequisite for a well-functioning social market economy. In recent years, however, the social partners have been facing a difficult environment in which to conduct their discussions. Even before the economic and financial crisis hit the European economies and labour markets, social dialogue was being challenged by globalisation, the changing world of work and the individualisation of employment relations. Furthermore, the diversity of industrial relations institutions across the EU had widened further following the enlargement of the EU. In Central and Eastern Europe, social dialogue underwent a difficult transformation following the fall of communism. In these countries, social partners are in a weaker position, the role of tripartite social dialogue is contested and industrial relations institutions such as collective bargaining are less developed than in a number of

Western European countries (European Commission, 2013a and 2015a).

Even in the countries where social dialogue was functioning comparatively well, the crisis had a negative impact on its effectiveness and ability to deliver, particularly in the later stages of the recession. While in some Member States strong social dialogue structures have helped to resist the crisis, the collective bargaining systems in others have changed and are now more fragmented. In several cases, the crisis accelerated pre-existing trends, such as declining collective bargaining coverage and more decentralised collective bargaining. While in many countries, decentralised bargaining remains embedded in coordinated systems, in others the key enabling conditions such as firm-level worker representation are not in place. Faced with economic uncertainty employers and workers had more difficulty in agreeing on the correct policy mix or on the required reforms to deal with the crisis. Without consensus, governments and public authorities more frequently took unilateral decisions without social partner support (European Commission, 2015a).

The weakening of social partners and social dialogue undermines the potential contribution social partners can make to job creation, growth, fairness and democratic change as set out

in the Commission's agenda. For the EU and Member States to succeed in the growth and jobs challenge there is a need for a broad consensus on the right policy mix and the support from all stakeholders to implement structural reforms, particularly the social partners.

The Commission is committed to giving a new impetus to social dialogue, 30 years after launching EU level social dialogue in Val Duchesse. The 'New start for social dialogue' was launched at a high level event on 5 March 2015 with the participation of representatives of the EU institutions and of EU and national social partner organisations.

The 'New start for social dialogue' aims at improving the involvement of social partners in the European Semester as well as stepping up their contribution to EU policy- and law-making. It depends on the existence of a well-functioning and effective social dialogue at national level. The European Commission in its Communication on steps towards completing the Economic and Monetary Union (2015b) calls for the Member States to pay greater attention to the contribution of national social partners, in particular to strengthen ownership of reform efforts, notably through stronger involvement in the elaboration of National Reform Programmes.

<sup>(1)</sup> By Tim Van Rie, Raymond Maes and David Pascal Dion.

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<sup>(3)</sup> Its vital role is recognised by the European Treaties, the EU Charter of Fundamental Rights, the European Social Charter, as well as by ILO conventions.



The guidelines for the employment policies<sup>(4)</sup> of the Member States adopted by Council Decision on 5 October 2015 reflect the need for Member States to closely involve National Parliaments and social partners, in line with national practices, in the design and implementation of relevant reforms and policies in order to improve the functioning and effectiveness of social dialogue at national level.

At national level, this calls for adequate resources and support, such as foreseen under the European Social Fund, to be devoted to capacity building of social partners. This concerns particularly those Member States where industrial relations systems have been most affected by the crisis, as well as those where capacity issues predated the economic downturn (including several Central and Eastern European countries).

Continuing the analysis presented in the eight editions of 'Industrial Relations in Europe' published over the past 16 years, the chapter will contribute to the discussions between the representatives of the social partners, the Commission and the Member States in the thematic group on 'social dialogue, economic governance and capacity building' as part of the 'New start for social dialogue'.

The aim of this chapter is to provide comparative evidence on the functioning of social dialogue at national level and the involvement of national social partners in the design and implementation of reforms. The first part maps certain key dimensions of national industrial relations systems: membership of trade unions and employer organisations; the structure and coverage of autonomous collective bargaining; the (perceived) level of cooperation and trust in labour relations and industrial action. The second part considers the interaction between social partners and governments in designing and implementing policies and reforms, including the structures in which social partners are involved at national level. Recent examples of social partner involvement in reforms (consultations, tripartite and bipartite

<sup>(4)</sup> Employment guideline 7: 'In line with national practices, and in order to improve the functioning and effectiveness of social dialogue at national level, Member States should closely involve national parliaments and social partners in the design and implementation of relevant reforms and policies'.

### Box 1: Terminology and definitions<sup>(1)</sup>

**Social dialogue** refers to interactions (such as negotiation, consultation or simply exchange of information) between or among organisations representing employers and workers (the social partners) and public authorities (at EU, national or other levels). The term 'social dialogue' is sometimes used more widely to include also dialogue between management and labour at individual workplaces.

**Social partners** refers (jointly) to the two sides of industry, namely organisations representing workers (trade unions) and employers (employers' associations).

**Bipartite** social dialogue involves only organisations representing management and labour (the social partners). **Tripartite** social dialogue, sometimes referred to as 'concertation' involves social partners as well as public authorities (such as a national government or EU institutions).

**Collective bargaining** is one specific form of social dialogue which refers to negotiations between social partners at national, sector, company or another level on pay and other employment and working conditions. It leads to collective agreements which may be of general application in the given country, region, sector or company.

**Industrial relations** are the collective relationships between workers, employers and their respective representatives, including the tripartite dimension where public authorities at different levels are involved. Industrial relations are the structural and institutional context (including informal institutions) in which social dialogue takes place.

<sup>(1)</sup> Based on European Commission (2012).

agreements) are presented. The concluding section identifies avenues for further inquiry.

## 2. THE FUNCTIONING AND EFFECTIVENESS OF SOCIAL DIALOGUE AT NATIONAL LEVEL

### 2.1. National systems: institutional diversity and common challenges

The European Union features a wide variety of national systems of industrial relations. This diversity is recognised in the Treaty on the Functioning of the European Union<sup>(5)</sup> (Art. 152).

Successive rounds of enlargement of the EU have increased this diversity. The Member States that joined the EU in 1995 (Austria, Finland and Sweden) are considered as having among the most encompassing systems of industrial relations. By contrast, many of the Central and Eastern European Member States that joined the EU since 2004 (with the notable exception of

Slovenia)<sup>(6)</sup> have comparatively weak social dialogue structures (European Commission, 2013a and 2015a).

In line with comparative research on welfare states (Esping-Andersen, 1990) or the 'varieties of capitalism' literature (Hall and Soskice, 2001), researchers have developed typologies of industrial relations systems. Table 1 presents an overview of five models, based on collective bargaining structures and interactions between social partners and the state. These models can be considered as 'ideal types', meaning that very few individual countries correspond fully to any of these regimes. Rather, these models serve as an analytical yardstick, including for analysis within countries. Moreover, they point to a number of institutional complementarities, for instance between collective bargaining and regulation by the state.

In both the organised corporatism and social partnership models, (sectoral) collective bargaining plays a large role

<sup>(6)</sup> Bohle and Greskovitz (2012) identified additional sub-clusters within Central and Eastern European countries, distinguishing between liberal Baltic and Balkan States (Bulgaria, Estonia, Latvia, Lithuania and Romania); welfarist Viségrad states (Czech Republic, Hungary, Poland, Slovakia). These authors also consider Slovenia as similar to corporatist European countries.

Table 1: Regimes of industrial relations

	Organised corporatism	Social partnership	Polarised, state-centred	Liberal pluralism	Fragmented/state-centred
Employee representation	Union based, high coverage	Dual system, high coverage	Variable	Union based, limited coverage	Union based, limited coverage
Main level of bargaining	Sector	Sector	Variable, unstable	Company	Company
Bargaining style	Integrating	Integrating	Conflict oriented	Conflict oriented	Acquiescent
Role of state in IR	Limited (mediator)	Shadow of hierarchy	Frequent intervention	Non-intervention	Organiser of transition
Role of SP in public policy	Institutionalised	Institutionalised	Irregular, politicised	Rare, event driven	Irregular, politicised
Broad geographic region	Northern Europe	Continental Western Europe	Southern Europe	Western Europe	Central and Eastern Europe

Source: Presented in European Commission (2008).

in setting working conditions. There is a relatively broad consensus across the political spectrum about the role of social partners on policy-making and their influence is fairly constant over time. The main difference between these models relates to the role of the state in industrial relations. In organised corporatism the state has a limited presence in industrial relations: relatively little is regulated in legislation, instead negotiations between the social partners regulate relations between employers and employees. In social partnership, the possibility of state intervention in industrial relations is more present. The main characteristic of the polarised state-centred model, while being fairly heterogeneous in terms of collective bargaining structures, is regular state intervention in the conflictual relations between employers and workers' representatives. In the liberal pluralism model, there is a limited role for both the social partners and the state in the regulation of employment, which is predominantly shaped by market forces. Industrial relations in this regime are both voluntarist and adversarial. Finally, most Central and Eastern European countries have a fairly short experience of social dialogue, with initial emphasis on managing the transition to a market economy. Collective bargaining plays a limited role in setting working conditions, while the level of industrial conflict is low, and social partners' influence on policy-making is fairly limited.

While such typologies are often used to classify individual countries, this approach has been challenged on substantive grounds. Bechter et al. (2012), argue that such country clusters tend to underestimate the diversity within countries, even in 'emblematic' cases

such as Germany (social partnership) or the United Kingdom (voluntaristic labour relations). Conversely, while acknowledging that national differences remain substantial, the authors found that the relative level of organisation in specific sectors is fairly similar across countries (with steel and railways for instance among the 'stronger' sectors).

Moreover, several broad economic trends are challenging existing labour relations in most industrialised countries, triggering the erosion of union density or collective bargaining coverage. First, as international trade and competition intensify, negotiating collective agreements that cover all relevant competitors becomes more difficult.

Second, in recent decades, the structure of economic activity in most economically developed nations shifted away from manufacturing towards an expanding service sector. Many of the established industrial relations systems have their roots in the Fordist economy, characterised by mass production in large plants with workers performing standardised tasks. The service economy, by contrast, features more differentiated activities, smaller establishments (partly due to outsourcing) and more segmented occupational profiles (Iversen and Soskice, 2015). Moreover, the service economy is characterised by more diverse employment relations including new forms of self-employment such as freelance work. This diversification of employment relations affects the ability of trade unions and employers' organisations to organise and represent workers and management<sup>(?)</sup>.

(?) See Chapters 1.1. and 1.2.

Third, the economic crisis accelerated changes in labour relations (in addition to globalisation and de-industrialisation). The initial shock triggered innovative joint responses by social partners, often supported by public authorities, such as short-time working schemes (European Commission, 2010). By contrast, the subsequent double dip recession and fiscal consolidation created a situation in which employers and workers' representatives often found it more difficult to find a consensus (European Commission, 2013a and 2015a).

In view of such common trends, the question arises whether distinct industrial relations clusters continue to exist, or whether countries converge towards a single model. Based on developments in union density, collective bargaining coverage and a bargaining coordination index between 1960 and 2012, Pedersini (2014) found that despite common pressures and trends, there was little sign of convergence over time, particularly between Eastern and Western Europe. The 'membership' of four clusters (Nordic, Continental, Southern European and 'disorganised') remained fairly stable<sup>(\*)</sup>. The most substantial changes occurred in the Southern European cluster following the recent economic crisis (See also European Commission, 2015a).

## 2.2. The effectiveness of social dialogue

The effectiveness of social dialogue (in the absence of a commonly agreed single indicator) is often assessed on the basis of different criteria. In this regard,

(\*) Italy is a notable exception, shifting from the Southern European to Continental cluster following the tripartite agreement on collective bargaining of 1993.

it is important to note that social dialogue can be seen as serving several purposes<sup>(9)</sup> (10), which may be mutually reinforcing.

First, there is the key principle of social partners' autonomy, enshrined in the Treaties (Art. 152 TFEU). This refers to social partners' freedom to choose their interlocutors, to identify common priorities and to pursue joint actions at their own initiative. This notion implies that interactions between workers and employers' representatives have an inherent 'process legitimacy' which cannot simply be reduced to joint outcomes. This legitimacy is arguably stronger insofar as participants have a stronger capacity and mandate to represent<sup>(11)</sup> their respective interests and show a higher degree of openness to finding common ground with their interlocutors. Closely linked to social partners' autonomy, the concept of horizontal subsidiarity refers to the choice, at EU level, between the legislative approach and the agreement-based approach. The latter is seen as having important benefits in terms of promoting policy orientations that are closely aligned with joint needs of employers and workers, thereby enjoying broad support (European Commission, 2004; Welz, 2008).

Secondly, social dialogue has the potential to identify 'win-win solutions' for workers and employers. Social partners can combine their inherent knowledge of

the workplace to jointly produce 'public goods'. They can agree to set minimum standards in terms of working conditions. By jointly investing in training or organising social protection, they can overcome the collective action problems that are associated with such investments. If negotiations are successful, cooperation tends to generate trust between the parties, and vice versa. On the other hand, to the extent that trust between the parties is a precondition for cooperation there may be a double bind or 'Catch-22' if no progress is made on either dimension.

Third, social dialogue can bring benefits at the macro-level, in terms of competitiveness and fairness, and increased resilience during crises. A sizeable body of analytical work assesses the socio-economic impacts of industrial relations systems (see also Hassel, 2015). Overall, the link between different industrial relations institutions on the one hand, and employment and output the other, appears to be largely contingent on the chosen indicators and to differ between countries. By contrast, there are more robust indications of distributive impacts of different industrial relations systems, where higher union density rates and higher rates of collective bargaining coverage are associated with lower dispersion of income and wages. To the extent that certain groups, including young workers, women and workers with fewer qualifications are less likely to be covered, this may contribute to segmentation of the labour market (European Commission 2006; Betcherman, 2012; Hassel, 2015).

The OECD (2012) has found that coordinated collective bargaining arrangements contributed to resilience<sup>(12)</sup> during the crisis, regardless of the predominant bargaining level. However, the OECD analysis also highlights possible interactions with the institutional context, including employment protection legislation and social protection. To the extent

that the social partners' role extends beyond workplace bargaining to higher political processes, the effects of institutions become more difficult to identify as they interact with other elements of the political or welfare system.

The next section provides an analysis of the relevant industrial relations indicators<sup>(13)</sup> across Member States, highlighting both the diversity between the national contexts and consistent cross-country patterns.

### 2.3. Trade union membership and organisation in the Member States

Trade union density represents the share of all employees<sup>(14)</sup> that are trade union members. This variable is considered an (imperfect) proxy for the influence of workers' organisations. Since the 1980s, there has been a secular trend of trade union decline across the large majority of EU Member States. To some extent, the decline in union density was driven by the 'denominator': an increasing number of new employees who chose not to join a trade union. (Visser, 2006). This trend appears to have slowed during the recent crisis, mainly due to a strong fall in employment (European Commission, 2015a).

Over and above the broad common trend, there are substantial differences across countries (Chart 1). Union density is fairly low in many Central and Eastern European Member States. These countries experienced a steep and sudden decline in trade union membership following the fall of communism. Under central planning, most trade unions fulfilled a function of management control rather than representation of workers. Rebuilding relations with workers under a market economy has often proved to be a challenging task (Varga, 2013).

<sup>(9)</sup> See for instance Joint Employment Report 2011; 'High quality industrial relations based on dialogue and trust between strong social partners contribute to solutions towards reducing segmentation and proper labour market functioning. Social dialogue has proved to be effective during the crisis. Establishing consensus is important when austerity measures must be decided, as only a repartition of efforts that is regarded as fair will guarantee socially acceptable and successful reforms. However, the operational capacity of social partner organisations and the quality of industrial relations differs; thus the full potential of autonomous, negotiated solutions based on joint analyses and negotiations between social partners is still to be developed in several Member States'.

<sup>(10)</sup> In-depth employment analysis of the European cross-industry social partners (2015, p. 89): 'The crisis has highlighted the important role that social partners can play in strengthening labour markets, but social dialogue has been under strain in the last years. Therefore, it is important that the agreements and proposals of national social partners are respected. They create "social trust" and by doing so they create better economic and social outcomes'.

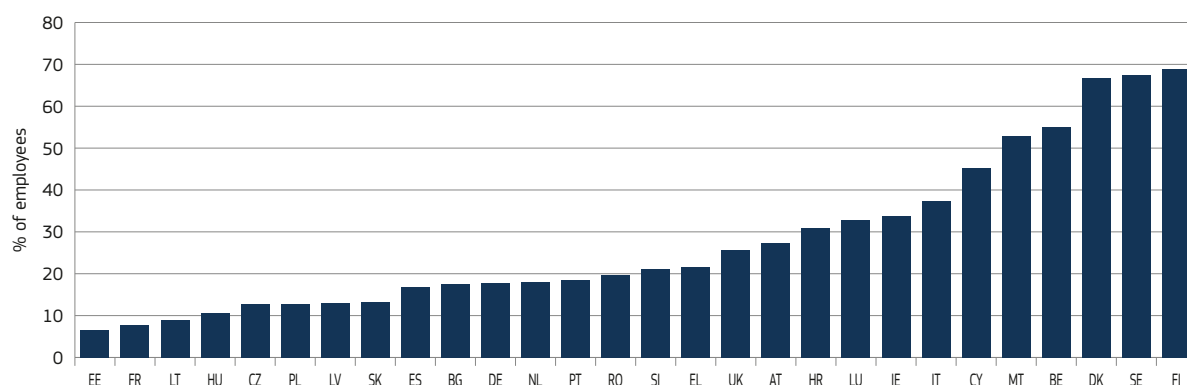
<sup>(11)</sup> In-depth employment analysis of the European cross-industry social partners (2015, p. 90) 'Representative, autonomous and independent social partners foster their legitimacy for collective bargaining'.

<sup>(12)</sup> A study by Eurofound (2015a) covering all EU Member States found that over the period 1990 to 2013 coordinated bargaining (regardless of the means of coordination) resulted in significantly lower pay outcomes compared to uncoordinated bargaining. Moreover, the results indicate that pay regimes where bargaining occurs predominantly at company level or alternating between sector and company recorded higher wage increases (also relative to productivity) than regimes where pay bargaining takes place predominantly at sector or higher levels.

<sup>(13)</sup> The Joint Assessment Framework developed by the Employment Committee includes several indicators on 'collective interest representation' as background information. In addition to the union density rate (ICTWSS data) and collective bargaining coverage rate (Structure of Earnings Survey data), these include indicators (European Company Survey) on employee representatives at company level (acting as/addressing issues with) and on meetings held by management to express views on what is happening in the organisation.

<sup>(14)</sup> In a number of countries, a sizeable share of trade union members are not employed (including the unemployed in Belgium or pensioners in Italy).

Chart 1: Union density rate



Source: ICTWSS database (Visser, 2015).

Notes: Share of employees that are trade union members. Data years: 2013 for AT, BE, CY, CZ, DE, DK, EL, ES, FI, FR, IE, IT, NL, SI, SK and UK; 2012 for BG, EE, HR, HU, LT, LU, LV, MT, PL, PT, RO and SE.

By contrast, union density rates in Denmark, Finland and Sweden are exceptionally high and, until recently, fairly stable. Trade union involvement in voluntary unemployment insurance (known as the Ghent system) may be a contributory factor since it is a macro (country)-level factor promoting trade union membership in industrialised countries (Ebbinghaus et al., 2011; Schnabel, 2013). Belgium has a similar system, with trade union involvement in the provision of statutory unemployment benefits (including short-time working schemes).

Beyond national differences, trade union density differs across sectors within countries (See Annex). It tends to be higher in the public sector compared to manufacturing and the private services sector. The potential drawbacks of membership to workers may be lower in the public sector than in (certain segments of) the private sector, where employer attitudes towards trade unions are more hostile, and membership may be sanctioned in terms of career prospects. The benefits of union organisation to workers are arguably larger in the public sector, as the scope for individual bargaining on working conditions is lower. Relatively strong professional identities for certain groups (medical professions, teachers) further contribute to organisational density, even if status differentiation may lead to fragmentation (European Commission, 2013a). Moreover, relatively low turnover and large establishment sizes in the public sector further facilitate recruitment and retention of trade union members. While the difference between the public and the private sectors are well-described in the literature,

the difference between private manufacturing and services is less clear-cut across Member States (Schnabel, 2013).

At company level, trade union density is positively associated with the size of the establishment in which the employee works. The less personal employment relationships in larger organisations are seen as increasing workers' demand for collective interest representation. For trade unions, there are economies of scale in targeting workers in larger organisations (Mrozowicki, 2014). Crucially, in many Member States, thresholds apply to statutory workplace representation (including shop stewards) at the workplace. Such workplace presence is an important channel for the recruitment and retention of members (Waddington, 2015; Ebbinghaus et al. (2011).

Whereas in the early 1980s, women were less likely to be unionised than men, this gap has narrowed over time, and in some cases even reversed (Schnabel, 2013). Substantial differences in union density between men and women now exist in only a few EU Member States, including Germany and the Netherlands. These remaining differences may be linked to gender patterns of part-time employment and/or fixed-term contracts.

Young workers are less likely to be unionized than older workers in the majority of industrialised countries. Given the general decline of union density, a cohort or generational effect is likely to be at work. There is no clear evidence that young workers would be less interested in trade unions or collective interest representation per se (Vandaele, 2012). In many countries, union density is also

lower among workers near retirement age than among middle-aged workers, which suggests that certain age specific effects apply as well. Arguably, as young workers are more mobile, a shorter time horizon may reduce their interest in becoming trade union members. Crucially, union density tends to be lower among employees and those under fixed-term contracts, compared to workers with an open-ended contract (Hassel, 2015). Young workers are over-represented among the former.

While their membership is an important resource for trade unions, their capacity to recruit and retain members cannot be equated with their influence and representation. Other dimensions, which are less straightforward to quantify include dedicated structures to represent the interests of specific groups, such as women, migrant workers or younger workers. The strength of trade unions relies on their capacity to mobilise workers, as well as to influence the political agenda (Gumbrell-McCormick and Hyman, 2014). This implies that there is a broader agenda of capacity building.

Kahancová (2015) states that in Central and Eastern Europe, traditional resources based on membership and involvement in collective bargaining have lost prominence in favour of unions' increased focus on mobilization, public protests and political support. Still, she concludes; "to achieve sustainable outcomes and find a way out of defensive strategies, CEE trade unions need to continue to develop their internal resources and capacity for action. This is relevant both for union legitimacy and for consolidating national industrial relations systems".



## 2.4. Membership of employers' organisations in the Member States

Employers' organisations are associations that, as participants in social dialogue, represent the interests of their members in their capacity as employers. These should be distinguished from interest organisations with different aims such as business organisations or chambers of commerce although in practice there may be some degree of overlap.

Employers' organisational density represents the share of employees working in establishments that are affiliated to an employers' organisation (or in other words, the organisation of employers, weighted by establishment size). The share of employees that are covered is larger than the share of firms, given that larger firms are more likely to organise (Traxler, 2000, and Chart 3). Compared to union membership, data

on employers' organisations are scarcer (and less consistent, see Annex) but there are no indications that employer organisational density has decreased as strongly as union density.

According to the European Company Survey (Eurofound 2015b), the proportion of establishments that are members of an employer organisation that participates in collective bargaining does not differ substantially between sectors. At European level membership is only somewhat higher than the European average of 26% in the transport sector (31%) and the financial services sector (32%).

Across countries, employer density is closely linked with institutionalisation of sectoral bargaining, including public policy support through extension of collective agreements to non-signatory parties (Visser, 2013). Where extension applies, employers have an incentive to join the organisation(s) that will

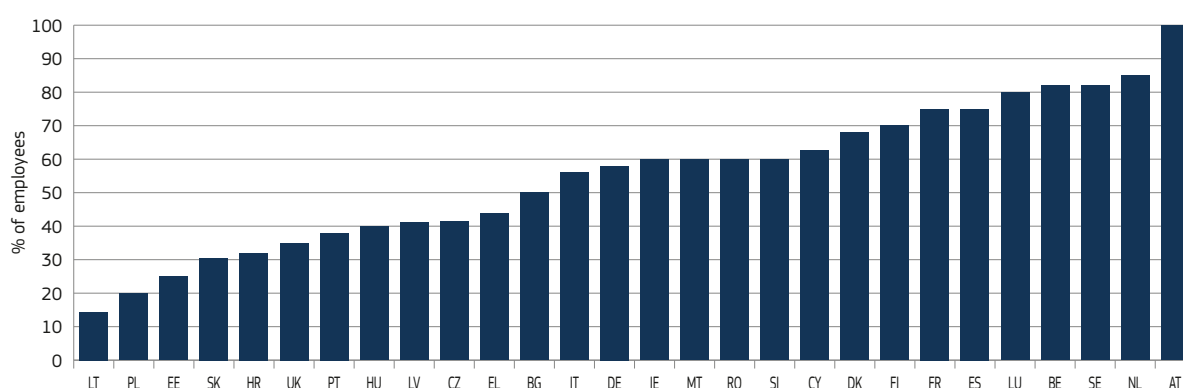
negotiate a contract that will apply to them, regardless of their membership status.

## 2.5. Collective bargaining structures and coverage of collective agreements

Collective agreements are concluded by a workers' representative (i.e. on behalf of a group of workers) either with a single employer, or representatives of several employers, typically at sector or cross-industry level (multi-employer bargaining).

By setting working conditions (typically wages) through a collective agreement, employers (in sheltered or local markets) can take these elements out of competition, establishing 'a lower bound'. In doing so, they can save on transaction costs with employees, particularly those linked to conflicts over the distribution of added value.

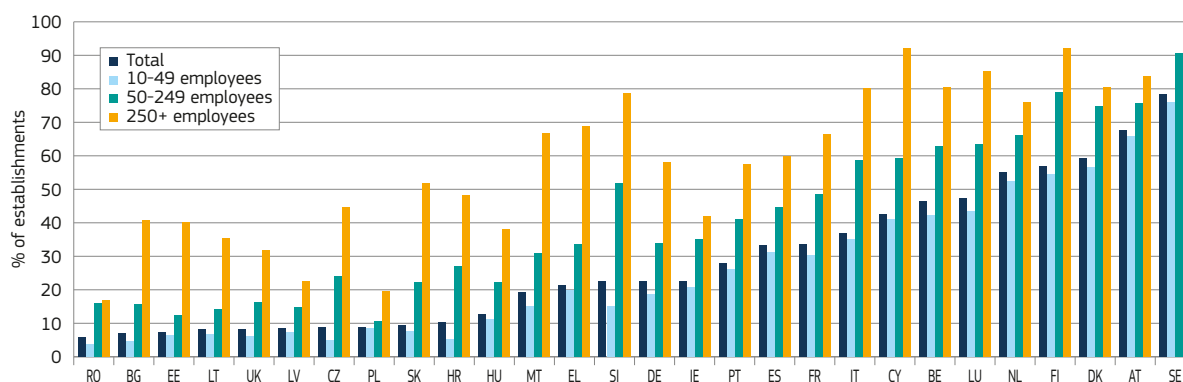
Chart 2: Employer density rate



Source: ICTWSS database (Visser, 2015).

Notes: Share of employees working in establishments that are affiliated to an employers' organisation. Data years: 2014 for AT; 2013 for HR, LV, SI and SK; 2012 for BE, BG, FI, FR, IT, LT, LU and PL; 2011 for CZ, DE, EE, IE, NL, PT and SE; 2010 for DK; 2008 for CY, EL, ES, HU, MT and UK; 2007 for RO.

Chart 3: Membership of an employers' organisation, by establishment size, 2013



Source: Eurofound, European Company Survey 2013.

Notes: Share of companies (with 10 employees or more) that are member of an employer organisation participating in collective bargaining.



For employees, collective agreements can provide protection against market fluctuations, as well as solidarity between workers with different productivity levels (European Commission, 2015a). While collective agreements cover a priori the signatory parties (particularly on the employer side), public authorities can (in certain cases) extend their validity to non-signatory parties. It should be noted that this practice has decreased markedly since the start of the crisis (Eurofound, 2014; European Commission 2015a).

In recent years, collective bargaining has tended to become more decentralised from the (cross-) industry level to the company level (Eurofound, 2014)<sup>(15)</sup>. This may be a response to increased international competition and diversification of activities, requiring a closer link between productivity and wages at sector and firm level<sup>(16)</sup>. Decentralisation takes different forms: in Ireland and Slovenia, 2009 saw the end to a series of centrally negotiated wage pacts, thereby shifting the centre of gravity for bargaining to the company and sector level respectively. In Romania, legislation passed in 2011 abolished cross-industry agreements, thereby promoting decentralisation of level bargaining.

In those Member States where (cross-) industry collective agreements exist, the scope for company level agreements to set working conditions has increased. Opening clauses in higher-level agreements devolve the regulation of a number of issues to lower-level agreements. Opt-out clauses in higher-level (typically sectoral) agreements

<sup>(15)</sup> Exceptions are Belgium (where the government intervened in wage setting following the failed negotiations for cross-industry agreements) and Finland (where a new cross-industry wage pact was concluded in 2013) (Eurofound, 2014; European Commission 2015a).

<sup>(16)</sup> See Euro Plus Pact: 'Each country will be responsible for the specific policy actions it chooses to foster competitiveness, but the following reforms will be given particular attention: (i) respecting national traditions of social dialogue and industrial relations, measures to ensure costs developments in line with productivity, such as: review the wage setting arrangements, and, where necessary, the degree of centralisation in the bargaining process, and the indexation mechanisms, while maintaining the autonomy of the social partners in the collective bargaining process; ensure that wages settlements in the public sector support the competitiveness efforts in the private sector (bearing in mind the important signalling effect of public sector wages)'.

Table 2: Dominant level of bargaining and extent of bargaining coordination, 2014

	1 Fragmented	2	3	4	5 Coordinated
5 Cross-industry					Belgium
4 Cross-industry / sector					Finland
3 Sector		France, Portugal	Italy, Slovenia, Spain	Austria, Denmark, Germany, Netherlands, Sweden	
2 Sector/ company		Bulgaria, Croatia, Cyprus, Greece, Luxembourg	Slovakia		
1 Company	Estonia, Hungary, Ireland, Latvia, Lithuania, Poland, UK	Czech Republic, Malta, Romania			

Source: ICTWSS database (Visser, 2015).

allow lower-level agreements to derogate from the regulations set in the higher-level agreements (under given conditions). Moreover, in some Member States there have been changes to the favourability principle, by which lower-level agreements are not allowed to deviate from the wages and working conditions agreed at a higher level in a way which would be unfavourable to employees (Eurofound, 2014; European Commission 2015a).

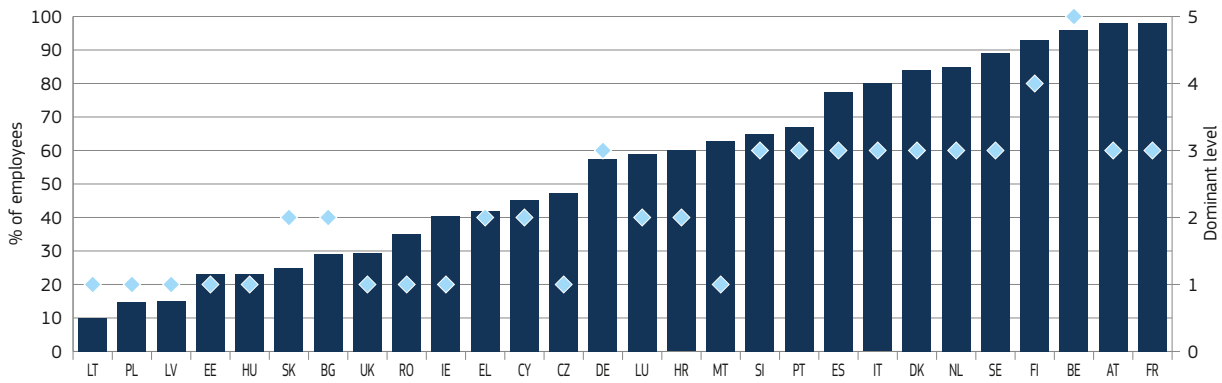
While a 'dominant' level of bargaining can be identified in Member States (Table 2), it should be noted that in most countries where multi-employer bargaining exists, different levels of bargaining influence each other with possible coordination between units at a given level. Such links can be achieved through different means. First, the state may impose wages instead of allowing bargaining (e.g. Belgium in 2014). This implies a low level of autonomy of social partners. Second, the state may also sponsor bargaining, including through social pacts, with social partner involvement (e.g. Finland in 2014). Third, peak level organisations may provide guidance to their members in setting conditions at lower levels (intra-associational guidance). With pattern bargaining a leading sector sets the pace for negotiations in other sectors (for instance the metal sector in Austria and Germany).

Across countries, there is a strong association between the main level at which collective bargaining takes place and the overall share of employees covered

by collective bargaining. Where collective bargaining (if any) occurs mainly at company level, relatively fewer employees are covered altogether. In the EU, coverage rates range from less than 10% to nearly full coverage. There was a steady erosion of bargaining coverage in the Member States from the early 2000s until the start of the economic crisis in 2008, after which it accelerated, driven by particularly sharp declines in a number of countries (Greece, Romania and Portugal) (European Commission, 2015a).

In a context of decentralised collective bargaining, structures for workers' representation are crucial. In the case of Portugal, it appears that the decentralisation of bargaining, given the rarity of workplace structures for representation, resulted in an (at least temporary) fall in collective bargaining coverage (CSR SWD 2015). There is a large diversity of such structures across Member States, including in the role of trade unions in electing or delegating representatives, or the presence of works councils that are directly elected by employees (even if the latter often have strong informal contacts with trade unions). The share of establishments that feature an official trade union representation vary considerably across countries. As smaller establishments are far less likely to feature official employee representation (Eurofound 2015b), the share of SMEs in the economy is a crucial variable, in addition to the rights and (legal) modalities related to workplace representation structures.

Chart 4: Collective bargaining coverage rate and dominant level of bargaining



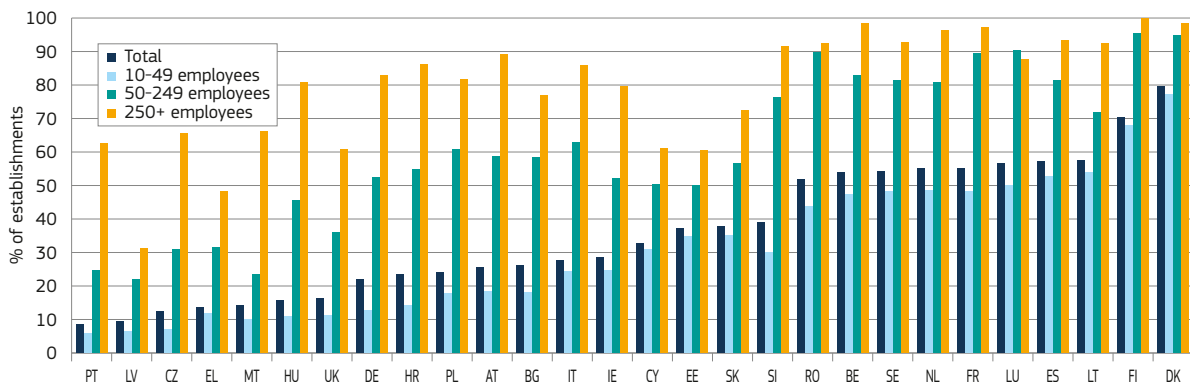
Source: ICTWSS database (Visser, 2015).

Notes: Collective bargaining coverage represents the share of employees covered by collective (wage) bargaining agreements (excluding sectors or occupations that do not have the right to bargain).

Dominant level of bargaining: 5 = bargaining predominantly takes place at central or cross-industry level and there are centrally determined binding norms or ceilings to be respected by agreements negotiated at lower levels; 4 = intermediate or alternating between central and industry bargaining; 3 = bargaining predominantly takes place at the sector or industry level; 2 = intermediate or alternating between sector and company bargaining; 1 = bargaining predominantly takes place at the local or company level.

Data years: dominant level: 2014 for all Member States; collective bargaining coverage: 2014 for FI and PT; 2013 for AT, BE, CY, CZ, DE, DK, EL, ES, HU, LV, NL, RO, SE, SI, SK and UK; 2012 for BG, EE, FR, LT, LU, MT and PL; 2010 for IT; 2009 for HR and IE.

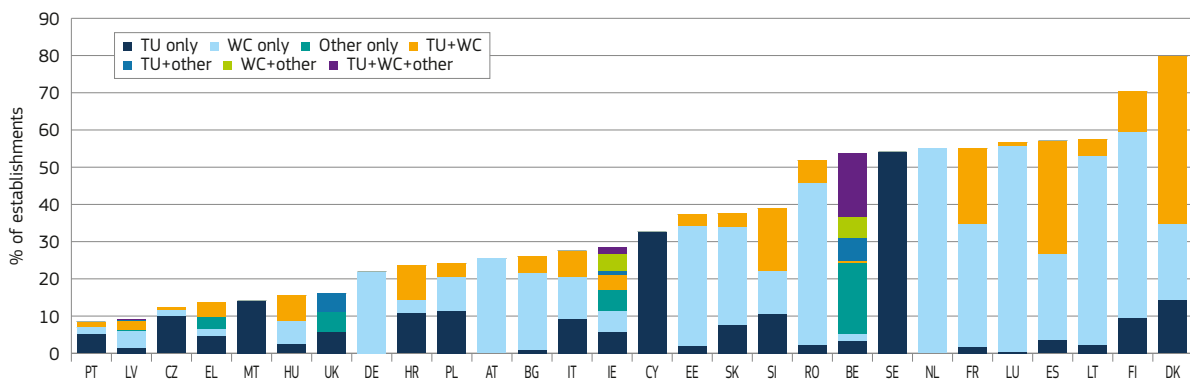
Chart 5: Official structure of employee representation at establishment, by establishment size, 2013



Source: Eurofound, European Company Survey 2013.

Notes: Share of establishments (with 10 employees or more) where an official structure of employee representation (trade union representation or shop steward; works council; joint platform; non-union employee representation, or other sector specific) is present.

Chart 6: Official structure of employee representation at establishment, by type, 2013



Source: Eurofound, European Company Survey 2013.

Notes: Share of establishments (with 10 employees or more) where an official structure of employee representation (trade union representation or shop steward; works council; others e.g. joint consultative committees, non-union staff association) is present. TU = Trade union delegation; WC = Works council (or workers representative).

## 2.6. Trust, cooperation and conflict

Trust and cooperation between employers and workers is a precondition for successful dialogue. A good ‘climate’ of labour relations can be considered an outcome of social dialogue as such to manage tensions between management and workers.

One possible proxy measure for the ‘quality’ of the industrial relations system, is the (perceived) quality of employer labour relations at national level (see Blanchard and Philippon, 2006; Feldman, 2008). The Executive Opinion Survey by the World Economic Forum collects data among executives, asking them to score cooperation on a scale from generally confrontational to generally cooperative. Average scores per country, as well as relative country positions are fairly stable over time (2006-2015).

In a similar vein, the European Quality of Life Survey conducted by Eurofound<sup>(17)</sup> provides data on perceived tensions between different social groups, including management and workers. The two alternative measures and data sources appear to be largely consistent. Denmark, Finland, and Sweden are seen to have highly cooperative relations marked by few tensions, which is in line with the categorisation presented in Table 1. By contrast, the data suggest that labour relations are particularly tense in France, Romania, Croatia and Greece.

Industrial action could be considered an alternative indicator for tensions in collective labour relations<sup>(18)</sup>. Such action includes strikes (at the initiative of workers) and lock-outs (initiated by employers). Across Western Europe, the

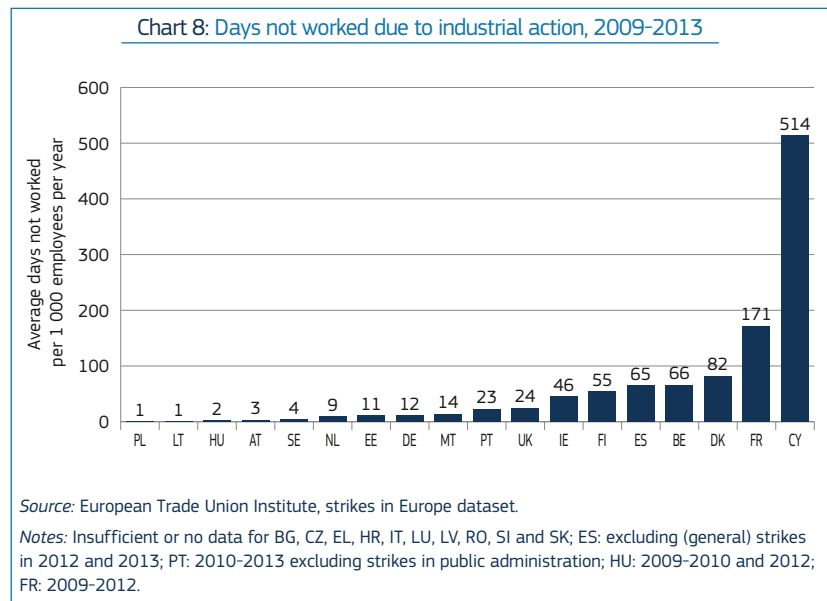
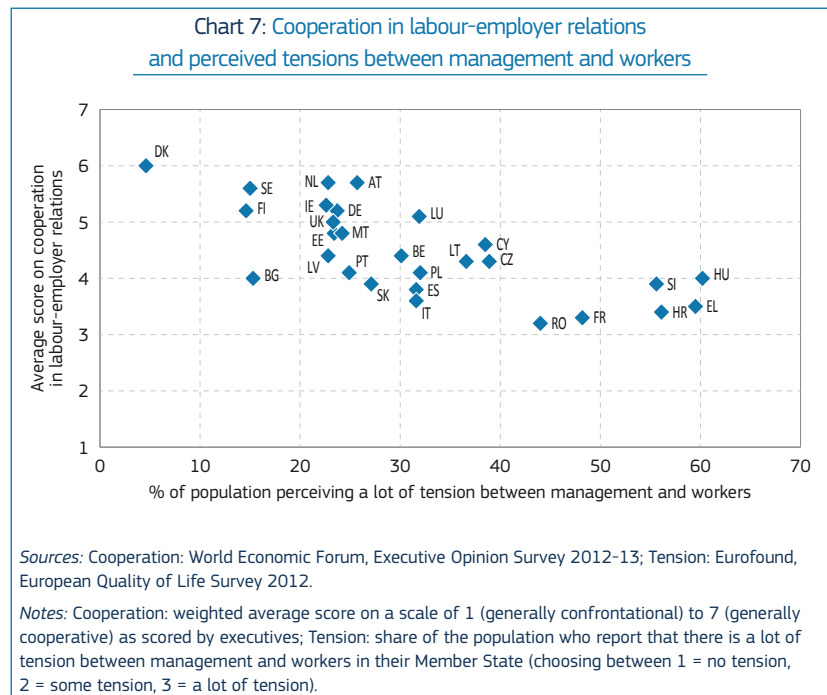
<sup>(17)</sup> An alternative data source is the European Company Survey (Eurofound), which collects data among management and employee representatives regarding cooperation and mutual trust at the establishment level. These data refer only to establishments with employee representation, which makes it difficult to interpret and compare data across countries, particularly those where workplace representation is very limited (see Charts 5 and 6). Eurofound 2015b suggests that the level of mutual trust is fairly similar across establishments of different size (noting again that smaller establishments are less likely to feature employee representation) and across different sectors.

<sup>(18)</sup> It should be noted however, that strikes may be political in nature, targeting government policies rather than employers.

number of days not worked due to strikes fell markedly between 1990 and 2009. While country rankings remained fairly stable, the overall trend tended to produce downward convergence (Vandaele, 2011). Strike activity increased after the start of the crisis with a marked shift from industrial to public sector strikes (Gall 2013).

Across countries there appears to be no clear bivariate link between industrial action and perceived tensions or cooperation between management and workers: Cyprus is an outlier in terms

of industrial action (2009-2013), while Chart 7 suggests moderate cooperation/tensions between workers and employers. National averages tend to peak in given years, in some cases driven by developments in a specific sector (in Cyprus, there was a protracted strike in the construction sector in 2013). Beyond issues of data comparability across countries, industrial action data must also be seen in the context of the national industrial relations systems in which they occur, for instance modalities regarding the right to strike in the public sector.



## 2.7. Associations between different dimensions

Table 3 represents the bivariate associations between variables across Member States, measured through the correlation coefficient. There is a strong correlation between employers' density rates and coverage of

collective agreements, and to a lesser extent, between collective bargaining coverage and union density. As mentioned earlier, the two measures that capture cooperation/tensions between employers and workers are consistent. By contrast, there is no clear linear association between industrial conflict and any of

the other measures (even when omitting outlier Cyprus). Moreover, there appears to be a positive association between both trade union and employer organisation rates and perceived cooperation in labour employment relations, which is to some extent driven by outliers (including Denmark and Sweden).

Table 3: Correlations between main indicators

	Union density	Employer density	Bargaining coverage	Cooperation labour - empl	Tension mgmt - workers	Industrial action
Union density	1 28	.498** (.007) 28	.562** (.002) 28	.491** (.008) 28	-.436* (.020) 28	.183 (.468) 18
Employer density	.498** (.007) 28	1 28	.822** (.000) 28	.424* (.024) 28	-.232 (.234) 28	.162 (.522) 18
Bargaining coverage	.562** (.002) 28	.822** (.000) 28	1 28	.285 (.141) 28	-.186 (.343) 28	.059 (.816) 18
Cooperation in labour - empl	.491** (.008) 28	.424* (.024) 28	.285 (.141) 28	1 28	-.710** (.000) 28	-.176 (.485) 18
Tension mgmt - workers	-.436* (.020) 28	-.232 (.234) 28	-.186 (.343) 28	-.710** (.000) 28	1 28	.234 (.349) 18
Industrial action	.183 (.468) 18	.162 (.522) 18	.059 (.816) 18	-.176 (.485) 18	.234 (.349) 18	1 18

First row: Pearson correlation coefficient.

Second row: Sigma (two-tailed).

Third row: N (number of cases).

### Box 2: Capacity building

The European Commission provides support to build the capacity of social partners at EU level, as well as at national level.

The European Commission's promotion of **European social dialogue** includes financial support, mainly in the form of grants to social partners and other industrial relations stakeholders. On the basis of Article 154 TFEU, the most important financial programmes are the headings in the EU budget earmarked for support to social dialogue; information and training measures for workers' organisations; information, consultation and participation of representatives of undertakings; and improving expertise in industrial relations<sup>(1)</sup>.

In this regard, it should be noted that the European social partners at cross-industry level included capacity-building as one of their eight priorities in their 2015-2017 work programme 'Partnership for inclusive growth and employment'. They notably recognise that greater efforts are needed to ensure an effective implementation in all Member States of the autonomous agreements<sup>(2)</sup> concluded at EU level. Moreover, several of the 43 European sectoral social dialogue committees (for instance in education) pursue joint actions to build capacity, including at national level (see European Commission, 2015a).

The Commission recognises the need to develop administrative capacity of partners (including social partners) that participate in the implementation of ESIF (**European Strategic Investment Funds**), and to support exchange of good practices between such partners. Social partners have been for many years a key stakeholder in the implementation of European Union's shared management funds, in particular in the context of the European Social Fund, as members of the ESF Committee. The Delegated Regulation establishing a European Code of Conduct on Partnership (ECCP), adopted in 2014, paves the way for a substantial improvement in the manner partners are involved in policies and reforms in view of the alignment of the funds to the European semester. This active involvement necessitates the empowerment of all partners, in particular the ones with limited human resources. Continuous capacity building of the partners is therefore crucial. Within the context of the implementation of the ESIF, Member States shall use part of their technical assistance to ensure that partners, in particular social partners, have the necessary capacity to participate in the implementation of the Partnership Agreement and the Operational programmes.

Furthermore, in line with the strategic partnership for social dialogue between the **ILO** and the European Commission, which has been renewed for the period 2014-2017, capacity building activities are developed together with the international training centre of the ILO in Turin. Such (training) activities involve representatives from employer and workers' organisations from EU Member States, candidate countries and in some cases also EU level organisations.

<sup>(1)</sup> <http://ec.europa.eu/social/main.jsp?catId=629&langId=en>.

<sup>(2)</sup> Such EU-level social partner agreements are implemented in accordance with the procedures and practices specific to management and labour and the Member States – in other words, the agreement will be implemented by the signatories' national member organisations, in ways consistent with the industrial relations systems in each Member State.

### 3. THE INVOLVEMENT OF SOCIAL PARTNERS IN THE DESIGN AND IMPLEMENTATION OF REFORMS AND POLICIES

#### 3.1. The role of social dialogue/social partners in the political decision-making process

Interactions between public authorities and social partners on policy development and implementation take different forms. One framework distinguishes between exchanges of information, consultation and negotiations leading to agreements (ILO, 2013).

The provision of **information** to social partners can be considered the most basic process of social dialogue, but may be a crucial condition for a more substantive involvement of social partners in the policy process. Alternatively, if social partners send their positions to public authorities on their own initiative, this can be considered an information exchange.

**Consultation** refers to a structured process whereby public authorities invite social partners' views on policy orientations or implementation. Social partners' positions may be either that of individual organisations or shared views (joint positions). Crucially, even if consultation itself may be mandatory in some Member States for given policy issues, its outcome does not bind any of the parties. The actual influence of such views on the policy process varies, sometimes framed in terms of the distinction between 'being heard' and 'being listened to'. Establishing the actual impact is not always straightforward. As part of a consultation, public authorities may enter into a dialogue with social partners on their views and their implications for the policy agenda. In some cases, a structured response by the government to social partners' advice is foreseen<sup>(19)</sup>.

**Negotiations** aim at achieving agreements between government and social

partners. Such agreements are binding upon the signatories. **Social pacts** are arguably the most comprehensive forms of (tripartite) social partner involvement in the design and implementation of policies and reforms. Such pacts are "publicly announced formal policy contracts between the government and social partners on incomes, labour market or welfare policies, that identify explicit policy issues and goals, the means to achieve them and designate the tasks and responsibilities of the signatories" (Avdagic, 2011, pp. 25-26).

The conditions for the emergence and institutionalisation of social pacts are

extensively examined in the academic literature. These studies consider consecutive 'waves' of pacts that had been observed across Europe, if not in all EU Member States. In the 1970s, amid high inflation and rising unemployment, social pacts tended to combine wage moderation with publicly financed employment and social policies (including unemployment insurance, pensions and early retirement, state-sponsored employment programmes). These pacts tended to involve a limited number of highly centralised interest associations, with strong internal control mechanisms to discipline the rank and file to respect the agreement (Baccaro, 2003; Schmitter and Grote, 1997).

#### Box 3: The role of social partners in the European Semester. Main findings (Eurofound)

In 2015, Eurofound launched a comparative study to map, analyse and assess the role of national social partners (SP) in the European Semester, focusing on employment and social policy issues (rather than fiscal policy or the Macroeconomic Imbalance Procedure). This study was part of Eurofound's four-year programme (2012-2016), which considers the impact of new forms of economic governance at European level on national social partners.

The study is based on contributions from Eurofound's network of national correspondents through the collection of comparative information and cross-national analysis of the national responses to a questionnaire. The observation period covers the European Semester 2011-2014. By involvement of social partners the study – in general – understands information and consultation. If other forms (e.g. co-decision) were relevant, this is indicated.

In the vast majority (22) of Member States, national social partners are involved in the definition and/or implementation of the National Reform Programmes (NRP). In most of these Member States, previously established social dialogue structures are used. In others (e.g. Sweden), the formal structure for consultation between SPs and the government was established by specific memoranda. In certain Member States (including Italy), the involvement of social partners has been irregular and variable over time. In Croatia, Hungary and Romania, no social partner involvement in the NRP was reported. The Member States where macroeconomic adjustment programmes replaced NRPs – Ireland and Portugal (2011-2013) and Greece (from 2011) are a specific case.

In general, Southern and Central-Eastern European countries tend to have an involvement which is less developed. In certain Nordic and Central-Western European countries, social partners are not heavily involved in the NRP, but do wield substantial influence over policy-making (e.g. Luxembourg, Finland). Social partners' involvement also depends partly on the degree of priority given to the European Semester by public authorities at national level (strategic document versus ex-post reporting).

The study shows that there are significant differences between countries in procedures by means of which the national social partners are involved in the NRPs. In this sense, the study reports that in 10 countries (Austria, Belgium, Denmark, Estonia, Lithuania, Malta, the Netherlands, Poland, Sweden and Slovakia) social partners are consulted in a regular and predictable manner, consider having enough time for information and consultation and are consulted on equal footing. Thus, social partners' involvement is highly institutionalised in these countries. However, the study also reports that only in 5 Member States (Belgium, Finland, the Netherlands, Malta and Sweden) the social partners have a strong impact on the content of the NRPs.

<sup>(19)</sup> For instance in the Netherlands, the government responds within three months of receiving unanimously supported advice from the socio-economic council SER (either following a consultation or on its own initiative). In particular, this response sets out the motives for not following such advice.



After a period of relative inactivity in the 1980s (including a series of failed attempts to renew existing pacts), a second series of social pacts was observed in the 1990s. Many of these pacts still covered wage issues, but active labour market policies and employment protection legislation became the main focus (Avdagic et al., 2011), possibly under the influence of the Maastricht convergence criteria (particularly targets for inflation and government finance). Pacts were also concluded in countries such as Italy or Ireland, where the trade union movement was relatively fragmented (Baccaro, 2003). However, through internal coordination they managed to conclude agreements with employers and governments. The focus shifted from institutions to strategies and actors, particularly (electorally weak) governments seeking support for policies.

A third series of pacts – ‘post-euro and post enlargement’ but pre-crisis – was seen in the 2000s (Natali and Pochet, 2010). Keune and Pochet (2010) raise the question of the relative absence of social pacts in Central and Eastern Europe (with the notable exception of a series of pacts in Slovenia, and an attempt at a pact in Poland). This absence is linked partly to the low capacity of social partners in terms of low membership and limited coordination in collective bargaining, and partly to governments’ alternatives to pacts in reaching their goals.

The most recent crisis has seen the unravelling of pacts in countries where they seemed to be fairly institutionalised, such as Slovenia. More generally, it appears that social pacts are fragile constructions, vulnerable to both external pressures and to shifts in the preferences and power distribution between the three sets of actors (Avdagic et al., 2011).

### 3.2. National institutions and practices for involving social partners in the design and implementation of policies

Practical arrangements for involving social partners in policy design and implementation differ substantially, both across and even within Member States, and can be differentiated by a number of key features. First, national bodies for social partner involvement may have different **objectives**. These range from purely consultative bodies to councils

that (also) serve to negotiate and conclude agreements, and monitor their implementation. The mandate of an institution may be more or less explicit.

Second, the institutions may differ in **scope**: while some are a forum to discuss a wide (but clearly delineated) range of socio-economic issues (such as the Czech RHSD CR) others focus on particular issues such as gender equality, occupational health and safety or wages. Where competences over labour market and social policy are decentralised, regional councils may exist (for instance in Belgium for the Flemish, Walloon and Brussels Capital Region).

Third, the **composition** of national structures for social partner involvement differs. Bipartite institutions are composed solely of employers and workers’ representatives. This does not, however, preclude logistic or financial support by the government (which may be substantial). In tripartite bodies, social partner representatives (the two sides of industry) meet the representatives of relevant public authorities. In addition, in several Member States (including Hungary and Malta) there are bodies that gather not only social partners and government, but also representatives of civil society. These organisations are neither trade unions nor employers’ organisations, but represent specific interests (for instance consumer groups, NGO’s representing the interests of certain vulnerable groups in the population, or environmental organisations).

Finally, national bodies for social partner involvement may be more or less **formalised and/or permanent**. While many Member States organise dialogue through an official ‘socio-economic council’, informal structures may be equally if not more influential. One example is the Belgian ‘Group of Ten’, gathering the (11) senior negotiators of cross-industry social partners. While this is not a formal body, it plays a crucial role in the national industrial relations system and the formulation of policies, and acts as the main forum for the negotiation of the biannual inter-professional agreements. Finland increasingly relies on ‘continuous negotiation’ by social partners through joint projects and temporary working groups, the composition of which may vary according to the subject matter (Eurofound national profile). Cyprus has similarly seen the emergence of dedicated (tripartite) technical committees.

Beyond specific bodies dedicated to (bipartite or tripartite) social dialogue, it should be noted that social partners may be represented on boards or advisory councils (most prominently in social security institutions or public employment services). In addition, labour courts in several Member States include social partner representatives or members nominated by them.

### 3.3. The involvement of social partners in the design and implementation of policies and reforms in the European Semester

Social partners are involved to varying degrees in the design and implementation of reforms in the EU Member States within the context of the European Semester. The data for this analysis were compiled from Commission Staff Working Documents/Country Reports and the Council Country Specific Recommendations for 2011–2015. This overview does not provide an exhaustive picture of all social partner involvement in reforms, which would allow the calculation of a ‘degree of involvement’. A certain ‘selection bias’ can be assumed, insofar as the involvement of social partners is more likely to be reported than the absence of such involvement. In addition, where certain country specific recommendations specifically refer to the role of social partners<sup>(20)</sup>, one could expect the staff working documents to

<sup>(20)</sup> The large majority of country-specific recommendations that refer explicitly to social partners call for their **consultation** on reform wage setting mechanisms (Belgium 2011 to 2015; Bulgaria 2011, 2014 and 2015; Cyprus 2011 and 2012; Spain 2011 and 2015; France 2015; Croatia 2015; Italy 2015; Luxembourg 2011, 2013, 2014 and 2015; Malta 2011 and 2012; the Netherlands 2014; Portugal 2015; Romania 2014 and 2015; Slovenia 2012, 2014 and 2015) and human capital development (France 2013). Further CSRs calling for social changes to labour law (France 2011; Croatia 2014; Lithuania 2013; Slovenia 2012); changes to collective bargaining (Portugal 2014 and Italy 2015) to pension reforms (Austria 2011 and Netherlands 2013), older workers (Finland 2011) and unemployment benefits (France 2015). For Finland, the CSRs (from 2012) refer to ‘**fully respecting the role**’ of social partners’ in reforms of the wage setting system (2012, 2013 and 2015). Several French CSRs refer to reforms to be undertaken ‘**in association with**’ social partners, on labour costs (2013) and unemployment benefits (2013 and 2014); A Slovenian CSR in 2014 calls for the **development of a comprehensive agreement** on wages. Three CSRs refer to **existing agreements** (Bulgaria 2011 on pensions; France 2013 for a cross-industry agreement; Italy 2011 for a 2009 agreement on collective bargaining).

report on this. The overview covers a series of examples, highlighting recurrent features that may be relevant in view of future cycles of the European Semester, and the involvement of social partners in the policies and reforms.

### 3.3.1. Expertise, consultations and debates

Social partners have been involved in their capacity as **experts** when designing policies. In Denmark (2015), social partners (along with government, municipalities and regions) were represented in an Expert Group on Vocational Youth Education, whose aim is to address the lack of private apprenticeships and high drop-out rates. The Danish government (2015) also tasked an expert commission (composed of academics, independent experts, and social partner representatives) to propose reforms to the unemployment benefit system. Issues to be discussed include eligibility criteria, compensation rates, financial robustness, full-time/part-time and voluntary versus mandatory insurance. In Spain, the July 2014 agreement signed by the government and the social partners sets out the intention to assess, together with the Autonomous Communities, the various models of income replacement schemes in terms of coverage and their link to employability. In Finland (2014–2015), an expert group composed of social partners, competent ministries, Finnish social security institutions and the Centre for Pensions produced a report on the employability of persons with partial work ability.

Expert reports can provide input to discussions and consultations with social partners. In Croatia (2015) the authorities (in cooperation with experts) have completed a comprehensive analysis of wage determination and wage-setting practices in both the private and the public sectors and in state owned enterprises, to provide the basis for a tripartite discussion with social partners. In Luxembourg (2015), the General Inspectorate of Social Security declared its intention to present a new study on the financial situation of pensions in 2016. Based on this report, additional fiscal consolidation measures could be discussed with social partners.

Conversely, in certain consultation processes, **important information may be lacking**. In Bulgaria, minimum

wages are established in consultation with social partners, but there appears to be a lack of effective and transparent consultation based on macro-economic indicators. While the situation was similar in Romania, the authorities launched an assessment study of the recent minimum wage increases. Based on this they are planning to start a discussion on the criteria to be followed in setting the minimum wages with the social partners towards the end of 2015.

Reforms where a consultation of the social partners is explicitly mentioned (in the staff working document) include the Croatian Labour Act of August 2014, which was preceded by 'discussions' with social partners. While no details are provided regarding the views of the social partners, they do participate in a working group to monitor the implementation and impacts of the labour market reform (with the first regular report envisaged for January 2015). In Malta, in line with national practice, social partner consultation preceded the preparations for a national apprenticeship scheme. In 2012, following consultation with the social partners and other main stakeholders, the Italian government adopted a draft ordinary law with a view to reforming labour market functioning. Following a debate among social partners in 2014, the Dutch government introduced proposals for the future of the pension system in the summer of 2015.

A number of reforms that were under discussion with social partners have not materialised such as discussions in Malta on pension reform (2013) and wages (2014), or discussions in Poland on possible changes to labour law, as well as on pension schemes for the armed forces and for miners.

Elsewhere, consultations are underway. The Lithuanian social partners are involved in discussions on a 'New Lithuanian Social Model', a comprehensive package for the regulation of labour relations and job creation, the state social insurance system and the reduction of poverty and social exclusion.

The status of 'debates' or 'discussions' with social partners is not always clear-cut in that they may include elements of consultation or negotiation. These consultation processes should be analysed more systematically to cover not only social partners' views on the subject

matter but also the subsequent outcomes in terms of policy.

### 3.3.2. Social partner agreements and government intervention

Reforms reported under the European Semester also include several **social partner agreements**, some of which were subsequently enacted into law.

In 2009, Bulgarian social partners reached an agreement on the reform of the pension system, which was implemented by the government. After the freezing of the reform for a couple of years in 2013–2014, the Bulgarian social partners were again involved in the newly-agreed pension reform in July 2015.

In November 2011, the Finnish social partners concluded a framework agreement to extend working lives and upgrade skills. This was followed by a social partner agreement in March 2012 to raise the part-time pension age limit; to limit early retirement, to raise pension contributions and to reinforce older workers' obligations to take part in activation measures. The government is committed to implementing the reforms no later than January 2017. The social partners negotiated and agreed on specific arrangements (including retirement ages, starting age for pension accrual, early retirement schemes and survivors' pensions, exemptions for arduous work) in Autumn 2014. The effects of the reform are to be monitored every five years on a tripartite basis. In addition, the social partners concluded a wage agreement in 2013.

In France, a cross-industry agreement resulted in the 2013 law on securing employment 'loi sur la sécurisation de l'emploi'. The reforms aim at combating labour market segmentation, simplifying the dismissals procedure while facilitating workers' transitions in the labour market. Implementation of certain arrangements (particularly regarding dismissal) depends on subsequent negotiations at branch and company levels.

In Italy, a series of productivity pacts were concluded with regard to wage setting. In a 2009 reform of the bargaining framework envisaged centrally-negotiated wage increments were linked to the cost of living, while introducing the possibility of opening clauses (i.e. upward and downward derogations with regard to

the sectoral wage agreed at the national level). An agreement of 2011 increased the scope for company level bargaining. A Pact of 2012 – not signed by the CGIL trade union – linked agreements not only to cost of living but also to the economic and competitive situation of the country and given sectors. It also provided for further scope to decentralise wage setting to the company level. Overall, the effectiveness of the reform depends on take-up at the decentralised level. A further agreement (including all social partners) was signed in 2013, supporting the wage setting agreements with tax rebates on productivity-related pay increases in second tier contracts<sup>(21)</sup>. Changes to representativeness criteria at the company level in the manufacturing sector were agreed in 2014.

The Dutch social partners agreed on a series of targets for public and private sector employers to hire persons with disabilities. The agreement is flanked by a legal act of 2015, implying that financial penalties will apply to enterprises that do not fulfil the quota.

In Portugal, following the freeze of minimum wages under the financial assistance programme, the Council of Ministers, in agreement with social partners, decided to increase the monthly minimum wage and to cut employers' social security contributions (TSU) for workers already receiving the minimum wage.

The Spanish social partners agreed on wage moderation (including suspension of cost of living adaptations) for the period 2012-2014, and have reached a pre-agreement for 2015-2017.

Slovenian social partners and the government concluded a tripartite agreement on wage setting in the public and private sector in 2015.

In several Member States, social partners are involved in the **management of social security** schemes (European Commission 2013a). The Dutch social partners agreed on a rise in the pension age for second pillar pensions, to bring them into line with the pension age for first pillar pensions, as well as on a decrease in the accrual rate exempted from taxes

(December 2013). Moreover, as part of the 'Sociaal Akkoord' (April 2013), the Dutch social partners agreed to reduce the duration of benefits under the publicly funded unemployment insurance scheme, while allowing for an extension funded by the social partners. The measures are part of a broader pact which also covers reforms of employment protection legislation.

As co-managers of social security institutions the French social partners reached a multiannual tripartite agreement in 2012 on the functioning of the 'Pôle emploi' (merger of jobseekers' placement services and unemployment benefits agencies). In 2013, they reached agreement on supplementary pension schemes in the private sector, temporarily suspending cost-of-living adaptations to reduce the deficit of the system. In March 2014, the social partners agreed on measures to reduce the deficit of the unemployment benefit scheme and to allow jobseekers to retain previously acquired rights to unemployment benefit in future periods of unemployment rather than forfeit them when taking up a job.

Some **recurrent patterns** emerge from these agreements. First, in several cases, public authorities provide financial support (through tax rebates or reductions in social security contributions) to reforms and policies agreed with the social partners. However, the scope for such measures depends on the state of public finances<sup>(22)</sup>.

Second, cross-industry framework agreements rely on take-up at the lower level, such as Italy's wage pacts and the French Law on ensuring employment. This requires a degree of coordination and consensus between the national-level signatories and local representatives.

Third, negotiations and agreements may divide social partners. The Italian 2012 Productivity Pact was not signed by CGIL. The pension reform was reported to be particularly controversial among trade unions in the Netherlands.

Fourth, reaching an agreement often requires a considerable amount of time and reaching consensus may prove elusive. There have been several instances where governments set a deadline for an agreement, in the absence of which they would legislate. For example in France, a law on the social dialogue has been adopted in 2015 following the failure by the social partners to reach an agreement in time.

The reforms implemented under the European Semester include several examples where the government took the initiative without agreement by social partners. In Belgium, the legislative framework provides for a key role for social partners as regards wage setting. In case social partners fail to come to a comprehensive agreement, the federal government can decide to step in, as it has done in recent years. In addition, in 2015 the government introduced a suspension of wage indexation schemes foreseen in industry-level collective bargaining agreements. In Bulgaria, negotiations on the minimum social security thresholds in different sectors of the economy take place each year between the social partners. These binding bi-partite agreements are then translated into law by the Bulgarian government. For economic sectors where no agreement is reached between the social partners, the government reserves the right to issue an administrative increase of the minimum social security thresholds. In Germany, a minimum wage was introduced by the government in 2015, applicable to all sectors from 2017. Thereafter, the level of the minimum wage would be adjusted by a committee of social partner representatives. The Hungarian minimum wage, which until 2011 was set in negotiation with social partners, is now fixed by the government in consultation with social partners and other actors represented in the tripartite council.

Social partner agreements sometimes followed state intervention. In Cyprus, a series of CSRs (2011 and 2012) and measures under the economic adjustment programme (2013-2016) related to the adaptation of the wage setting system particularly wage indexation. Whereas this issue was reported as 'non-negotiable' for social partners in 2011, a dialogue was initiated in 2012. Following government measures to suspend indexation in the public sector a tripartite agreement for the private sector was reached, suspending indexation until 2016.

<sup>(21)</sup> For additional information, see the In-depth Review for Italy 2014, [http://ec.europa.eu/economy\\_finance/publications/occasional\\_paper/2014/op182\\_en.htm](http://ec.europa.eu/economy_finance/publications/occasional_paper/2014/op182_en.htm).

<sup>(22)</sup> For Belgium, the 2015 Country Report highlights the role of 'midwife' traditionally played by the federal government in previous cross-industry wage agreements, supporting these through wage subsidies, social allowances and reductions in social security contributions. In a context of a narrowing budgetary manoeuvre, scope for such support is reduced significantly.



In Luxembourg, wage indexation was postponed by the government in 2011, following an agreement with the social partners. This was followed by a legally enacted modulation of the system between 2012 and 2014. In 2014, the government asked the social partners to agree on amendments to the system before summer, otherwise it would legislate. Social partner involvement in policies and reforms are a set of complex dynamics which often play out over the medium term.

In terms of progress towards the country specific recommendations, several reforms designed or implemented by social partners addressed or anticipated challenges in national labour markets and social security systems. In other cases, the measures taken by, or in association with, social partners represent only partial or limited progress. Where consensus on reform is elusive, it may imply a complex balancing exercise between building broad consensus and promoting ownership of reforms, while addressing socio-economic challenges in a timely manner.

## 4. MAIN FINDINGS

This chapter documented key dimensions of national industrial relations systems in the EU in all their diversity. This concluding section discusses some of the key elements or criteria that would allow looking into the functioning of social dialogue at national level, including the involvement of social partners in policies and reforms.

Employers' organisations and trade unions are the leading actors in social dialogue. As membership organisations, a number of common challenges in terms of representation emerge. In a context of declining union density, trade unions across Europe organise a proportionately smaller share of younger workers, employees on fixed-term contracts, in relatively small establishments and those working in the private services sector. While employer density rates appear to have been more stable over time, in the majority of countries smaller firms are less likely to be members of employers' associations.

With regard to collective bargaining, the coverage rate of collective agreements varies considerably across countries. Overall, it tends to be lower in Member States where collective bargaining occurs predominantly at the company level. Moreover, in many countries, bargaining at company level remains fragmented. While trustful and cooperative labour relations appear to exist in different institutional settings, the question remains how social partners with few members, in a context of fragmented bargaining can develop their views and contribute to policy making at national level.

Most Member States have at least one structure through which to involve social partners in policy-making. These vary considerably in number, objective, scope and composition. The existence of an official structure cannot be considered as an indication of its influence in policy-making. Moreover, informal or temporary structures may actually be more influential.

An overview of national social partners' reforms in the Semester, while not exhaustive, showed concrete examples of social partners' contributions to the policy agenda. In some cases, it implies a delicate balancing exercise between addressing pressing socio-economic challenges, while achieving a broad consensus in respect for autonomy of the social partners.

Taking due account of diversity of national systems, this overview does suggest that certain elements for social dialogue at national level are mutually supportive: social partners with high levels of capacity and mutual trust, engaging in an outcome-oriented dialogue, the results of which are taken into account by the public authorities (ranging from consultation, tripartite agreements, or institutional support to bipartite agreements). From an analytical perspective, a more systematic mapping of these dimensions would be helpful in highlighting the specificities of national systems, but also facilitate the identification of key conditions or enabling factors across Member States.

## DATA SOURCES

The Database on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts (ICTWSS) is a dataset compiled by Prof Jelle Visser of the Amsterdam Institute for Advanced Labour Studies (AIAS). For a detailed code book and methods, see <http://www.uva-aias.net/208>.

The European Social Survey (ESS) is an academically driven cross-national survey among the population aged over 15. It has been conducted every two years across Europe since 2001. The survey measures the attitudes, beliefs and behaviour patterns of diverse populations in more than 30 nations.

The European Company Survey (ECS) has been carried out every four years since its inception in 2004-2005 by Eurofound. The ECS is a questionnaire-based representative sample survey carried out by telephone in the language(s) of the country. Interviews take place with the manager responsible for human resources in the establishment and when possible with an employee representative.

The European Quality of Life Survey (EQLS) is a pan-European survey among the adult population, carried out every four years by Eurofound. It examines both the objective circumstances of European citizens' lives and how they feel about those circumstances and their lives in general.

The World Economic Forum (WEF) Executive Opinion Survey is a survey among business executives from small and medium-sized enterprises and large companies, administered each year in over 140 economies.

The European Trade Union Institute (ETUI) Strikes in Europe dataset (by K. Vandaele) compiles data on the number of days not worked due to industrial action per 1 000 employees, as well as on the prevalent regime of the collective bargaining system; on the legal status of the right to strike and its strictness in the market sector and government sector.

### ANNEX: UNION DENSITY, % EMPLOYEES, BY SEX, AGE CATEGORY, CONTRACT TYPE, ESTABLISHMENT SIZE AND BROAD ECONOMIC SECTOR, 2012 OR LATEST DATA YEAR

	Sex		Age category					Contract type			Establishment size, employees					Broad economic sector			
	Total	Men	Women	15-29	30-44	45-59	60+	Open-ended	Fixed-term	<10	10-24	25-99	100-499	500+	Industry and construction	Private services	Public services		
LT	7	7	7	2	5	10	(13)	7	7	6	3	8	8	(32)	6	5	11		
HU	8	8	8	5	9	10	(0)	9	2	1	6	7	8	28	5	8	11		
EE	9	7	11	6	8	11	11	9	(9)	4	7	12	11	(24)	7	5	17		
PT	9	9	9	6	9	11	(5)	11	(5)	3	11	13	(21)	(0)	4	8	18		
FR	10	12	8	4	10	11	(17)	11	1	1	9	12	15	16	8	6	14		
EL	10	13	7	3	8	18	(22)	13	(5)	5	12	16	(17)	(16)	(11)	10	(6)		
CZ	10	10	10	3	11	11	(14)	11	3	4	9	7	10	24	8	8	18		
SK	12	10	13	9	8	13	(29)	12	(14)	7	13	11	11	(33)	9	8	21		
PL	12	13	11	5	11	18	(16)	16	3	3	4	10	15	32	12	5	19		
BG	13	12	14	(7)	8	17	(12)	15	5	6	14	17	(17)	(25)	13	8	18		
LV	15	13	16	4	12	21	(19)	16	14	9	13	18	(28)	(35)	-	-	-		
DE	18	21	13	13	12	22	18	19	10	9	12	15	20	26	20	13	19		
ES	19	20	18	8	18	29	(7)	22	10	11	22	23	(21)	(25)	15	13	28		
IT	24	26	23	(12)	24	30	(20)	26	(21)	9	(16)	(34)	(34)	(37)	(18)	16	39		
UK	25	23	26	9	25	30	(29)	28	18	5	17	27	27	40	20	14	38		
NL	25	31	19	8	23	35	(26)	27	17	19	26	28	28	24	26	16	35		
HR	27	27	27	11	29	31	(44)	31	(11)	16	(21)	32	(31)	(49)	31	15	17		
RO	29	27	30	14	30	36	(32)	31	(21)	8	29	37	36	(45)	-	-	-		
AT	31	38	25	16	32	41	(41)	36	11	23	29	38	39	(48)	-	-	-		
SI	32	30	37	(14)	30	44	(27)	38	(13)	(15)	(9)	33	39	50	36	24	40		
IE	34	31	36	15	35	43	(32)	42	27	16	29	38	53	48	32	22	48		
CY	44	43	45	(15)	45	58	(39)	43	(68)	31	(40)	59	(69)	(38)	(59)	37	(51)		
LU	46	50	39	35	48	55	(38)	49	(17)	29	39	56	52	51	-	-	-		
BE	48	52	44	47	47	52	(34)	48	(52)	44	46	53	49	48	60	43	44		
SE	71	68	74	46	69	81	77	73	(54)	57	65	71	79	84	74	59	79		
FI	76	75	77	60	75	83	(72)	77	70	63	75	80	80	85	83	64	84		
DK	82	78	86	52	88	89	(82)	85	70	76	79	86	87	77	81	76	89		

Source: Calculations based on European Social Survey.

Notes: Current members of trade unions or similar organisations among employees having performed paid work over the last 7 days.

Data years: 2012, except 2010 for EL, ES and HR; 2008 for LV and RO; 2006 for AT; 2004 for LU.

Industry and construction corresponds to NACE Rev 2 B->F; Private services to G->N; Public services to O-> S. Agriculture not included due to small sample sizes in most MS.

Data are broadly consistent with union density rates presented in chart. Higher density in ESS for DK, FI and SE may be linked to 'trade union or similar organisation' as these Member States feature union linked voluntary unemployment insurance funds. Total rates for EL, IT and PT based on ESS are substantially lower, compared to ICTW55.

Cells light shade: Chi<sup>2</sup> test with p <= 5%, dark shade p <= 1%.

Point estimates based on a limited number of observations (due to size of the sample or of subcategories in certain MS) may be imprecise. Data based on fewer than 100 observations are therefore put between brackets. The main aim of the table is to illustrate common patterns across Member States.



## REFERENCES

- Avdagic, S., 'The conditions for social pacts. A fuzzy-set analysis of the resurgence of tripartite concertation', in S. Avdagic, M. Rhodes and J. Visser (eds.), *Social Pacts in Europe. Emergence, evolution and institutionalization*, Oxford: Oxford University Press, 2011.
- Avdagic, S., Rhodes, M. and J. Visser, 'Introduction', in S. Avdagic, M. Rhodes and J. Visser (eds.), *Social Pacts in Europe. Emergence, evolution and Institutionalization*, Oxford: Oxford University Press, 2011.
- Baccaro, L., 'What is Alive and What is Dead in the Theory of Corporatism', *British Journal of Industrial Relations*, 41(4), 2003, pp. 683-706.
- Bechter, B., Brandl, B., & Meardi, G. 'Sectors or countries? Typologies and levels of analysis in comparative industrial relations', *European Journal of Industrial Relations*, 0959680112452691, 2012.
- Betcherman, G., 'Labor market institutions: a review of the literature', *World Bank Policy Research Working Paper*, (6276), 2012.
- Blanchard, O., & Philippon, T., 'The quality of labor relations and unemployment', *National Bureau of Economic Research*, No w10590, 2006.
- Bohle, D., & Greskovits, B., *Capitalist diversity on Europe's periphery*. Cornell University Press, 2012.
- Ebbinghaus, B., Göbel, C., & Koos, S., 'Social capital, 'Ghent' and workplace contexts matter: Comparing union membership in Europe', *European Journal of Industrial Relations*, 17(2), 2011, pp. 107-124.
- Esping-Andersen, G., *The Three Worlds of Welfare Capitalism*, Princeton University Press, 2011.
- ETUC, BUSINESSEUROPE, CEEP, UEAPME, 'In-depth employment analysis', 2015.
- Eurofound, 'Changes to wage-setting mechanisms in the context of the crisis and the EU's new economic governance regime', Publications Office of the European Union, Luxembourg, 2014.
- Eurofound, 'Pay developments in different wage bargaining settings in Europe', Publications Office of the European Union, Luxembourg, 2015a.
- Eurofound, 'Third European Company Survey – Overview report: Workplace practices – Patterns, performance and well-being', Publications Office of the European Union, Luxembourg, 2015b.
- Eurofound (forthcoming), 'Role of the social partners in the European Semester', Publications Office of the European Union, Luxembourg.
- European Commission, 'Partnership for change in an enlarged Europe – Enhancing the contribution of European social dialogue', Communication from the Commission, COM(2004) 557 final, 2004, available at <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1449583326483&uri=CELEX:52004DC0557>.
- European Commission, 'Industrial Relations in Europe 2006', Publications Office of the European Union, Luxembourg, 2006.
- European Commission, 'Industrial Relations in Europe 2008', Publications Office of the European Union, Luxembourg, 2008.
- European Commission, 'Industrial Relations in Europe 2010', Publications Office of the European Union, Luxembourg, 2010.
- European Commission, 'Social Europe Guide, Volume 1: Social Dialogue', Publications Office of the European Union, Luxembourg, 2012.
- European Commission, 'Industrial Relations in Europe 2012', Publications Office of the European Union, Luxembourg, 2013a.
- European Commission, 'Strengthening the social dimension of the Economic and Monetary Union', Communication from the Commission to the European Parliament and the Council, COM(2013) 690 final, 2013b, available at <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1449590703629&uri=CELEX:52013DC0690>.
- European Commission, 'Industrial Relations in Europe 2014', Publications Office of the European Union, Luxembourg, 2015a.
- European Commission, 'On steps towards Completing Economic and Monetary Union', Communication from the Commission to the European Parliament, the Council and the European Central Bank, COM(2015) 600 final, 2015b, available at <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1449590397602&uri=CELEX:52015DC0600>.
- Feldmann, H., 'The quality of industrial relations and unemployment around the world', *Economics Letters*, 99(1), 2008, pp. 200-203.
- Gall, G., 'Quiescence continued? Recent strike activity in nine Western European economies. Economic and Industrial Democracy', 34(4), 2013, pp. 667-691.
- Gumbrell-McCormick, R., & Hyman, R., *Trade unions in western Europe: Hard times, hard choices*, Oxford University Press, 2013.
- Hall, P. A., & Soskice, D., *Varieties of capitalism: the institutional foundations of comparative advantage*, Oxford University Press, 2001.
- Hassel, Anke, 'Trade Unions and the Future of Democratic Capitalism', in: P. Beramendi, S. Häusermann, H. Kitschelt, H. Kriesi (eds.): *The Politics of Advanced Capitalism*, Cambridge University Press, 2015.
- International Labour Office, 'National Tripartite Social Dialogue. An ILO Guide for improved governance', Geneva, International Labour Office, 2013.
- Iversen, T. and Soskice, D., 'Redistribution and Power of the Advanced Nation State', in: J.E. Dolvik and A. Martin (eds), *European Social Models from Crisis to Crisis. Employment and Inequality in the Era of Monetary Integration*, Oxford: Oxford University Press, 2015.
- Kahancová, M., 'Central and Eastern European trade unions after the EU enlargement', transfer: *European Review of Labour and Research August 2015*, Vol. 21, No 3, 2015, pp. 343-357.
- Keune, M. and Pochet, P., 'Conclusions: trade union structures, the virtual absence of social pacts in the new Member States and the relationship between sheltered and exposed sectors', in P. Pochet, D. Natali and M. Keune (eds.), *After the euro and enlargement – Social pacts in the EU*, Brussels: European Trade Union Institute, 2010.

- Eurofound, 'Changes to wage-setting mechanisms in the context of the crisis and the EU's new economic governance regime', Eurofound, Dublin, 2014.
- Meardi, G., 'Industrial relations after European state traditions?', *Economy and Society in Europe. A Relationship in Crisis*, Cheltenham, Edward Elgar, 2012, pp. 100-123.
- Mrozowicki, A., 'Varieties of trade union organizing in Central and Eastern Europe: A comparison of the retail and automotive sectors', *European Journal of Industrial Relations*, 20(4), 2014, pp. 297-315.
- Natali, D., and P. Pochet, 'Introduction: The last wave of social pacts in Europe: problems, actors and institutions' in P. Pochet, D. Natali and M. Keune (eds.), *After the euro and enlargement – Social pacts in the EU*, Brussels: European Trade Union Institute, 2010.
- OECD, 'What Makes Labour Markets Resilient During Recessions?', *Employment Outlook 2012*, Chapter 2, Paris: OECD, 2012.
- Pedersini, R. 'European industrial relations between old and new trends', *Stato e mercato*, (3), 2014, pp. 341-368.
- Schmitter, P. and Grote, J.R., 'The Corporatist Sisyphus: Past, Present and Future', *European University Institute Working Paper*, SPS, No 97/4, 1997.
- Schnabel, C., 'Union membership and density: Some (not so) stylized facts and challenges', *European Journal of Industrial Relations*, 0959680113493373, 2013.
- Traxler, F., 'Employers and employer organisations in Europe: membership strength, density and representativeness', *Industrial Relations Journal*, 31(4), 2000, pp. 308-316.
- Vandaele, K., *Sustaining or abandoning 'social peace'? Strike development and trends in Europe since the 1990s*, Brussels, ETUI, 2011.
- Vandaele, K., 'Youth representatives' opinions on recruiting and representing workers: A twofold unsatisfied demand?', *European Journal of Industrial Relations*, 18(3), 2012, pp. 203-218.
- Varga, M., 'Refocusing studies of post-communist trade unions', *European Journal of Industrial Relations*, 19(2), 2013, pp. 109-125.
- Visser, J., 'Union membership statistics in 24 countries', *Monthly Labour Review*, 129, 38, 2006.
- Visser, J., 'Wage bargaining institutions—from crisis to crisis' (No 488), Directorate General Economic and Monetary Affairs (DG ECFIN), European Commission, 2013.
- Waddington, J., 'Trade union membership retention in Europe: The challenge of difficult times.' *European Journal of Industrial Relations* (2014): 0959680114538708, 2015.
- Welz, C., 'The European social dialogue under articles 138 and 139 of the EC treaty: actors, processes, outcomes', (Vol. 36), Kluwer Law International, 2008.

# PART III

Removing obstacles  
to job creation



# Supporting skills development and matching in the EU <sup>(1)</sup>

The present chapter analyses skills development and matching, a fundamental issue for the functioning of labour markets in the EU. It starts with an explanation of the concept and definitions behind 'skills' and with a presentation of the current economic backdrop. In Section 2 it then examines a number of problems around skill mismatches, monitoring and forecasting skill demand. Then, before concluding, it presents some policy recommendations: better education and training, Active Labour Market Policies (ALMPs) and recognition of skills and qualifications.

## 1. SKILLS IN THE EU – THE ECONOMIC CONTEXT

Seven years after the beginning of the Great Recession, the European Union (EU) is still struggling to return to a sustainable growth path able to absorb the current high stocks of unemployment. This situation presents major concerns not only for the economic prospects but also for the long-term sustainability of the European social model.

One of the key issues that employment and social policies have to address is the preservation and development of human capital. The formation, maintenance, recognition and use of knowledge, skills and competence are crucial for the prosperity of

individuals, for the competitiveness of firms, and for overall economic development, high employment and social cohesion in the EU. Countries with a highly qualified and skilled workforce also tend to have higher employment rates, skills proficiency and productivity. Policies to increase employability can also facilitate transnational mobility for workers and learners and contribute to meeting the requirements of supply and demand in the European labour market.

### 1.1. How to define and measure skills

The definition of skills varies widely in the literature. From a broad perspective, human capital can be defined as 'the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being' (OECD, 2001; EC-ESDE, 2014). This goes beyond earlier definitions that focused essentially on the 'productive value' of human capital (Mincer, 1958 and 1997).

The multifaceted nature of this concept implies that it spreads across several distinct domains. Green (2013) looks at the different uses of the concept, in economics, sociology and psychology, and proposes a functional concept of skills, according to which 'skills' have three key features: they are productive, expandable and social. Using skill is productive of value; skills are enhanced by training and development; and skills are socially determined.

Heckman and Kautz (2012) argue that an important dimension of skills relates to what they call 'soft skills', which they define as 'soft skills – personality traits, goals, motivations, and preferences that are valued in the labor market' <sup>(2)</sup>. These are relevant for the labour market, in education and in many other life domains. Soft skills are important determinants of personal success, and programmes that enhance soft skills may have an important place in public policy.

The division between skills and attributes is blurred and some authors consider attributes as skills to emphasise that, as with knowledge and skills, they can be influenced and changed over the life-cycle by the external environment, including learning <sup>(3)</sup>.

Even official definitions differ in the use they make of the terms 'skills' and 'competences'. The Recommendation of the European Parliament and of the Council on key competences for Lifelong Learning

<sup>(2)</sup> Heckmann and Kautz (2012) (p. 451).

<sup>(3)</sup> Heckmann and Kautz (2013) recently introduced the concept of 'character skill' which captures personality traits, goals, motivations, and preferences. See also explanation of 'interactive skills' in Green (2013). Heckman and Kautz also note that such skills lie on a spectrum in terms of their ability to be changed. In particular, the preference parameter part of soft skills (time discounting, risk aversion, social preference and trust) show mixed evidence in terms of their stability, with a number of studies showing little change with age. See Almlund et al. 2011.

<sup>(1)</sup> By Bartek Lessaer, Paolo Pasimeni, Konstantinos Pouliakas, Mantas Sekmokas with contributions by Petrica Badea, Michael Horgan, John Hurley and Anneleen Vandeplass.



(LLL)<sup>(4)</sup> defines these key competences as ‘a combination of knowledge, skills and attitudes appropriate to the context’. It stresses that these are necessary for personal fulfilment and development, social inclusion, active citizenship and employment and suggests they guarantee more flexibility in the labour force, allowing it to adapt more quickly to constant changes. The key competences are acquired by formal education and training and through a continuous process of developing and updating skills.

The Recommendation of the European Parliament and of the Council on the establishment of the European Qualifications Framework for Lifelong Learning<sup>(5)</sup> defines the concepts of knowledge, skills and competence. Knowledge is described as theoretical and/or factual; skills are described as cognitive (involving the use of logical, intuitive and creative thinking) and practical (involving manual dexterity and the use of methods, materials, tools and instruments); and competence is described in terms of responsibility and autonomy. In this context, ‘skills’ refers to the ability to apply knowledge to complete tasks and solve problems.

The main difference is that the first Recommendation uses ‘skills’ as a component of ‘competence’, while the second one puts the two concepts on the same level, together with ‘knowledge’. Looking at this difference through the perspective of the labour market, the first approach implies a broader view of ‘competences’ as all those attributes which enable the individual to be active in the labour market, namely knowledge, skills and attitudes appropriate to the context. The second approach instead uses ‘competences’ rather as a behavioural concept which relates to the personality, prior experience and other psychological traits of the individuals. In this sense, ‘skills’ would be the ability to execute tasks, while ‘competences’ determine how well individuals actually perform those tasks<sup>(6)</sup> (see McClelland, 1973 or Boyatzis et al. 2015).

<sup>(4)</sup> Recommendation 2006/962/EC of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning [Official Journal L 394 of 30.12.2006], <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006H0962&from=EN>

<sup>(5)</sup> Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning [Official Journal C 111, 6.5.2008]. Annex 1, paragraph h, [http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32008H0506\(01\)](http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32008H0506(01))

<sup>(6)</sup> Some HR managers say that people are hired based on their skills but are promoted or fired based on their competencies e.g. see: Goleman et al. 2013.

#### Box 1: Main sources

The **EU Labour Force Survey (EU-LFS)**<sup>(1)</sup>, carried out by Eurostat and the national statistical institutes in all the EU Member States, collects information on a wide number of work-related topics, including employment/unemployment and participation in LLL broken down by different categories.

The OECD **Programme for International Student Assessment (PISA)**<sup>(2)</sup> is a triennial international survey which aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students. The most recently published results are from the assessment in 2012, which focused on reading, mathematics and science (with a focus on mathematics) as well as on creative problem-solving and financial literacy, and covered all the EU Member States. The 2015 assessment will focus on science.

The OECD **Survey of Adult Skills (PIAAC)**<sup>(3)</sup> provides evidence about the skills of Europe’s working-age population. The data informs about the literacy, numeracy and problem-solving skills of the 16-65 year-olds and thus allows for looking into the long-term outcomes of educational provision in terms of the skills acquired or the relation between formal qualifications and skills levels. The 1<sup>st</sup> PIAAC round was carried out in 2008-2013 in 17 EU Member States<sup>(4)</sup>. The 2<sup>nd</sup> round is being carried out in 2012-2016 in three other Member States (Greece, Lithuania and Slovenia).

The **European Working Conditions Survey (EWCS)**<sup>(5)</sup> by Eurofound explores quality of work issues and provides information on *inter alia* training and learning at work.

Cedefop’s **European Skills and Jobs (ESJ)** survey<sup>(6)</sup>, carried out in 2014 in all 28 EU Member States, collected information on the match of the skills of about 49 000 workers (adults aged 24-65) with the skill needs of their jobs<sup>(7)</sup>.

The EU **Adult Education Survey (AES)**<sup>(8)</sup>, carried out by Eurostat and national statistical offices every five years, collects information on a variety of aspects of individual participation in formal and non-formal education and training in the EU of adults aged 25-64. This includes the analysis of willingness to participate in learning, expected outcomes, types of learning undertaken, learning providers and financing of learning.

The EU **Continuing Vocational Training Survey (CVTS)**<sup>(9)</sup>, carried out by Eurostat and national statistical offices every five years, collects information on training activities carried out and/or financed by companies working in the business economy for their employees. The data collected includes assessment of companies’ HR practices, skills needs, the financial amounts invested in training, and barriers to training or reasons for not providing training for the employees.

<sup>(1)</sup> <http://ec.europa.eu/eurostat/web/lfs/overview>

<sup>(2)</sup> <http://www.oecd.org/pisa/>

<sup>(3)</sup> <http://www.oecd.org/site/piaac/>

<sup>(4)</sup> AT, BE (Flanders only), CZ, DK, EE, FI, FR, DE, IE, IT, NL, PL, SK, ES, SE, UK (England and Northern Ireland only).

<sup>(5)</sup> To date, Eurofound has carried out five European Working Conditions Surveys (1991, 1995, 2000/2001, 2005 and 2010). The 6<sup>th</sup> survey to be carried out in 2015 will include all the 28 EU Member States. The first results will be available at the end of 2015.

<sup>(6)</sup> <http://www.cedefop.europa.eu/en/news-and-press/news/cedefop-launches-european-skills-survey-eu-skills>

<sup>(7)</sup> It provides a first insight of the dynamics of qualification and skill mismatch in the EU, focusing on the interplay between changes in the (cognitive and non-cognitive) skills of employees in their jobs as well as the changing skill needs and complexities of their jobs. The survey also focuses on the role of European policies on initial (e.g. work-based learning) and continuing VET (e.g. formal, non-formal and informal training) and on workplace design for mitigating skill mismatch. For further information see Cedefop (2015b) and <http://www.cedefop.europa.eu/en/events-and-projects/projects/analysing-skill-mismatch>.

<sup>(8)</sup> <http://ec.europa.eu/eurostat/web/education-and-training/methodology>

<sup>(9)</sup> <http://ec.europa.eu/eurostat/web/education-and-training/methodology>

For the purposes of our analysis, however, we have chosen an operational definition, which allows us to quantify the concept of skills and conduct the analysis. Therefore, we focus on those elements which are measurable, thus restricting the focus of the definition. Measuring the quantity and quality of skills and their impact on employability and productivity, along with how skills are matched to skill needs in the labour market, is a complex task that relies on a number of sources, of which the main ones are presented in Box 1.

## 1.2. Why skills matter

### 1.2.1. The role of skills in competitiveness and productivity

Forming and developing relevant skills, activating existing skills and making effective use of them is crucial for productivity and international competitiveness, and for sustainable, inclusive economic growth (OECD, 2012; Schwab, 2014; Burgess, 2015; Wiederhold and Woessmann, 2015; Patt, 2015). At the individual level, skills are essential for social inclusion and are positively associated with better individual labour market outcomes<sup>(7)</sup>.

In view of workforce shrinkage and increased global competition the pressure to generate higher productivity gains will be particularly strong in the EU over the next decades. Present demographic trends suggest that the ‘demographic dividend’, which sustained economic growth in past decades, is likely to reverse. Moreover, the shrinkage of the workforce will materialise at a time when global competition is expected to require more skilled workers in many industries which are under pressure to become more innovative and productive. The result may be fiercer global competition for talents, with skills becoming a decisive success factor in an increasingly globalised environment.

Workforce shrinking could reduce employment<sup>(8)</sup>, leaving productivity growth as the only leverage to sustain economic growth. Higher employment growth would not suffice to compensate, although it could postpone the point in time when productivity becomes the only

source of economic growth. This implies that the EU has to obtain much faster productivity growth in the near future than it has in the past, if the current productivity gap relative to the EU’s main competitors<sup>(9)</sup> is to be closed.

The logical response to these challenges is to try to generate higher productivity gains by investing in skills. However, the search for productivity gains, by substituting labour with capital, risks generating jobless growth, reducing the national income share of workers relative to capital and putting further pressure on the labour demand side. In this respect, much of the existing evidence suggests that there has been a strong complementarity between capital and skills in today’s globalised production chains<sup>(10)</sup>. However, there are more recent concerns that such a relationship may be weakening – Brown, Lauder and Ashton (2011) discuss a process of ‘digital Taylorism’ occurring within many high-skill occupations driven by technical change. Moreover, others have predicted that new technologies, such as robotics, may in the future substitute for high-skilled work rather than complement it (Frey and Osborne, 2013; Brynjolfsson and McAfee, 2013). At the macro level, investment, growth and productivity rates and levels typically correlate with the share of higher skills in the labour force. Establishing the direction of causality can prove difficult and it might be that higher skill investment follows growth, investment and rising productivity (Bils and Klenow, 1998). Some channels for investment in higher skills have been shown to have causal effects on growth, particularly where such investment leads to greater innovation (Aghion et al. 2009; Aghion and Akcigit, 2015). However, the evidence is more mixed – for example, Holmes (2013) finds zero or negative relationships between long-run economic growth rates and the size of higher education sectors or the rate of their expansion, once other levels of education and capital investment had been controlled for.

The demand for skilled workers will continue to increase, if the EU is to ensure higher productivity gains (see Section 2.4). The Annual Growth Survey 2015<sup>(11)</sup>

stresses the need for a skilled work force in growing sectors such as the digital economy, green sectors and health. It places a particular emphasis on the need to upgrade vocational training and dual education systems, and LLL, and to improve the assessment of regional and sectoral skills needs.

### 1.2.2. Inequalities and job polarisation

Rising inequality is a major challenge for our societies and is notably linked to increasing polarisation in the labour market – that is, an increase in the employment share of higher-skill and lower-skill jobs and a decline in middle-skilled work (Beblavy and Veselkova, 2014). One of the main drivers of this tendency is the structural change promoted by technological progress, which tends to make skills of workers obsolete, particularly those needed to perform the tasks typically associated with middle-skilled work. In order to avoid that technological change ends up increasing inequalities it is important for skills to be kept up to date with the changing demands. The assumption here is that such skills, once produced, are employed in the labour market. However Keep and Mayhew (2010) identified weak demand for skills as a major obstacle between skill investment and an improvement in economic inequality and other social objectives.

Recent analyses (OECD, 2015, Employment Outlook) show that countries where skills are less equally distributed also have higher wage inequality and that putting skills to better use can help both maintaining them (EC, ESDE, 2014) and reducing wage inequality, by strengthening the links between workers’ skills, productivity and wages (OECD, 2015). Investment in skills, then, turns out to be one of the key policies for addressing inequality and social inclusion. It is believed to be a powerful instrument for governments to use to reduce wage dispersion, but also to increase employment rates together with the increase in the share of women in employment (OECD, 2011, DWS).

In the EU as a whole, over the periods covered by the analysis going back to 1998, employment shifts have tended to be asymmetrically polarising, i.e. upgrading but with some evidence of polarisation, which becomes more apparent in recessions (see Chart 1). Employment polarisation sharpens during periods of net employment destruction.

<sup>(7)</sup> OECD (2013b), Hanushek et al. (2013), Quintini (2014) and, Dinis da Costa et al. (2014).

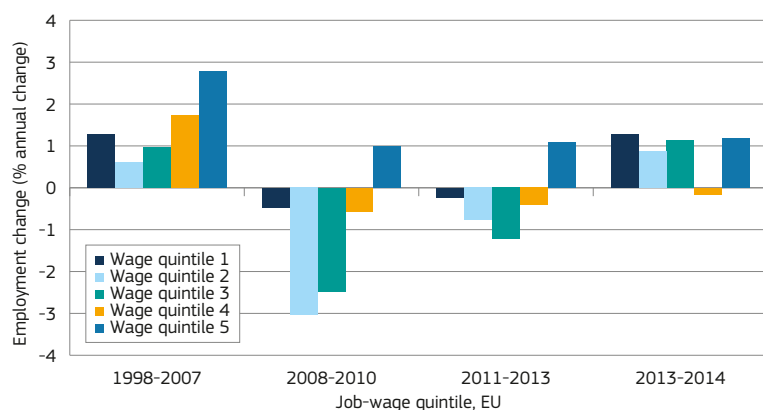
<sup>(8)</sup> Under a low activity growth scenario the EU will see employment growth turn negative around 2021 (Chart 1, EC-ESDE 2014, Chapter 2).

<sup>(9)</sup> van Ark et al. (2013).

<sup>(10)</sup> Timmer et al. (2013); Krusell et al. (2000); DG EMPL’s Labour Market Model incorporates the capital–skills–complementarity, see Berger et al. (2009), p. 3.

<sup>(11)</sup> [http://ec.europa.eu/europe2020/pdf/2015/ags2015\\_en.pdf](http://ec.europa.eu/europe2020/pdf/2015/ags2015_en.pdf)

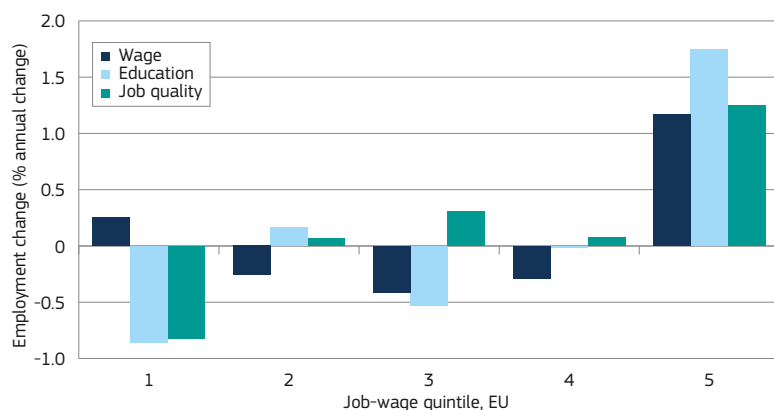
Chart 1: Employment change (% per annum), EU, by job-wage quintile



Reading note: EU-27 for 2008-2014 (HR not included), EU-23 for 1998-2007 (PL, RO, MT, BG missing). Quarter two employment data used for each year post-2008, annual data for 1998-2007. The changes do not add up to zero.

Sources: EU-LFS, Structure of Earning Survey (Eurofound calculations).

Chart 2: Annual employment change (%), EU 2011-2014, by job wage, education attainment and job quality quintiles



Reading note: Second quarter data in each year. Due to sample limitations, the third, multidimensional 'job quality' indicator derived from the Fifth European Working Conditions survey was not able to generate rank estimates for jobs accounting for c. 8% of employment. The education attainment according to ISCED.

Source: Eurofound 2015, <http://www.eurofound.europa.eu/publications/report/2015/labour-market/upgrading-or-polarisation-long-term-and-global-shifts-in-the-employment-structure-european-jobs>, p. 93. Data from: EU-LFS, Structure of Earning Survey, 5<sup>th</sup> EWCS (Eurofound calculations).

In the period of employment expansion prior to the financial crisis (1998-2007), employment grew across job-wage quintiles<sup>(12)</sup>, but strongly skewed towards jobs in the top two quintiles.

In the phase of sharp employment contraction (2008-2010), this trend continued with the higher quintile still acknowledging positive growth. Heaviest job losses were experienced in the middle of the wage distribution while the lowest quintile experienced more modest losses.

This pattern persisted during 2011-2013 though employment contraction

slowed down and the polarisation was correspondingly more muted.

In 2013-2014 job growth resumed on average in the EU-28<sup>(13)</sup>. While employment grew in the lowest and highest-paid jobs, the pattern is quite distinct from the asymmetrical polarisation of the earlier two periods. Perhaps the most interesting feature is that the largest share of net new employment created since 2013Q2 has been in the bottom three job-wage quintiles.

<sup>(13)</sup> According to Eurostat LFS data, the increase was just over 1.2 million. This however does not take account of a very significant break in the Romanian data in 2013-2014 apparently based on census revisions. We make an adjustment in this report to take account of the more likely real employment shifts in Romania. The practical impact of this is to reduce estimates of total employment in Romania prior to 2014 by c. 600 000. This therefore raises our estimate of net employment growth in Romania and in the EU-28 as a whole.

The debate about shifts in the employment structure in developed economies has largely been oriented around two main patterns of change: 'skill-biased technological change' in the case of upgrading and 'task-biased technological change' in the case of polarisation. With upgrading employment shifts, the patterns we expect to see are a more or less linear improvement in the employment structure with greatest employment growth in high-paid (or -skilled) jobs and weakest growth in low-paid (or -skilled) jobs with moderate growth in the middle. With polarisation, the main difference is that the relative positions in terms of employment dynamics of the middle and bottom of the job distribution would be swapped; employment growth is weakest in the middle and relatively stronger at both ends of the job distribution leading to a 'shrinking' or 'hollowing middle'.

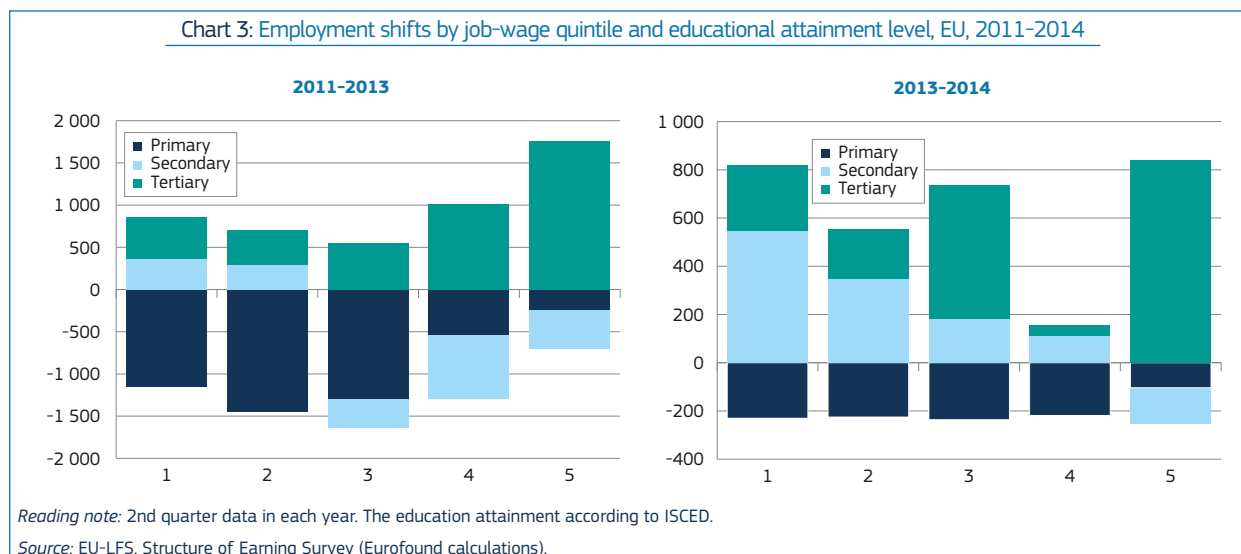
The main explanation of the differences in the two accounts is the contention by exponents of 'task-biased technological change' that those jobs most vulnerable to technological displacement are routine jobs (clerical and manufacturing / production) which happen to predominate in the middle of the wage distribution in developed economies. Less-routine jobs are either less vulnerable to replacement by machines – for example, personal services – or are actively complemented by, and made more productive by new technology – such as knowledge-intensive professional services. These less-routine jobs tend to be more prevalent at either end of the wage distribution.

The most consistent finding of this type of jobs approach analysis is that there has been greater employment growth in well-paid jobs employing those with generally high education / training levels than in mid- or low-paid jobs. The shape of the observed employment shifts may depend on the criterion used: wages, education or a non-pecuniary job quality ranking (see Chart 2)<sup>(14)</sup>.

<sup>(14)</sup> The education ranking is based on the average achieved educational level of jobholders, using the ISCED-based highest achieved level of education variable (hatlev1d) in the EU-LFS. The job quality ranking is based on a multidimensional non-pecuniary job quality indicator based on answers to 38 questions in the 2010 European Working Conditions survey. For each indicator, jobs are assigned to quintiles in the start period (2011) based on the specific ranking criterion and weighted by employment to ensure that each quintile accounts for as close to possible 20% of employment as possible; the charts then show the shifts by quintile over the three-year period 2011-2014.

<sup>(12)</sup> Occupations are ranked by initial median wage and assigned to a quintile group on this basis, going from the top paying occupations in the 5<sup>th</sup> job-quintile group to the bottom paying occupations in the 1<sup>st</sup> job-quintile group. The figure shows the change in employment of each quintile over the time period.

Chart 3: Employment shifts by job-wage quintile and educational attainment level, EU, 2011-2014



There are some points of similarity between the three approaches. The top quintile is growing regardless of the approach, while job destruction is concentrated in the lower quintiles – in the middle for the wage-based distribution, and mainly in the 1<sup>st</sup> quintile for the education and job quality distribution. Both in terms of education and non-pecuniary job quality, the pattern has been one of occupational upgrading, with gains in the top quintile counterbalanced by declines in the bottom quintile<sup>(15)</sup>.

### 1.2.3. Educational attainment and job polarisation

Supporting evidence shows that net employment growth has benefitted tertiary level education graduates, especially in the top quintile. However, even in the lowest quintiles, graduates account for most employment growth. This raises the problem of possible over-qualification.

<sup>(15)</sup> The main reason for the (modest) differences between the three measures is that a large proportion of jobs in the middle of the wage distribution have a relative wage premium (a higher relative position in terms of wages than education or non-pecuniary job quality attributes) and that these jobs have been responsible for a large share of overall job destruction during the crisis. For example, two of the largest-employing jobs in the EU are building / trades workers in construction and drivers / mobile plant operators in transport. Both are in the middle quintile (3) of the wage distribution but only the first or second quintile in terms of education or broader job quality. These archetypal blue-collar, male jobs have both shed employment throughout the period 2008-2014 and jobs like these contribute to explaining the differences between the three charts. Other important measures tend to show shifts in a more upgrading light, consistent with the predictions of skill-biased technological change (see Oesch, 2013). The jobs that have been disproportionately affected by employment loss during the crisis have been primarily blue-collar, mid-paying jobs that do not require high levels of formal education.

During the recession, job destruction mostly affected those with lower-level qualifications. As aggregate employment growth returned in 2013-2014 and some labour markets began to tighten, the chances to secure employment increased for those with completed secondary education. This growth was not limited to the lowest quintile – though it was highest here – but included jobs in the middle and mid-upper quintiles.

The transformation of the workforce in terms of educational attainment over the most recent period of 3 years was significant (see Chart 3), reflecting older generations with lower levels of education leaving the labour market replaced by better-educated younger and core-age workers and also working-age less educated workers becoming unemployed and being unable to find work after the crisis<sup>(16)</sup>. There were in 2014 over 6 million more graduates in employment in the EU compared to 3 years previously. The speed of this transformation appears to be most rapid during periods of net employment destruction which disproportionately affect low- and mid-skilled workers while favouring, in relative terms, graduates.

### 1.3. Where the EU stands

It is useful to briefly look at the state of play of the EU from a skills perspective, in order to understand how the EU performs in terms of skills compared to

<sup>(16)</sup> It is useful to remember the positive role that early childhood education and care (ECEC) plays as concerns children's educational attainment later in life, with positive consequences for the labour market participation, particularly for children from disadvantaged backgrounds. However, this goes beyond the scope of this analysis.

its world competitors, and where it needs to improve.

Looking at average PISA scores for the five key skills, the EU has an overall level of skills which is similar to countries like the United States, Canada and Australia, but lower than Japan and Korea, with differences among countries. There is a high correlation in the rankings of the different dimensions. For all five scores one can see a slightly skewed distribution of the averages with a tail toward the higher scores. The city of Shanghai, China outperforms other countries by a large amount in all four skills.

There is a great deal of variation when comparing the EU Member States for all the five skills tested by PISA. The differences between the best averages and the worst performers are quite high. All EU Member States score below the 7 Asian countries, but are more in line with Canada, Australia, New Zealand and the United States.

Chart 4 shows different paths in the evolution of PISA scores over the last three waves, in 2006, 2009 and 2012. The annualised change in score for the three main skills tested, mathematics, reading and science, shows a very different picture in the EU: while some Member States made constant progress on average for one or all the three scores, others registered a continuous decrease. As Chart 4 shows, the increase in three scores was registered by 'low performers' in the EU like Romania and Bulgaria, while good performers like the Netherlands and Finland decreased their scores. On the other hand, good performers like Germany and Poland increased while low performers like Sweden, decreased.



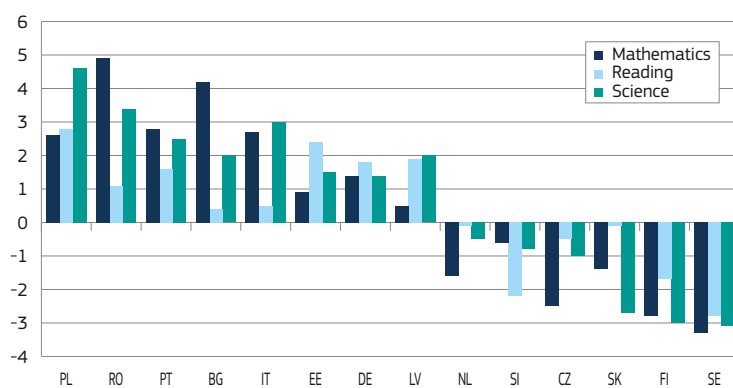
Table 1: PISA 2012 survey – the average scores for the five skills tested for EU Member States and 10 extra EU economies

	Mathematics	Reading	Science	Problem solving	Financial literacy
Shanghai-China	613	570	580	536	603
Singapore	573	542	551	562	
Hong Kong-China	561	545	555	540	
Chinese Taipei	560	523	523	534	
Korea	554	536	538	561	
Macao-China	538	509	521	540	
Japan	536	538	547	552	
Netherlands	523	511	522	511	
Estonia	521	516	541	515	529
Finland	519	524	545	523	
Poland	518	518	526	481	510
Canada	518	523	525	526	
Belgium	515	509	505	508	541
Germany	514	508	524	509	
Austria	506	490	506	506	
Australia	504	512	521	523	526
Ireland	501	523	522	498	
Slovenia	501	481	514	476	485
New Zealand	500	512	516		520
Denmark	500	496	498	497	
Czech Republic	499	493	508	509	513
France	495	505	499	511	486
United Kingdom	494	499	514	517	
<b>OECD - average</b>	<b>494</b>	<b>496</b>	<b>501</b>	<b>500</b>	<b>500</b>
Latvia	491	489	502		501
Luxembourg	490	488	491		
Portugal	487	488	489	494	
Italy	485	490	494	510	466
Spain	484	488	496	477	484
Slovak Republic	482	463	471	483	470
United States	481	498	497	508	492
Lithuania	479	477	496		
Sweden	478	483	485	491	
Hungary	477	488	494	459	
Croatia	471	485	491	466	480
Greece	453	477	467		
Romania	445	438	439		
Cyprus	440	449	438	445	
Bulgaria	439	436	446	402	

Reading notes: The table presents the scores for 10 non-EU countries and for the 28 EU Member States. Non-EU entities are seven Asian geographic regions; the other three are Canada, Australia and the United States. Countries are listed in descending order following the score in mathematics. The colour coding [dark green: >540], [light green: 510 – 540], [yellow: 480 – 510], [orange: 450 – 480] [red: <450].

Source: OECD, PISA 2012 – ranking.

Chart 4: Change in all three PISA scores, between 2006 and 2012



Source: OECD – PISA 2012 survey.



The Survey of Adult Skills (PIAAC) assesses the proficiency of adults from age 16 onwards in three basic skills: literacy, numeracy and problem solving in technology-rich environments. These skills are ‘key information-processing competencies’ that are relevant to adults in many social contexts and work situations, and necessary for fully integrating and participating in the labour market, education and training, and social and civic life. In addition, the survey collects a range of information on the reading- and numeracy-related activities of respondents, the use of information and communication technologies at work and in everyday life, and on a range of generic skills, such as collaborating with others and organising one’s time, required of individuals in their work. Respondents are also asked whether their skills and qualifications match their work requirements and whether they have autonomy over key aspects of their work.

The table shows that for the EU Member States the three scores range from 288 in Finland to 250 in Italy for literacy, from 282 in Finland to 246 in Spain for numeracy and from 289 in Finland to 275 in Poland for problem solving. Again, as for the scores in PISA, there is a high level of correlation between the three scores; all countries tend to preserve the ranking in one score for the other two. Japan outperforms the rest of the participants in all three tests, while Finland is the top EU performer for all the three scores. In general, the 2012 survey shows that many EU Member States perform below the OECD average. Best performing countries include Japan and a few EU countries, including Finland and Belgium (Flanders only).

Many adults have satisfactory or good skills. However, on average, one in five adults in EU countries display a low level of skills in literacy and one in four have similarly low levels of skills in numeracy. When it comes to very high skills, only a handful of Member States are able to match the performance of the best non-EU countries, such as Japan or Australia. While in some countries it is mainly the older age groups that show very low skill levels, in others it seems that also younger groups perform rather poorly (e.g. in Cyprus and the United Kingdom). Moreover, the survey results confirm that proficiency is strongly related to parental education and to migrant status, but to a different extent across countries.

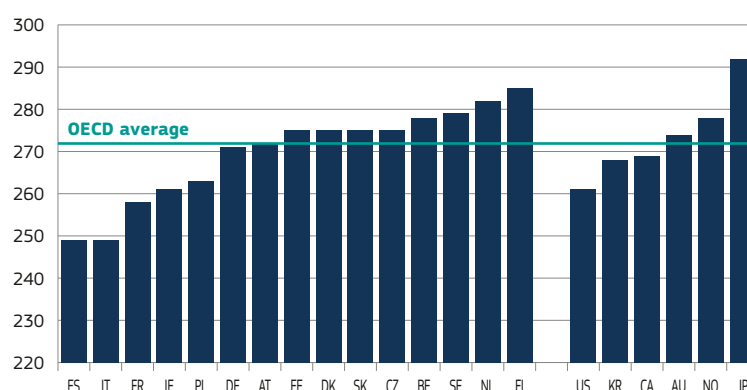
Table 2: PIAAC results on the three skills for 18 EU Member States, two EU geographical regions, four non-EU countries and the OECD average

	Literacy	Numeracy	Problem solving
Japan	296	288	294
Finland	288	282	289
Netherlands	284	280	286
Australia	280	268	289
Sweden	279	279	288
Estonia	276	273	278
Flanders (Belgium)	275	280	281
Czech Republic	274	276	283
Slovakia	274	276	281
Canada	273	265	282
OECD Average	273	269	283
Republic of Korea	273	263	283
England and N. Ireland (UK)	272	262	280
Denmark	271	278	283
Germany	270	272	283
United States	270	253	277
Austria	269	275	284
Poland	267	260	275
Ireland	267	256	277
France	262	254	
Spain	252	246	
Italy	250	247	

Reading note: Problem solving was not tested in France, Spain and Italy.

Source: PIAAC.

Chart 5: Average scores in literacy and numeracy among adults aged 27 and over, 2012



Source: PIAAC.

The average performance in the three scores decreases with the age group (see Table 8, Table 11 and Table 14 in the Annex of this chapter) having in general a maximum either for the 20-24 age group or for the 25-29 group in almost all countries. The average difference between the maximum and the minimum average scores for the 10 different age groups (from 16-19 to 60-64) in literacy ranges from under 2 points in Slovakia to more than 5 points in Finland. There is a similar picture for numeracy and problem solving, while the decrease linked to age is stronger for problem solving capacities.

The survey also shows interesting variations depending on gender or socio-economic background (see Table 9, Table 12 and Table 15 in the Annex of this chapter). For the difference by gender, most of the countries show statistically significant differences for all three skills in favour of men, ranging from around a non-significant 2 points in Poland to 17 points in Germany for numeracy. Concerning the socio-economic background, in literacy for example, the average difference between adults with high and low-educated parents ranges from around 17 points in Cyprus to 57 points in Germany. Almost all of the EU Member States display a difference of more than 25 points.

## 2. THE CHALLENGE OF SKILL MISMATCHES

A smooth functioning of labour markets relies on a match between the skills possessed by the labour force and the skills requested by employers. When workers have either fewer or more skills than jobs require, skills mismatch occurs. Some mismatch is inevitable, as the labour market involves complex decisions by employers and workers and depends on many external factors. In particular, in a dynamic, continuously changing economy, there are always some unfilled positions even if some people remain unemployed; and there are always some individuals who are in a job that does not fully match their skills profile. However, high and persistent skills mismatch is costly for employers, workers and society at large. Skill mismatch has become more prominent in the crisis. However, it is primarily a structural issue and as such it already existed prior to the recent global economic slowdown.

### 2.1. Dimensions of skill mismatch

Skill mismatches encompass a range of different phenomena. One strand of the literature on this subject focuses on the divergence between the skills of individuals that are available for work (in its strictest sense: the unemployed) and the skills sought by employers (in its strictest sense: current vacancies). Usually this type of skills mismatch is studied along broad qualification levels, which hide a wide diversity of different field of training and specific skills profiles. Another approach focuses on occupational mismatches, i.e. whether job holders, are 'correctly matched' with their job's skill requirements.

Employers often report shortages for specific skills. Although some of these difficulties are related to absence genuine supply shortage of skills required in specific sectors, occupations and regions, they can often be explained by factors other than skills, such as uncompetitive wages, unattractive working conditions, poor recruitment policies and/or mismatch between the location of skills and jobs. This will be further explained in Section 2.2.

Another strand of literature on skills mismatches focuses on skills mismatch on-the-job, which means that an individual

has different skills or qualifications than his/her job requires. Over the crisis period, many tertiary-educated workers (in particular recent graduates) were reported to accept non-graduate jobs. This led to additional concerns that these higher-qualified workers would crowd out less-qualified workers, who were correctly matched, and further aggravate the labour market situation of less-qualified workers which were already hit hardest by the crisis.

Flisi et al. (2014) offer a useful discussion of the dimensions of mismatch and the variables used in its measurement, specifically distinguishing between skills and qualifications. Skills are qualities possessed by individuals such as e.g. literacy, numeracy, problem solving, proficiency information processing, technological processes or abilities to perform manual tasks. Qualifications, on the other hand, refer to educational attainment and the competencies formally attested by education diplomas yet not necessarily demonstrated during tests<sup>(17)</sup>.

A major challenge in measuring skill mismatch however concerns the complexity of determining what skills or education levels are really needed to perform a certain job. Measurement error may lead to misleading conclusions, and this has been especially the case in the literature on over-qualification. This topic will be further developed in Section 2.3.

### 2.2. Skill shortages

Skill shortages occur when there are not enough individuals with the required skills within the economy to fill existing vacancies under prevailing market wages and working conditions (and within a reasonable location) (Shah and Burke, 2003; Cedefop, 2010; Barnow et al., 2013). More refined definitions have been proposed to incorporate training lead times, dynamic interactions between skill demand and supply, the complexity of a vacancy, the time it takes for a shortage to clear in reaction to market signals and other important elements (Richardson, 2007). This definition assumes that the prevailing wages and working conditions are set appropriately to the conditions in the labour market and that the labour market is functioning efficiently and effectively.

This rules out the situation where firms are, for one of a number of reasons, offering wages below the appropriate market clearing level. Genuine shortages usually occur when the last condition does not hold and there is some form of market failure (Booth and Snower, 1996). Market failures may be due to restricted access to capital markets, poaching externalities (Stevens, 1999) and coordination failures (Acemoglu, 2001), to name a few. In these cases, the prevailing wage offers will fail to lead to the optimal investment in skills. Other market imperfections may mean that skills are sub-optimally allocated – for example, if some firms engage in rent-seeking behaviour they are able to set a wage higher than could be offered in other firms or industries, even though the social value of those skills would be greater if employed in competitive, non-rent seeking markets.

Within skills shortages, there is a conceptual difference between qualitative skill shortages and quantitative labour shortages (Sattinger, 2013; Abraham, 2015; Kahn, 2015). Quantitative labour shortages point to an absolute lack of workers in the labour market<sup>(18)</sup> and arise when there is an overall increase in labour demand in an economy, as a result of economic growth or structural changes in an economy, without a commensurate increase in labour supply. For example, in the context of the ongoing adverse demographic evolution in many advanced economies (or, in some cases, because of emigration) a declining working-age population is anticipated (Peschner and Fotakis, 2014). Some specific age or skill groups are more likely to be characterised by low participation rates, accentuating labour shortages, such as workers in possession of medium- or low-skill levels or the elderly close to statutory retirement age (Cedefop, 2012). Or, also, low participation rates may be a response to the existing labour market and the actual wage levels being lower than the equilibrium level.

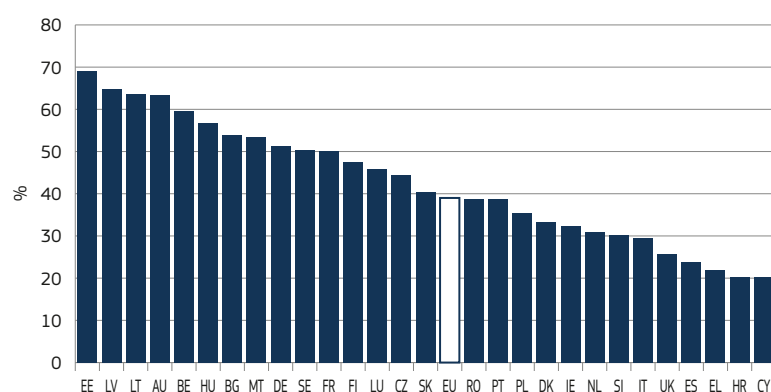
#### 2.2.1. Incidence of skill shortages in Europe

In contrast to the quantitative differences, qualitative mismatch relates to the types

<sup>(18)</sup> To be more precise, when demand exceeds supply, this could also point to wages being lower than the equilibrium level. There are also potential market failure problems that might affect the supply side – for example, where demand exceeds supply in one market where workers could efficiently move into this market, but are prevented from doing so for some reasons.

<sup>(17)</sup> See e.g. <http://www.cedefop.europa.eu/en/events-and-projects/projects/analysing-skill-mismatch-for-more-recent-work-by-CEDEFOP-on-skill-mismatch>.

Chart 6: Difficulties finding staff with required skills in European firms, 2013, EU-28



*Reading note:* Proportion of establishments replying affirmatively to the question 'Did your establishment encounter difficulties in finding staff with the required skills?'

*Source:* Third European Company Survey (2013), Eurofound 2013c.

of skills that have been invested in. A high share of EU firms report difficulties finding the right mix of skills – Chart 6. The 2008 financial and economic crisis has increased unemployment in the EU to unprecedented levels, yet a range of surveys frequently indicate that a significant share of employers have difficulties finding job candidates to fill their vacancies. The latest European Company Survey, in spring 2013, found that about 4 out of 10 (39%) firms in the EU had difficulties finding staff with the right skills. As is shown in Chart 6 these skill shortages vary markedly across EU Member States. Over 60% of establishments in Austria and the Baltic states have difficulties finding suitably skilled employees, compared to less than 25% in Croatia, Cyprus, Greece and Spain (Eurofound, 2013a) <sup>(19)</sup>.

Genuine skill shortages constitute a barrier to innovation and labour productivity. They can lead to a loss of competitiveness as wage rates are bid up, especially if they predominantly affect growing or dynamic EU enterprises (UKCES, 2011; Healy et al., 2015). More than half of the global employers surveyed as part of the Manpower Talent surveys in 2014 stated that talent shortages significantly impact

their ability to meet client needs. 40% said that shortages reduce their competitiveness and productivity (Manpower, 2014). Haskel and Martin (1996) have also estimated that skill shortages reduced annual productivity growth in the United Kingdom by 0.4 percentage points over the period 1983–1989. Bennett and McGuinness (2009) reported that output per worker was lower in high-tech Irish firms with hard-to-fill vacancies.

To the extent that skill shortages inhibit the productivity of companies, appropriate policy responses are required to enable the faster and more efficient matching of individuals with available job vacancies.

A first step is to identify and measure skill shortages correctly. The measurement, however, is hampered by the lack of comparable data. As a result, researchers and policy makers often rely on partial indicators, such as subjective assessments by employers on 'situations where there is a large share of difficult to fill vacancies due to an absence of applicants with the right knowledge, skills and competences' (UKCES, 2014). Such partial indicators may however mask a multitude of other factors. Next to 'genuine' skills shortages, common factors cited to explain employers' difficulties in filling vacancies include preference or job mismatch (e.g. individuals not willing to accept jobs or high labour turnover induced due to poor wage and working conditions), informational mismatch (e.g. limited dissemination of vacancies; poor job networks of individuals) and barriers to geographical mobility (European Commission, 2014b; de Beer et al., 2015). Hence, only part of the identified skill shortages can be attributed to 'genuine' skills shortages.

Challenges in meeting replacement needs of the labour market, mainly in jobs requiring medium and lower skills, are also often mentioned (Cedefop, 2012). The inability to meet replacement demand needs is typically attributed to the demanding job preferences of increasingly higher-educated cohorts of young European citizens, the lack of attractiveness of certain vocational education and training (VET) streams (Cedefop, 2014), as well as the poor image of specific sectors and occupations.

Those skill shortages that are 'genuine' may refer not only to technical competences, but also to generic or non-cognitive skills, or to work experience. About one third of employers in the Manpower Talent surveys attribute recruitment bottlenecks to the lack of technical competences (hard skills) of individuals, while 20–25% identify a lack of generic skills and of work experience as culprits (Manpower, 2014).

To devise the 'right' policy mix, it is critical for policy-makers and employers alike to be able to identify the underlying source of recruitment bottlenecks and to filter through a variety of different labour market signals (e.g. trends in vacancies, employment rates, wages, average hours worked, etc.) that point to the occurrence of emerging skill shortages.

A recent analysis of available European data sources <sup>(20)</sup>, undertaken by the European Centre for the Development of Vocational Training (Cedefop), confirms that only a subset of the total vacancy bottlenecks of firms can be genuinely attributed to skill deficits of job applicants (Cedefop, 2015a). Focusing on a selected sample of European firms that had recently recruited higher-education graduates, the analysis finds that about one third to a half of employers' total reported recruitment difficulties constitute genuine skill shortages. About 29% reflect the offer of uncompetitive starting salaries, while a smaller part (13%) is due to inefficient

<sup>(19)</sup> Claims of skill shortages are also widespread in the public media and in the policy discourse, spurred by reports of manpower or consultancy firms. For example, the annual Manpower Talent surveys, undertaken by the company Manpower using a sample of over 37,000 employers from 42 countries in the world, regularly report that more than a third of employers experience difficulties in filling their jobs (Manpower, 2014). It is worth noting that such survey evidence should be treated with some caution – employers would of course always prefer to recruit from a larger pool of skilled workers willing to work at as low a wage as possible. These types of surveys may simply be picking up this attitude, rather than a genuine skill shortage caused by some form of market failure in the provision of suitably skilled workers.

<sup>(20)</sup> The empirical findings described in this Section are based on an analysis of data from three European employer surveys, namely: the European Company Survey, a representative survey of about 30,000 companies in 32 European countries; the 304 Flash Eurobarometer on 'Employers' perception of graduate employability' ([http://ec.europa.eu/public\\_opinion/flash/fl\\_304\\_en.pdf](http://ec.europa.eu/public_opinion/flash/fl_304_en.pdf)) which provides insights into the skill needs of about 7,000 recruiters of higher-education graduates in 2010; and the 196 Flash Eurobarometer survey ([http://ec.europa.eu/public\\_opinion/flash/fl196\\_en.pdf](http://ec.europa.eu/public_opinion/flash/fl196_en.pdf)), carried out in 2006, which focused on constraints to the growth of SMEs (including the lack of skilled labour).

human resource management by firms, which includes the fact that employers do not offer a competitive graduate training and development programme or that the hiring process is slow. Apart from masking an underlying inability of firms to offer the going pay rate for the skills sought, employers also frequently confound other significant constraints to the firm (e.g. lack of access to finance, administrative barriers) with perceptions of skill shortages.

Cedefop's analysis reveals that employers are more likely to experience difficulties filling their vacancies when the jobs offered are of poorer quality, such as when they provide a precarious employment

contract or rely on atypical working hours and bad working conditions (Table 3). There is a significant positive association between employers' self-reported difficulties in filling jobs, particularly when concerning high-skilled posts within the firm, and their propensity to hire casual or temporary labour as part of their staff (e.g. temporary agency workers; staff with fixed-term contracts; freelancers).

Finally, the analysis shows that companies experiencing skill shortages are more likely to have expanded their staffing capacity (e.g. due to higher demand for their products and services) while recruitment difficulties are also correlated with the

adoption of new methods of organising their work processes in the recent past. They are more likely to rely on high-performance workplace practices (HPWPs), while Cedefop (2015a) also shows that the prevalence of skill shortage is related to product market strategies that focus on the improvement of their products' quality (although the nature of the causality cannot be established with the data at hand). In this case skills shortages are more likely to reflect business success rather than the firm's fundamental inability to attract skilled labour (e.g. due to bad reputation or an undesirable location or other inefficient HR strategies) (UKCES, 2011; Healy et al., 2015).

Table 3: Determinants of probability of establishments facing difficulties in finding staff for skilled or low-skilled/unskilled jobs, EU-27, 2009

	High skilled jobs	Low skilled/unskilled jobs
<b>Casual or atypical workforce</b>	0.029***	0.008***
(temporary agency, freelances, fixed-term)	(0.005)	(0.003)
<b>Variable pay</b> (PRP, profit-sharing, employee share ownership)	0.010**	-0.002
	(0.004)	(0.003)
<b>High performance workplace practices</b>	0.016**	0.001
(time flexibility, teamwork, training, OSH committee)	(0.006)	(0.004)
<b>Changes in establishment in last 3 years</b>	0.022***	0.012***
(remuneration scheme, work processes, working time, restructuring measures)	(0.005)	(0.002)
<b>Atypical hours</b> (work on weekends, nights, shifts)	0.012***	0.013***
	(0.003)	(0.003)
	(0.018)	(0.006)
Public sector	-0.070***	-0.024**
	(0.021)	(0.012)
Composition of workforce		
Proportion of female employees	-0.085***	0.035***
	(0.022)	(0.013)
Proportion of employees who work in high-skilled jobs	0.019	-0.095***
	(0.019)	(0.018)
	(0.036)	(0.025)
Proportion of employees who worked overtime in past 12 months	0.080***	0.021**
	(0.020)	(0.010)
Proportion of employees covered by collective wage agreement	-0.007	-0.020***
	(0.020)	(0.006)
Change in size of establishment in past 3 years		
- Decreased	-0.065***	-0.006
	(0.023)	(0.008)
- Stayed about the same	-0.048***	0.001
(omitted: Increased)	(0.017)	(0.007)
<i>N</i>	18,975	18,808
Log-likelihood	-11881.64	-5812.5881
Pseudo R2	0.06	0.08

*Reading note:* Marginal effects of probit estimates at the variable mean for continuous variables and for discrete changes of categorical variables; Robust standard errors in parentheses, clustered for country in EU-27 sample; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; Dependent variable in column (1): a dummy variable = 1 if the establishment encounters any of the following problems related to personnel? Difficulties in finding staff for skilled jobs. Column (2): Difficulties in finding staff for low skilled/unskilled jobs. Variables included in the regression are principal component factors constructed as follows (for further details see Cedefop, 2015a). Other control variables include: a single independent company or organisation; share of employees working part-time; size of establishment; industry dummies (NACE Rev.1.1); country dummies.

Source: Second European Company Survey; Cedefop estimations; Cedefop (2015a).



Skill shortages are also subject to cyclical fluctuations. After the onset of the crisis, skills shortages declined in the EU. This was an outcome of the declining average number of job vacancies in the EU economy, accompanied by the considerably greater supply of available workers per vacancy<sup>(21)</sup>. As economic activity slowly rebounded in recent years, the downward trend of skill shortages has been slightly reversed since 2011, but the incidence of skills shortages remains below its pre-crisis level.

Several additional indicators and data sources tend to reveal that labour and skill shortages have been subdued, on average, during the recent period of slow growth. For instance, evidence from Cedefop's European Skills and Jobs (ESJ) Survey<sup>(22)</sup> (see Chart 8) shows that the chances of recent cohorts of job finders suffering from under-skilling (i.e. having lower skills than needed by their jobs) at the time of entry to their job have declined relative to previous cohorts. By contrast, a higher share of recent job finders and graduates, who have found employment in the post-crisis era, report that they are over-skilled for their jobs<sup>(23)</sup>.

If shortages of skilled workers exist in a competitive economy, economic theory predicts that the wages of the currently employed should exhibit an increasing trend over time. However, with the exception of a few countries (e.g. Finland, Germany, the Netherlands, Belgium and Austria) the growth in the mean level of gross wages of the employed has been stagnant or has

declined in the post-crisis period. Some have relied on the absence of evidence of rising pressure in the median wage to argue that this constitutes evidence that employers' claims of skill shortages are 'overblown' (Burtless, 2014). Nevertheless, other authors have cautioned that this line of reasoning is potentially simplistic and erroneous, given that it is not the skills of the median worker that are in short supply, but those of specific groups of workers employed in sectors where new technologies or structural economic changes pose greater demand for specialised and rapidly changing skills (e.g. nursing, information specialists, software analysts) (Bessen, 2014). Moreover, rising wages would not distinguish between genuine and other forms of mismatch – in the non-genuine cases, wages might just have been too low to fill vacancies – rising wages would then be expected to correct, but the initial situation was not one of mismatch. Similarly, focussing only on wages in broad occupational groups or in

state/metropolitan areas also masks the intrinsic wage dispersion taking place *within* many occupations or geographical areas, particularly those affected mostly by information technologies. Furthermore, in many European Member States the determination of wages is not solely determined by free market forces (e.g. administrative pay scales, collective bargaining), which may also confound the automatic adjustment of wages that would be expected in the presence of skill shortages.

In the majority of EU countries, employers reported that difficulties in filling their vacancies fell during the period of the economic crisis (see Chart 9). Nevertheless, there are some countries, namely Austria, Germany, Greece, Hungary, Italy, Romania, Sweden and the United Kingdom, where firms experienced increasing challenges in finding suitable talent in the post-crisis era. By contrast, in some Member States (e.g. Belgium, the Czech Republic, Spain,

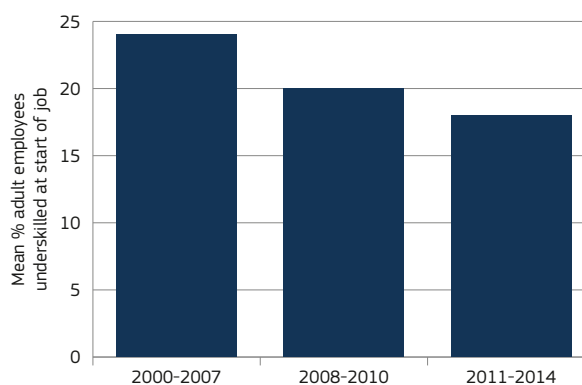
Chart 7: Shortage of skilled labour, 2000-2014, EU



Reading note: Responses to the question 'Skilled labour is readily available'.

Sources: IMD WCY (2014); Cedefop's analysis.

Chart 8: Average share of adult employees (aged 24-65) under-skilled at start of job by period of job entry, EU-28, 2014



Reading notes: Share of adult employees with positive response to question: 'When you started your job with your current employer, overall, how would you best describe your skills in relation to what was required to do your job at that time? Some of my skills were lower than required by my job and needed to be further developed'; The period of job entry is determined by answers to the question 'How many years in total have you been working for your current employer?'

Source: European Skills and Jobs (ESJ) survey, Cedefop (2015b).

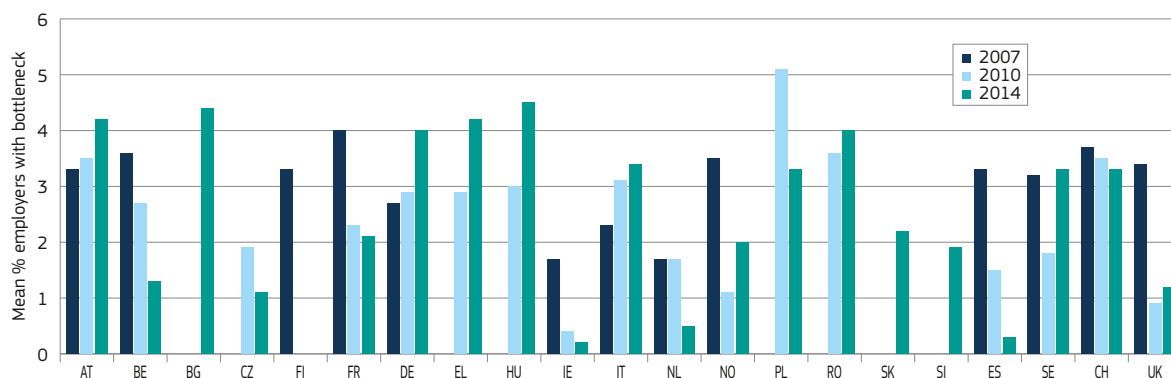
<sup>(21)</sup> For example, there were about 142 unemployed individuals per vacancy in Greece in 2013. At the other end of the spectrum, 2.5 individuals corresponded to a given vacancy in Germany (European Commission, 2014d).

<sup>(22)</sup> The ESJ is a new European survey, carried out in 2014 in all 28 EU Member States, that collects information on the match of the skills of about 49,000 EU workers (adults aged 24-65) with the skill needs of their jobs. It provides a first insight of the dynamics of qualification and skill mismatch in the EU, focusing on the interplay between changes in the (cognitive and non-cognitive) skills of employees in their jobs as well as the changing skill needs and complexities of their jobs. The survey also focuses on the role of European policies on initial (e.g. work-based learning) and continuing VET (e.g. formal, non-formal and informal training) and on workplace design for mitigating skill mismatch. The survey findings will be published in 2015. For more information, see <http://www.cedefop.europa.eu/en/news-and-press/news/cedefop-launches-european-skills-survey-eu-skills>

<sup>(23)</sup> It must be borne in mind, though, that this comparison may be subject to compositional bias, given that it is likely to be the most skilled of the unemployed who have found a job in the post-crisis period while the least skilled of the graduates and job finders who entered into employment in the pre-crisis era will have been the first to be laid off as a result of the fall in economic activity.



Chart 9: Vacancy bottlenecks of employers, 2007-2014, EU-19 + CH + NO



Reading note: Share of employers reporting difficulty filling jobs i.e. a vacancy bottleneck.

Sources: Manpower Talent surveys (2007, 2010, 2014); For some countries (e.g. HU, SI, SK, BG, FI, CZ) the survey took place after 2010. Cedefop's analysis.

Table 4: Trend towards shortages of skilled labour, 2011-2014, EU-18 + Norway

	Increasing unemployment	No significant change in unemployment	Decreasing unemployment
Increasing bottlenecks	AT	–	HU
No significant change in bottlenecks	EL, FR, IT, NO	BG, PL, RO, SE, SK	DE, UK
Decreasing bottlenecks	BE, NL, SI	CZ, ES	IE

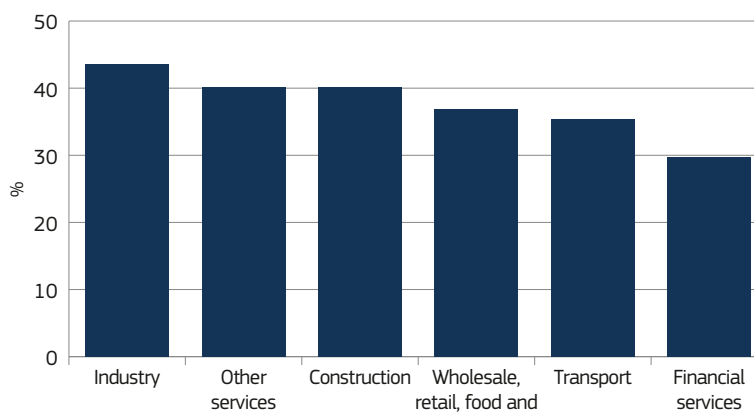
Reading note: An increasing or decreasing bottleneck is identified on the basis of the significance of a time trend of employers' stated difficulties in filling jobs and of annual unemployment rates in the specified time period. For some countries (e.g. HU, SI, SK, BG, CZ) the Manpower Talent survey took place after 2010, so even though there is no information prior to 2010 (as shown in Chart 9) a time series of data is available between 2011-2014. Data is only available for 18 EU Member States and Norway.

Sources: Manpower Talent surveys; Eurostat [variable: une\_rt\_a]; Cedefop's analysis.

Ireland), employers have continued to find it increasingly easier to fill their jobs even after 2010.

Data indicate that Hungary, in particular, but also Germany and the United Kingdom have seen a falling trend in unemployment rates in the post-crisis period (2011-2014) in tandem with increasing or unchanged difficulties faced by employers in finding talent. This reflects the increased difficulty in finding the skills set desired by employers within the shrinking pool of job applicants, but could also mean widening gaps between the skill supply and demand even after tightening labour market conditions are taken into account. In Austria, as well as Greece, France, Italy and Norway, rising or stable bottlenecks have coincided with an increasing trend towards higher unemployment. On the other hand, companies in Belgium, the Netherlands and Slovenia have, overall, found it easier to fill their vacancies, presumably due to an increasing supply of readily available skilled labour in the job market. Only in Ireland are signs of a healthy recovery evident, since a larger availability of jobs has been accompanied by a greater easiness by firms to fill their open job posts with the existing labour.

Chart 10: Difficulty of EU firms finding employees with required skills by broad industry, 2013, EU-28



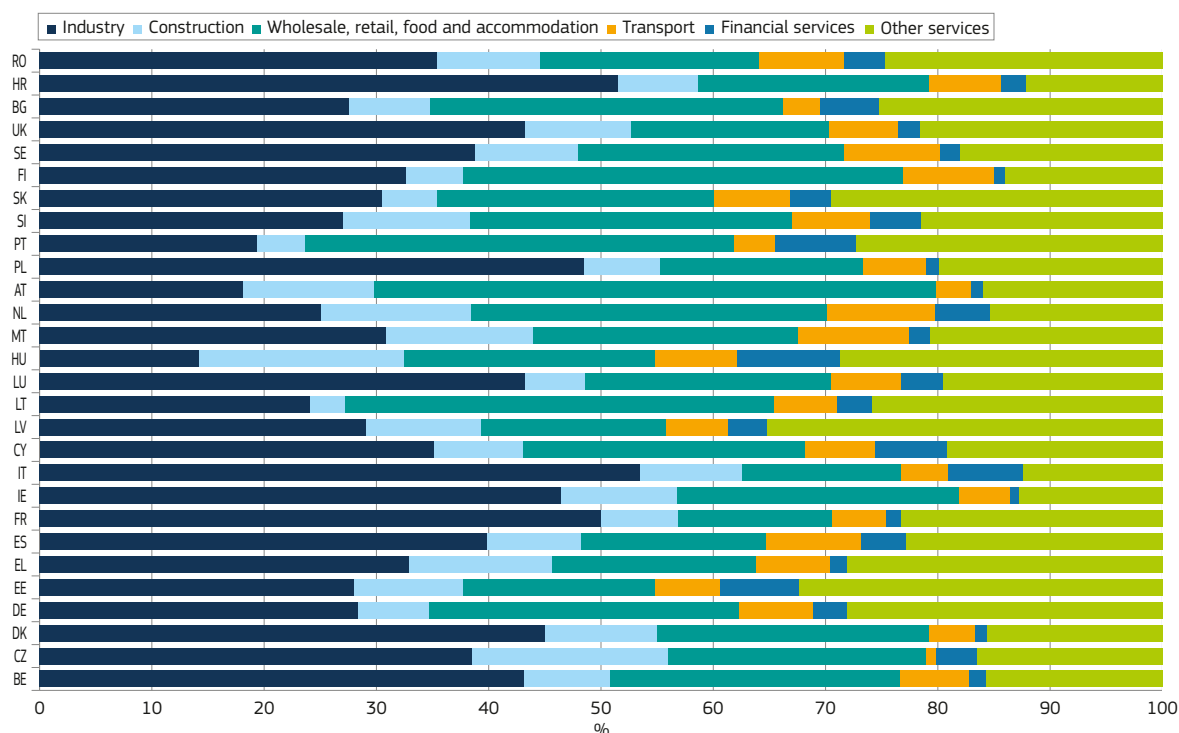
Source: Third European Company Survey (2013); data provided to Cedefop by Eurofound.

Specific skill shortages exist in particular sectors and occupations in EU Member States. Throughout Europe there is some consistency when it comes to sectors or occupational groups with vacancy bottlenecks and, possibly, skill shortages. For instance, difficulties finding workers with the required skills are most widely reported by EU employers (in excess of 40%) in the manufacturing and healthcare sectors and are least common (though still

quite high) in financial services (less than 30%), Chart 10 (24).

(24) Similar evidence is often cited in labour markets outside of the EU. For example, in a recent survey of manufacturing establishments in the US, more than 75% of manufacturers reported a moderate or severe shortage in highly skilled manufacturing human resources (Accenture and Manufacturing Institute, 2014). While in Australia, Healy et al. (2015) find that about 10% of establishments were affected in total by skill shortages in 2004/5, ranging from as high as 17% in the Construction sector to as low as 4% in Property and business services.

Chart 11: Distribution of skill shortages by broad economic sector and country, EU-28, 2013



Sources: Third European Company Survey (2013) Eurofound 2013c; Cedefop's calculations based on Eurofound data.

In the manufacturing sector, in particular, the shift to greener technologies has generated a significant need for specific engineering skills (e.g. electric engineering of hybrid cars, manipulation of light materials, product design) or for specific occupations (e.g. energy auditors, photovoltaic installers, insulation workers, environmental engineers, sheet metal workers) (Cedefop, 2011). The Green Employment Initiative (COM(2014) 446) identified a number of actions to allow skills policies to play an active role in supporting employment and job creation in the green economy. If a company lacks the skills to improve its resource efficiency, it will be trapped in using existing methods. Education and training systems are being used to enhance the supply of green skills within the workforce<sup>(25)</sup>. In most EU Member States which promote skills in this area, the support focuses on the company level<sup>(26)</sup>. Key success factors for building resource efficiency related skills and capacity within a company are found to be engaging at the personal level with company members; employing experienced trainers who have practical

knowledge of company processes; targeting teaching contents and materials to specific sectors, regions or types of companies; linking skills development with other support measures to support resource efficiency in businesses; and providing financial support through EU funding programs (e.g. European Social Fund, European Structural and Investment Fund).

In addition, the ICT sector is generally confronted by a lack of professionals in possession of highly technical skills, in areas such as ICT security and cloud computing (e.g. software analysts, Java and mobile apps programmers) (European Commission, 2012a). In particular, a growing shortage of ICT professionals and experts in Europe has been predicted, namely an estimated shortfall of as many as 900 000 professionals by 2020, which has facilitated the institution by the European Commission of the so-called 'Grand Coalition for Digital Jobs'<sup>(27)</sup>.

Chart 11 illustrates that recruitment bottlenecks vary considerably across different industries within EU Member States, reflecting their diversity in terms of economic structure, responsiveness of education and training systems, employer commitment to talent management and

the economic cycle. In the Czech Republic, Poland, Slovenia and Italy more than half of all establishments with hiring difficulties can be found in the Manufacturing sector. Luxembourg and Croatia have pronounced difficulties in Construction, while Cyprus, Greece and Ireland experience a disproportionate share of perceived skill shortages (relative to other EU Member States) in the Wholesale and retail trade sector. Latvia and Lithuania have greater domestic bottlenecks in the Transport sector.

Skill shortages are also often an issue of concern in particular occupational groups within industries. Based on a number of indicators of labour market pressure, such as the ratio of vacancies or of recruitments to unemployment, the European Commission's Recruitment and Vacancy Report (European Commission, 2014a) has identified occupations which are susceptible to labour market bottlenecks. Examples of sectors and occupations where employment demand has been consistently strong include mainly high-skilled vocational professionals in the ICT (e.g. software and applications developers), health (e.g. personal care workers in health services, nursing and midwifery professionals, medical doctors), engineering (e.g. mining, manufacturing and construction supervisors, process control technicians) and teaching.

<sup>(25)</sup> EU Skills Panorama (2014) Environmental awareness skills Analytical Highlight: [http://skillspanorama.cedefop.europa.eu/sites/default/files/EUSP\\_AH\\_Environmental\\_0.pdf](http://skillspanorama.cedefop.europa.eu/sites/default/files/EUSP_AH_Environmental_0.pdf)

<sup>(26)</sup> Ecologic (2015) A framework for Member States to support business in improving its resource efficiency: <http://www.ecologic.eu/node/12726>

<sup>(27)</sup> <https://ec.europa.eu/digital-agenda/en/grand-coalition-digital-jobs>

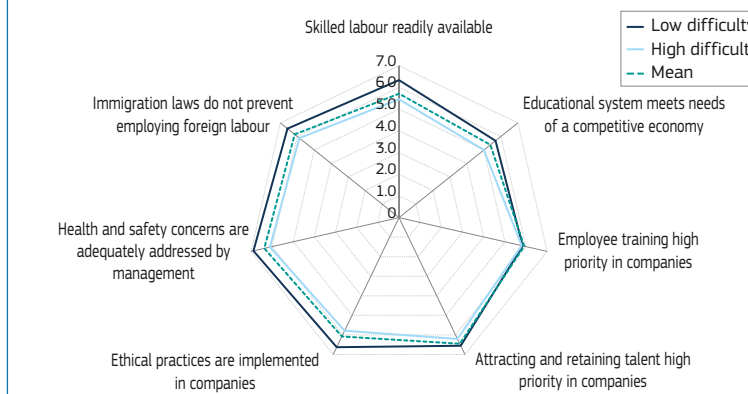
A further recent overview of bottleneck occupations across all EU Member States, carried out by the European Commission, has found that bottleneck vacancies do not only occur in high-skilled occupations but are also prevalent in skilled and low-skilled manual occupations (European Commission, 2014b). The top three bottleneck occupational groups, identified by the study, were metal, machinery and trade related workers, science and engineering professionals and ICT professionals. However, when analysed in detail, specific occupations experiencing shortages differ between Member States.

There are many factors influencing the incidence of bottleneck vacancies. Chart 12 shows results from employer surveys suggesting that bottleneck vacancies occur less often in those countries where business executives believe that the education system meets the needs of a competitive economy (e.g. Finland, Denmark, Switzerland) and countries with a higher (perceived) availability of skilled labour. They occur more often in countries where the education and training system is believed to be less responsive to economic needs (e.g. Bulgaria, Romania, Croatia, Hungary) (Cedefop, 2015a) <sup>(28)</sup>.

However, talent shortages can also diverge depending on the variation in the commitment of employers to the talent management process (e.g. whether a significant investment is made in attracting and retaining talent within the firm) and, crucially, their provision of jobs characterised by good working conditions (e.g. adequate health and safety, ethical practices, etc.). In particular, enterprises in the Northern European countries such as Finland, Sweden, Denmark, the Netherlands and Ireland tend to exhibit a stronger orientation towards talent management practices relative to their counterparts in Central and Eastern Europe (e.g. Bulgaria, Romania, Croatia, Hungary) and experience significantly smaller skill shortages than the latter. In Greece, Spain, Portugal and Poland below-average skill shortages are experienced

<sup>(28)</sup> The insignificant difference between firms with high- and low difficulties filling jobs depending onto whether employee training is a priority in companies, could be explained by the fact that vocational training is more likely to be employed as a tool by those employers faced with high skill shortages in the first place. Alternatively, it might be the case that attitudes towards training by firms are independent of hiring difficulties, given that most firms place a high priority on training regardless of their skill shortages.

Chart 12: Differences between European countries with high and low difficulties filling job vacancies, 2006-2014



*Reading note:* The responses to the statements are measured using a 0-10 index, where 0 is the lowest possible level of agreement to the statement and 10 is the highest; countries are grouped according to whether their average recruitment difficulty in a given year is higher or lower than the 75<sup>th</sup> or 25<sup>th</sup> percentile of the distribution of recruitment difficulties among 21 European countries.

*Sources:* Cedefop (2015a) based on Manpower Talent surveys (2006-2014); IMD WCY.

in spite of a low commitment of firms to human resource development and the management process (Cedefop, 2015a).

Chart 12 also highlights that the policy context governing and shaping a country's favourable attitudes and orientations towards the immigration of foreign skilled labour is an additional important factor that may account for recent cross-country differences in bottlenecks, as it is positively correlated with a smaller incidence of recruitment difficulties by domestic companies (also see OECD, 2014).

### 2.2.2. Understanding determinants of skill shortages between countries

A country-level empirical analysis can help investigate the determinants of the average talent shortages experienced by employers in different EU labour markets, by using two separate macro-economic data sources (Mane and Pouliakas, 2015). In particular, we obtain information on the mean recruitment difficulties of firms over 8 years (2006-2013), collected as part of the respective annual waves of the Manpower Talent surveys. We merge this information with a number of macro-economic variables (e.g. GDP, unemployment, active population, educational attainment rates, etc.) drawn from Eurostat at the level of each country. Information on the availability (or not) of skilled labour in different countries, and on other supplementary variables, is also obtained from the IMD World Competitiveness Yearbook (WCY) and Online Database. The IMD WCY is a

survey of about 4300 business executives conducted in several countries across the world. The purpose of the survey is to construct an overall international ranking of the competitiveness of different economies.

The statistical information obtained from these separate sources was merged into one master longitudinal dataset (i.e. repeated observations of variables for the same country over time). The total database comprises of a panel of 21 European countries observed over an average of 6.3 years during the period 2006-2013, given that information on the difficulty in filling jobs from the Manpower Talent surveys is only available from 2006 onwards <sup>(29)</sup>. Alternatively, the panel includes 28 EU Member States over the period 2000-2013 when a measure of skill shortages based on the IMD WCY survey is used instead.

The empirical investigation uses longitudinal statistical models to explore the contribution of different macro-economic aggregates to the overall variance in talent shortages observed between and within different countries. To estimate parsimonious regression models, a principal components analysis was performed using several of the correlated items in the IMD WCY survey (for a similar analysis see European Commission, 2012a, 2014c). Three principal components with

<sup>(29)</sup> The 21 European countries in the Manpower sample are 19 EU Member States: Austria, Belgium, Bulgaria, the Czech Republic, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Poland, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom plus Norway and Switzerland.

eigenvalues above 1.0<sup>(30)</sup> were found to account for 77 % of the total variation in the survey items of interest.

First, a novel measure of skill shortages at the country level has been constructed as a principal components factor that weighs heavily on the following items: (i) skilled labour is readily available; (ii) finance skills are readily available; (iii) qualified engineers are available in the labour market; (iv) information technology skills are readily available; and (v) health problems do not have a significant impact on companies. This measure provides a summary of the availability of skills in the respective economies. Reversing the scale (i.e. skills are not readily available) leads to a variable that is used in the analysis as a proxy for (perceived) skill shortages.

A second factor obtained from the principal components analysis is comprised of factor loadings that capture differences in terms of the ability of firms to commit to the skill formation process and to a high quality of working conditions. Specifically, the second factor weighs more heavily on the following items: (i) employee training is a priority in companies; (ii) ethical practices are implemented in companies; (iii) social responsibility of business leaders is high; (iii) health and safety concerns are adequately addressed by management; and (iv) workers' motivation in companies is high.

Finally, a third factor is a summary measure of the degree of leniency of labour market regulations, described mainly by the extent to which: (i) labour regulations (hiring, firing, minimum wages, etc.) do not hinder business; (ii) unemployment legislation provides incentives to look for work; and (iii) labour relations are generally productive.

Furthermore, it is assumed that the variation in the incidence of skill bottlenecks observed across different countries can be explained by the following key macro-economic factors: (i) GDP per capita; (ii) the structure of the economy, proxied by the share of the industrial sector in GDP; and (iii) the rate of unemployment.

<sup>(30)</sup> The eigenvalue of each factor measures the variance in all the survey items included in the principal component analysis which can be accounted for by that factor alone. An eigenvalue of 1.0 indicates where a factor explains just as much variance as a single survey item would on its own. Factors which have eigenvalues below 1.0 are less informative than if each survey item were not combined using factor analysis. This is known as the Kaiser criterion.

In order to examine further whether the above factors exert a statistically significant influence on the variance of skill shortages, we thus estimate the following model:

$$s_{ct} = \alpha_{ct} + \beta_1 GDP_{ct} + \beta_2 IND_{ct} + \beta_3 U_{ct} + \beta_4 LF_{ct} + \beta_5 FIRM_{ct} + \beta_6 REG_{ct} + \beta_7 T_t + \epsilon_c + u_{ct}$$

where the incidence of skill shortages,  $s$ , in a given country ( $c$ ) and year ( $t$ ) is assumed to be a linear function of the two other principal component factors, as well as the other controls used in the previous analysis. The model also includes time dummies ( $T$ ), which capture the impact of any residual country-specific changes in talent shortages that took place across the respective time period. The model is then estimated using both random and fixed effects.

Unobserved heterogeneity in the model is given by the summation of country-specific time-invariant factors,  $\epsilon$ , and another random error term,  $u$ . As is standard, a fixed-effects regression identifies the impact of within-country deviations in the determinants (e.g.  $\ddot{U} = (U_{ct} - \bar{U}_c)$ ) on the within-country variance in talent shortages ( $\dot{s} = (s_{ct} - \bar{s}_c)$ ). This allows for the identification of the effect of a given regressor on the dependent variable that is purged of any confounding influences of other country-specific factors that remain constant (or change very slowly) across time (e.g. the institutional environment).

After taking into account other important factors that vary between the countries (e.g. levels of national income or regulatory environment), higher unemployment rates are found to be associated with a significantly lower hiring difficulty by employers, the latter derived by the Manpower Talent surveys (Table 5). Specifically, for every 1% increase in the rate of unemployment since 2006, the average recruitment bottleneck of firms has declined by 0.8 percentage points in the sample and time period examined. The empirical evidence therefore confirms that, overall, during the recent period of economic turmoil, talent shortages in the European economy became less pronounced, given that employers were confronted with a significantly larger supply of available skilled workers per job vacancy. Once this was accounted for, Table 5 also shows that in countries where skills were not readily available, filling vacancies was more difficult. A 1 unit increase in the skills shortage factor increased the average bottleneck by 0.04 percentage points. The empirical findings of columns (2) and (3)

in the table, which are based on panel regressions models that use the measure of skill shortages derived from the IMD WCY, further confirm the significance of macro-economic forces that are correlated with a smaller deficiency of skills in EU economies. They also confirm that skill shortages are also more prevalent in economies where strong industrial sectors account for a larger share of employment. Furthermore, a smaller incidence of skill shortages is observed in EU countries in which firms are characterised by greater commitment to talent management and the offer of good work. Economies in which skilled labour is not readily available are also less likely to have lenient employment regulations.

### 2.2.3. Employers' crucial role

Faced with an inability to fill existing vacancies with suitable labour, employers may respond in a number of ways. Firstly, it is likely that wages will rise in order to attract more skilled labour, particularly in the case where skill shortages were the result of firms offering too low a wage given the prevailing market conditions. At the same time, firms may look for alternatives to skilled labour, for example by investing in technology and capital to substitute for labour. However, there are several frictions that may impede the fast response of the wage mechanism. Firms may be wary of wage inflation and rising staffing costs across the board or may wish to avoid pay inequity that can spur demotivation among their workforce (Bewley, 1999; Poulidakos and Theodossiou, 2013). There may also be significant time lags and 'menu costs' associated with firms having to undertake significant adjustments to their remuneration policy (Arrow and Capron, 1959). For the above reasons, many firms prefer to rely on alternative strategies to combat skill shortages than to raise their relative pay rates (Haskel and Holt, 1999).

For example, difficulties in recruitment faced by employers may be tackled via the adoption of an alternative mix of human resource policies (Cedefop, 2015a). Such a strategy should rely on the offer of better and more stable jobs to skilled applicants, hiring individuals on the basis of their 'potential' rather than on accumulated prior work experience, as well as sourcing relatively unexploited talent (e.g. females, older workers), which tends to be over-seen despite the fact that it may possess the skills needed for the advertised jobs (Manpower, 2014). Employers could also



Table 5: Determinants of difficulties filling jobs/finding skills faced by employers, 2000–2013

	Difficulty filling jobs	Skills not readily available in economy (!)	
	Fixed effects	Random effects	Fixed effects
Unemployment rate	-0.80** (0.392)	-10.11*** (1.952)	-7.61*** (2.350)
Skills not readily available in economy (!)	0.04*** (0.010)		
Firms' commitment to good work (!)	-0.01 (0.012)	-0.31*** (0.057)	-0.24*** (0.068)
Leniency of regulations (!)	0.02 (0.013)	-0.32*** (0.065)	-0.36*** (0.069)
GDP per capita	-0.00 (0.001)	-0.01* (0.006)	-0.01* (0.007)
Share of industry in employment	-0.26 (0.474)	10.35*** (2.659)	16.21*** (4.515)
Time dummies	√ (2006–2013)	√ (2000–2013)	√ (2000–2013)
Constant	0.58*** (0.171)	-1.89** (0.905)	-3.69*** (1.354)
N	132	358	358
R-squared	0.24 (within)	0.52 (overall)	0.47 (within)
Wald chi2	4.69***	311.65***	15.0***
Corr(u <sub>i</sub> , X)	-0.26	0	-0.29
No. of countries	21	28	28

*Reading note:* Standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; (!) = principal components index (derived as explained in the main text).  
*Source:* Cedefop (2015a), based on data from the Manpower Talent surveys (Difficulty filling jobs) and IMD WCY (Skills not readily available).

provide more training themselves. They can change the content and skill intensity of the jobs offered to better match the profiles of individuals available on the labour market (Pouliakas and Russo, 2015). Enterprises can further alleviate skill shortages by strengthening their talent pipeline both from the outside market (e.g. via participation in local employer associations) and by investing further in the workforce inside the firm (via promotions and job rotations).

Of course, where skills shortages are the result of a significant market failure, some of these options may not be available or may be second-best, which would then necessitate greater State intervention. For a significant number of enterprises, particularly smaller-sized, unfilled vacancies may be a consequence of their inability to offer a competitive starting salary or because they face other business constraints (e.g. lack of access to credit, administrative hurdles). Policies to alleviate labour market monopsony and to ease the bargaining power of a few dominant firms in a market (e.g. wage subsidies; removal of barriers to firm entry) may therefore improve efficiency in the allocation of skilled labour (Kahn, 2015). In general, tackling imperfections in labour, credit and product markets can remove the distortionary incentives to train in areas of skill shortage by firms as well as individuals (Almeida et al., 2012).

### 2.3. Skills mismatch on-the-job

Another topic that has received ample attention in the context of skills mismatch is the possibility that workers have different skills or qualifications from what is required by their jobs. Over the crisis period, there has been high concern about over-qualification, especially in the case where tertiary graduates end up in positions that do not require a tertiary degree.

The evidence on the extent and the effects of over-qualification however remains subject to discussion (Allen and van der Velden, 2011). For example, while Battu et al. (1999) and Dolton and Vignoles (2000) show that over-qualified graduates have lower earnings compared to others with the same qualifications, Chevalier and Lindley (2009) find that the wage penalty declines if one controls for ability; and Büchel (2002) and Mahy et al. (2015) argue that over-qualification among employees has a positive impact on productivity.

Measuring skills mismatch on-the-job implies a correct identification of the education level that is required for a job, which has proved to be challenging. Three major approaches have been taken in the literature: a subjective approach, an objective approach and an empirical one (see Box 2 and Tjstens and van

Klaveren, 2012). This Section reflects on these different approaches and analyses the divergence in results arising when applying three different indicators (based on LFS 2013). It reveals a number of limitations in the extent to which these indicators can contribute to a better understanding of the phenomenon of skills mismatch on-the-job.

The analysis focuses on over-qualification, as this issue has received most attention from researchers and policy-makers, but in principle, a similar analysis could be carried out on under-qualification. First, we present the results of using the empirical indicator for over-qualification, which counts an individual as over-qualified if his/her level of education is higher than the modal level of education of all individuals in the same occupation and country<sup>(31)</sup>. Then we present the results of two variants of the objective indicator for over-qualification. The first one considers an individual as over-qualified if he/she has a tertiary degree but works in an occupation sometimes considered as not requiring a tertiary degree<sup>(32)</sup>. The second one takes a more narrow approach, only considering those high-skilled individuals who are in elementary

<sup>(31)</sup> Based on ISCO2 digits occupation (derived from variable ISCO3D). This approach is similar to EDU1 by Flisi et al. (2014).

<sup>(32)</sup> Within ISCO 1-digit codes 4-9.



### Box 2: Measurement of skills mismatch on-the-job

Three major approaches have been taken in the literature:

- the subjective approach ('worker self-assessment'), where workers ask themselves what the education level required for their job would be;
- the objective approach ('job analysis' or 'systematic job evaluation'), where job market experts are asked to identify the education requirement based on a job description (e.g. Rumberger, 1987; McGoldrick and Robst, 1996);
- the empirical approach ('realised matches'), where the required education level is derived from the observed education levels of workers in a certain job (e.g. Verdugo and Verdugo, 1989; Kiker et al., 1997; European Commission, 2012a: 360).

Each of these methodologies has constraints. Hartog and Jonker (1997) argue that individuals are inclined to overstate the educational requirements for their job, and that this 'social desirability' effect may bias the subjective measure downwards. Nevertheless, in practice the subjective measure usually leads to higher instead of lower reported levels of over-qualification than other measures (McGuinness, 2006). From an operational perspective, the main drawback of using the subjective measure is that it relies on data from specific surveys which are not carried out on a frequent basis.

The objective approach is conceptually preferable to the subjective and the empirical approach (Flisi et al. 2014). Its major drawback however is that it is only relevant if it relies on a high-quality taxonomy of job skills requirements, notably one that is up to date and sufficiently country-specific. For example, United States studies can rely on a dynamic database (the Occupational Information Network) which is continuously updated (Mariani, 1999). For cross-European analyses, no such dictionary exists as yet. Development of the European Skills, Competences, Qualifications and Occupations (ESCO) classification is in progress. A first draft is expected by the end of 2016 at the earliest.

In the absence of a reliable dictionary, researchers have used simplified strategies to assess the incidence of over-qualification. One strategy often applied uses a very simple taxonomy that is fixed across time and across countries and crosses ISCO 1-digit job categories with ISCED 1-digit education categories. ISCO categories 1-3 are considered 'high-skilled' occupations, requiring a tertiary degree. ISCO categories 4-8 are considered as 'medium-skilled' occupations, requiring an upper secondary qualification; and finally ISCO category 9 is considered as low-skilled, not requiring upper secondary education. This classification was proposed by ILO (2007).

This approach is also used in European Commission (2012: 360). It may be more appropriate to think about these as 'high-skill jobs' rather than 'tertiary-graduate jobs' as historically these groups have employed a majority of workers without degrees. Recognising this, Elias and Purcell (2013) categorise many occupations within these groups found in the UK as non-graduate, particular those in the equivalent of ISCO groups 1 and 3.

Nevertheless, as technological progress exerts upward pressure on educational requirements for specific occupations, education requirements are likely to vary across countries as well as over time (see e.g. Livingstone, 1999:74). If one fails to account for rising skills requirements, the measure for over-qualification will be upward biased. On the other hand, Elias and Purcell (2013) categorise many occupations within ISCO groups 1-3 as non-graduate for the United Kingdom. Hence, in general, an approach that relies on a very simple dictionary has major limitations.

Finally, the empirical approach is relatively easy to apply and draws on frequently collected data. An example of an often applied empirical measure identifies the qualification requirement for a particular occupation as the modal level of education empirically observed in that occupation (usually at the ISCO 2-digit level). This approach has however been criticised most of all, due to its on-the-job skills mismatch indicators, since it allows job skills requirements to be endogenously related to the extent of over-qualification in an occupation (Verhaest and Omev, 2006a; Cedefop, 2010: 67).

Both the objective and the empirical method suffer from measurement error if different jobs (with different education requirements) are clustered together in occupational categories; which usually is the case if one relies on ISCO 1- or 2-digit classifications.

Hence, each of these indicators presents major shortcomings. What is even more worrying, is that the extent of over-qualification varies strongly across different measures and the correlation between different measures is low (Verhaest and Omev, 2006b). This seriously calls into question the usefulness of these measures for policy-makers.

jobs as mismatched<sup>(33)</sup>. This category of jobs concerns sales and services elementary occupations and labourers in agriculture, mining, construction, manufacturing and transport.

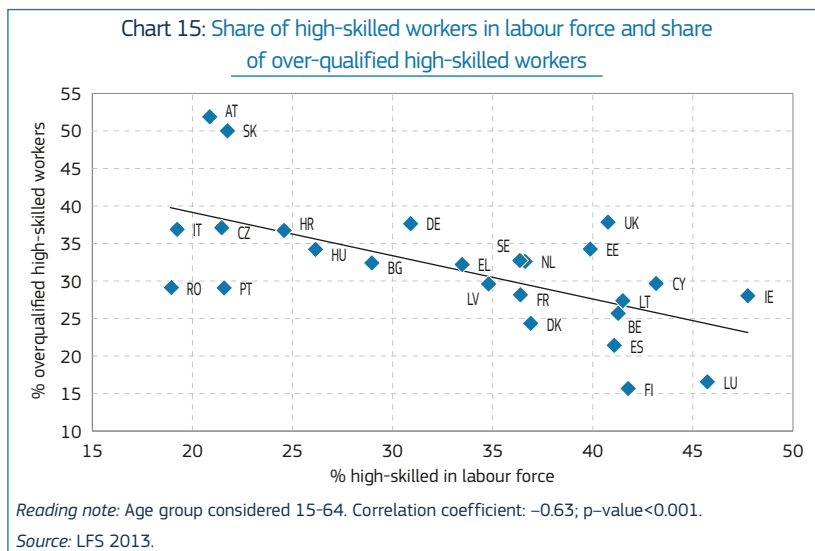
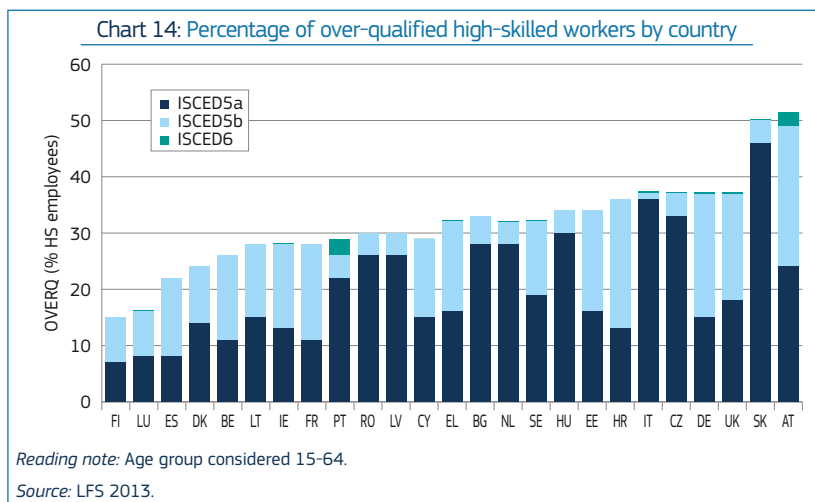
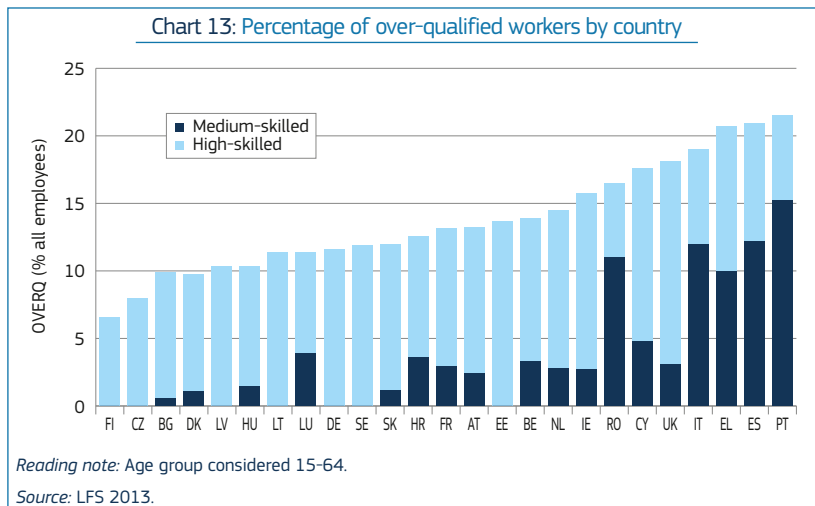
The empirical approach suggests that across the EU 15.5% of the workers are over-qualified, with levels ranging

<sup>(33)</sup> ISCO 1-digit code 9.

from 6.5% in Finland to 21.5% in Portugal (Chart 13). In particular, Southern European countries present a high level of over-qualification, with as worst performers Portugal, Spain, Greece and Italy, but also the United Kingdom. Interestingly, these are not only individuals with a tertiary degree: they include individuals with upper secondary education that are in occupations dominated

by low-skilled individuals. In fact, in Spain, Portugal, Italy and Romania the majority are medium-skilled (MS)<sup>(34)</sup> working in occupations dominated by low-skilled individuals.

<sup>(34)</sup> Throughout this Section we will refer to individuals with tertiary education as high-skilled (HS), with only upper secondary education as medium-skilled (MS) and with less than upper-secondary education as low-skilled (LS).



Among high-skilled (HS) workers, 29.0% are considered to be over-qualified in the EU, ranging from 15.7% of high-skilled workers in Finland up to 51.9% in Austria (Chart 14). The highest shares are found in Austria, Slovakia, the United Kingdom, Germany and the Czech Republic. For Austria, Slovakia and the Czech Republic, this high level of over-qualification is potentially due to the high dominance

(> 65%) of medium-skilled workers in the labour force; which means the modal education level for many ISCO categories is likely to be medium-skilled. This reflects the endogenous nature of the empirical measure of over-qualification. Contrary to what one would perhaps expect, a country with a high share of high-skilled individuals (e.g. Finland and Luxembourg) is likely to have a low share

of the over-qualified, as many occupations are dominated by the high-skilled and therefore the 'modal education level' is upgraded to tertiary education for these countries (see also Chart 15). Note that this does not necessarily reflect higher skill requirements of the job, but rather the relative supply of highly-skilled workers.

Many of the high-skilled individuals considered as over-qualified have tertiary-level programmes that are typically short, with a minimum duration of two years full-time equivalent, and focus on practical, technical or occupational skills for direct entry into the labour markets, hence with a vocational orientation (Chart 14)<sup>(35)</sup>. The results of this approach should be interpreted with caution; as the underlying assumptions are rather strong, possibly debatable, and they influence the outcomes to a great extent.

The objective approach puts the average level of over-qualification in the EU at 7.4% of all workers; or 21.9% of high-skilled workers, a significantly lower number. Over-qualification among high-skilled workers ranges from 5.3% in Luxembourg to 35.6% in Spain. The highest incidence of over-qualification (as a % of high-skilled workers) is found in Spain, Cyprus, Ireland and Estonia. Interestingly, the ranking of countries according to the objective approach and the ranking according to the empirical approach differ strongly: at the country level, there is no significant correlation between both measures.

Many of the individuals identified as over-qualified are clerks, such as secretaries and bank, library and customer service clerks<sup>(36)</sup>. Such jobs would in some EU Member States typically be taken up by individuals with an upper secondary (or post-secondary, non-tertiary) VET degree, while in other Member States they are more often taken up by individuals who follow general education at secondary education level, potentially followed by a (short) tertiary programme.

<sup>(35)</sup> ISCED 5b qualifications in the ISCED97 classification. These are OECD (2003) Glossary of Statistical Terms. Tertiary-type B education (ISCED 5b) Available online at <https://stats.oecd.org/glossary/detail.asp?ID=5441>

<sup>(36)</sup> According to the objective approach, the highest incidence of over-qualified workers at the EU-level can be found in occupational category of customer service clerks (ISCO 2-digit category 42).

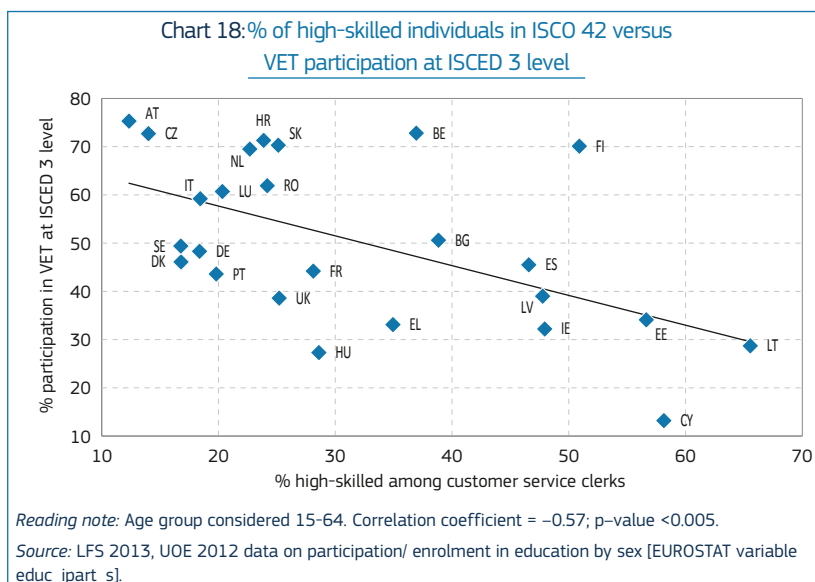
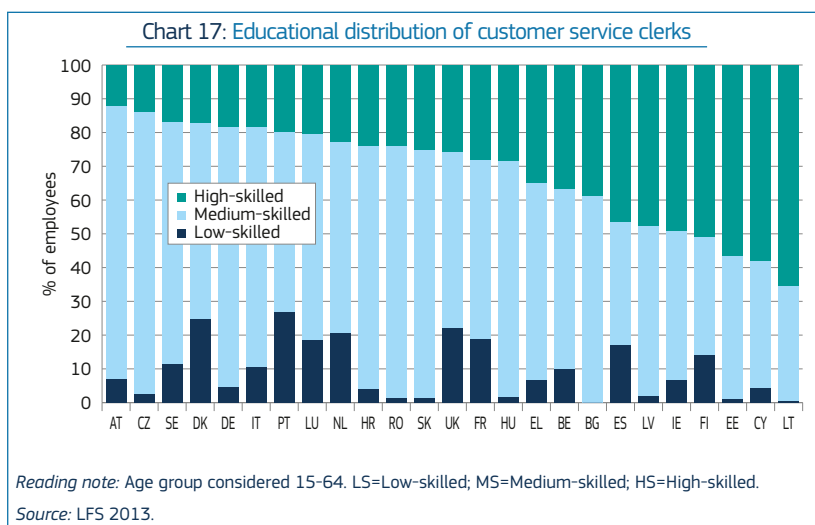
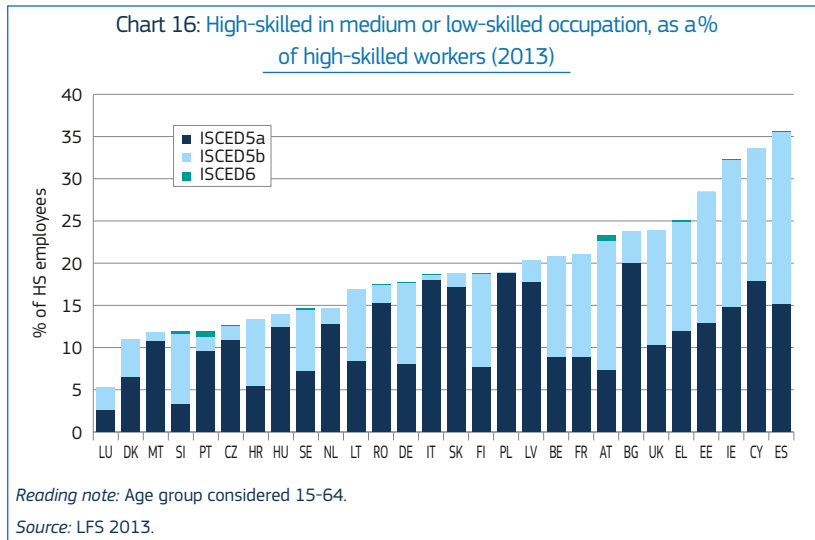


Chart 17 confirms the wide variation in educational profiles of workers in this specific occupational category across EU Member States. In Lithuania, Cyprus, Estonia, Finland, Ireland, Spain and Latvia, customer service clerk jobs are predominantly taken up by high-skilled (HS)

individuals. In Austria, the Czech Republic, Sweden, Italy and Germany, they are mostly taken up by individuals with an upper secondary qualification.

Interestingly, the countries with the highest incidence of tertiary graduates in

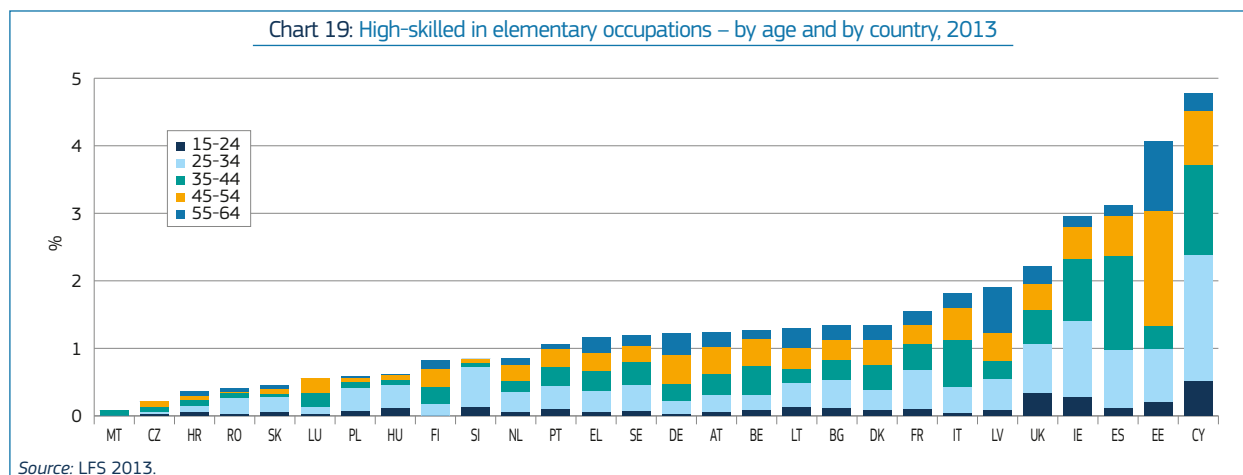
these occupations are the countries with the lowest percentage of participation in VET at the ISCED 3 level (Chart 18). This could mean that those countries with a low level of over-qualification draw their customer service clerks and sales workers from VET graduates, which may not be available in countries with low participation in VET. Perhaps school systems across different countries do not offer the same type of programmes at the upper secondary level. In Estonia and Cyprus, for example, VET programmes seem to produce more graduates in the fields of ‘Engineering, manufacturing and construction’ and in ‘Services’ (including personal, transport, environmental and security services) than in ‘Social Sciences, business and law’<sup>(37)</sup>. Estonia and Cyprus have less than 15% of VET graduates in the field ‘social sciences, business and law’ at the ISCED 3 level as compared with over 40% in Germany. Further research is needed to corroborate these tentative explanations, but data availability is a major constraint.

Lastly, a second objective measure of over-qualification is explored, namely one that considers only individuals with a tertiary degree in elementary occupations (ISCO 9), arguably the most severe form of over-qualification. Elementary occupations are those which require low levels of skills, such as cleaners, domestic helpers, labourers in agriculture, construction and manufacturing, and food preparation. The incidence of such over-qualification is rather low: it applies to less than 0.6% of all workers; and to less than 1.7% of high-skilled workers across the EU. By country, figures vary from below 0.1% in Malta to above 4.7% of the high-skilled in Cyprus (Chart 19).

Why relatively high levels occur in Cyprus, Estonia, Spain and Ireland is another interesting topic for further exploration. It should be noted that every country is different in its labour market and education institutional features, the structure of its economy as well as historical elements. This underscores the need for a country-specific in-depth analysis of

<sup>(37)</sup> See EUROSTAT indicator educ\_grad5. The different fields considered are: Education; Humanities and Arts; Social sciences, business, and law; Science, mathematics and computing; Engineering, manufacturing and construction; Agriculture and veterinary; Health and welfare; and Services.

Chart 19: High-skilled in elementary occupations – by age and by country, 2013



Source: LFS 2013.

the factors contributing to high levels of observed over-qualification.

The high levels for Spain and Cyprus, for example, are probably influenced by their labour market structure: these countries have a relatively high share of elementary jobs in their economy (13% and 17% respectively, as compared to an EU average of 9%). In many of the countries in Southern Europe, a high share of the individuals identified as over-qualified are working in a family business (NACE sector T). This applies to 20-50% of the high-skilled in elementary occupations in Portugal, Spain, Romania, Greece, Malta, Italy and Cyprus.

In Cyprus, it is mostly young (25-34) tertiary graduates who end up in such positions; in Spain, there are more over-qualified in the age category 35-44. In Estonia and Latvia, on the other hand, most over-qualified (67% and 58% respectively) are over 45, and a considerable share even over 55. This could be related to obsolescence of skills. There is also a gender dimension: in Cyprus and Estonia, the over-qualified are predominantly women (more than 70%), while in Ireland and the United Kingdom the majority (more than 55%) are men. This probably relates to the type of elementary occupations more common in each country.

In sum, the analysis in this Section has shown that as with skills shortages, measuring skills mismatch on-the-job is challenging and existing measures may not always pick up 'genuine' skills mismatches, or those that should be of most policy concern. They may point to mismatch where none actually exists. The problem of measurement error is illustrated by the very weak correlation

between the different measures that have been proposed in the literature.

For those workers whose skills are genuinely mismatched on their job, the reasons may be diverse: it could relate not only to education and training systems, but also to unobserved job features, labour market institutions, the structure of the economy and historical factors. Again, in order to devise the 'right' policy mix, country-specific analysis is needed on the drivers and determinants of skills mismatch on-the-job.

## 2.4. Skill demand

The analysis of trends and patterns of skill demand in the EU is particularly relevant in view of new needs brought forward by technological innovation, globalisation, demographic change and the process of greening of the economy. All these trends will have an impact on future skills needs. They will provide the EU with an opportunity to exploit its comparative advantages in activities with high-technology, high-skilled and knowledge-intensive profiles. At the same time, they may also result in job insecurity and wage pressures especially for workers in routine low-skilled task-based occupations or involved in the production of tradable goods and services, and in job polarisation.

This Section investigates whether there is an accelerating increase in skill demand that is pervasive throughout sectors and occupations in Europe. In certain sectors and occupational groups the level of skills needed to perform the job is not always high and in certain cases there is no evidence of a need for skills upgrading. In other words, while we sometimes take for granted that there is rising skill demand across

occupations, this is not always the case, and there might be cases in which technology leads to deskilling.

### 2.4.1. Skills monitoring and anticipation systems

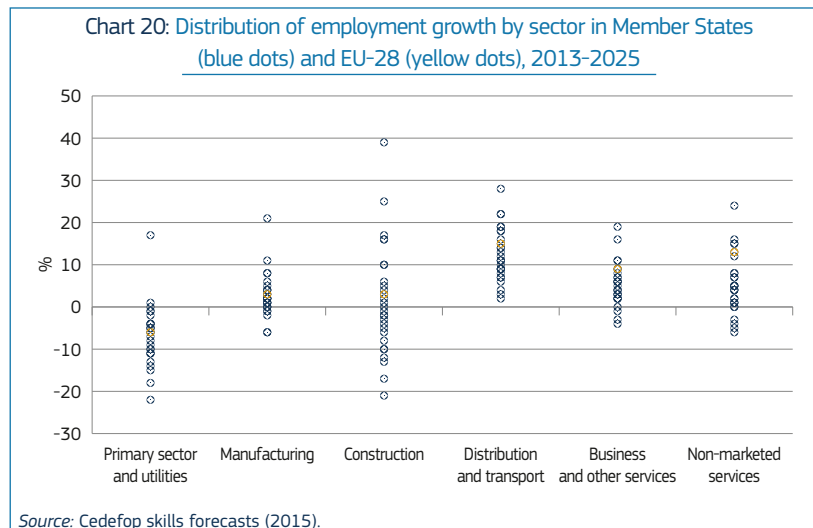
A wide-ranging group of social actors (individuals, firms, education and training providers, human resource managers, career guidance and counsellors, PES advisors and policy-makers) are called upon each day to make decisions about the optimal development and deployment of skills. These are decisions that will ultimately determine and shape future economic outcomes (e.g. What type of education and training to undertake? What mix of skilled labour to hire? What type of training programme to offer to the unemployed?). Labour market intelligence (LMI), most notably information collected as part of labour market monitoring and skills anticipation exercises, allows them to assess current and future prospects carefully and to make informed decisions about investments that will generate the best return. Skills anticipation tools, in particular, help fill significant information gaps and can mitigate, to some extent, the emergence of future shortages and mismatches<sup>(38)</sup>.

<sup>(38)</sup> Assessing or evaluating directly the impact of investments in LMI and skill forecasting systems is difficult as such systems are inputs into the overall policy process. There is nevertheless evidence that developing LMI helps actors in the labour market to make better choices. The revealed preference of governments worldwide suggests that there is general acceptance of the principle of carrying out such work as a 'public good'. A comprehensive literature review in Canada of the impacts of LMI has also concluded that despite the difficulties 'individuals and employers do use LMI in decision-making and consider it useful, while it has a positive impact on users' labour market knowledge and on decisions pertaining to investment in education' (Murray, 2010).

Since the launch of the European Commission communication 'New Skills for New Jobs' in 2008, complemented by the flagship EU2020 initiative 'Agenda for New Skills and Jobs', concerted efforts to develop mechanisms that monitor and anticipate skill needs have been made in many European Member States (OECD–Cedefop–ETF–ILO, 2015). The main rationale for the development and proliferation of skills anticipation tools is that labour market failures, in particular information asymmetries between different market agents, make a strong case in favour of public intervention. By offering early warning signals of emerging skill mismatches, skills anticipation tools allow policy-makers sufficient scope and time to design appropriate policy measures (at present time) that can mitigate or counteract them so that they do not fully evolve in the future.

Anticipating the future is an inherently uncertain task. Yet sophisticated skills anticipation tools rely on careful study and identification of past and current labour market trends. They provide a visualisation ('a mirror extension') of a country's projected future, should it stay on a similar path as the one that prevailed in previous years. In other words, skills anticipation tools rely heavily on the assumption that past trends and existing economic realities will not be significantly disturbed in future time periods. Of course, in dynamic market economies such an assumption may ultimately prove to be false. However, the true value of skills anticipation tools becomes evident when they provide a platform to policy-makers and relevant social partners for engaging and interacting in designing future economic strategies for their respective country or locality. In addition, taking into account the typically short-term incentives of policy-making, such as regular electoral cycles and the need for immediate delivery of political objectives, skills anticipation tools can offer a useful forward-looking 'beam of light' to policy-makers, anchoring and steering their decisions over the long term.

The production of information on future skill needs typically entails the involvement of a number of actors including ministries, training institutions, public employment services and regional and local authorities. The information produced serves multiple purposes, depending on the needs of the various actors.



Generally governments and stakeholders attempt to disseminate the information collected on future skill needs as broadly as possible to a wide group of potential beneficiaries (e.g. students and families, employees, unemployed).

When skills forecasting instruments are used for the purpose of manpower planning, namely attempts to influence the market system from the top down, they will almost certainly prove to be exercises in futility. But when used properly as inputs for the decision-making process, skill anticipation systems can be a very powerful tool. Governments can rely on such mechanisms for multiple uses, such as updating occupational standards, designing training schemes for workers and the unemployed, introducing educational reforms or guiding migration policy (OECD/Cedefop, 2015). Other stakeholders can also use the information as a means to inform their members or respective audiences or for shaping their own respective agendas. In principle, skills anticipation can feed directly into the decisions of policy-makers, who can channel the information towards the attainment of a broad set of objectives that will ultimately affect the future course of economic development of a country.

#### 2.4.2. Effective skills anticipation

Anticipation systems across EU countries, although having many similarities in features and development trends, are in fact quite different in many respects. The efforts in Member States, while broadly similar, differ in methodology and in data sources used. They therefore do not produce comparable data at European level.

Developing anticipation systems at pan-European level is important for providing comparable data on future challenges across Europe. Cedefop (with the support of the European Commission) has produced since 2008 regular forecasts of skill supply and demand for the EU and each Member State up to 2020, including details by broad sectors, occupational groups and educational levels.

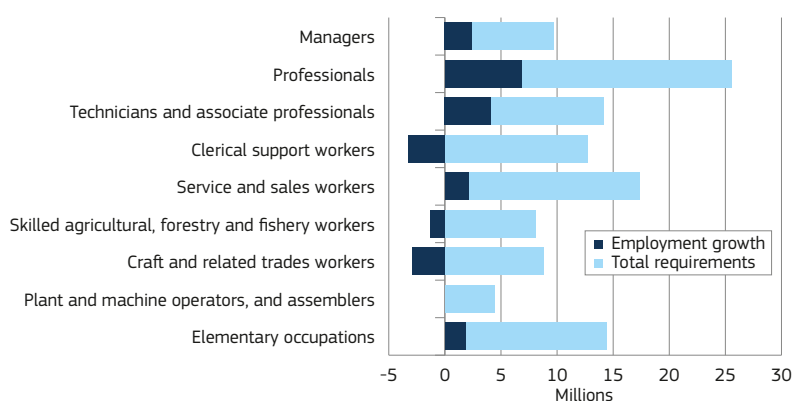
According to Cedefop skills forecasts<sup>(39)</sup> the annual growth rate of employment between now and 2025 will be 0.3%. Future job growth in the EU-28 will be concentrated mainly in transportation and service related sectors. Most jobs will be created in business services (legal, accounting, administration), accommodation and catering and health sectors. Employment will continue to fall in the primary sector. Despite the fact that the majority of manufacturing subsectors will experience further job losses, good employment prospects are forecast in optical and electronic equipment as well as manufacturing of motor vehicles. The situation in the construction sector, the sector most affected by the crisis, will be stabilised and minor job growth is expected in this sector in the next decade on average.

Sectoral job growth will differ markedly across countries. Chart 20 presents projected employment change between 2013 and 2025 (in%) for each EU Member State (blue dots) and for the EU-28 (yellow dots).

<sup>(39)</sup> Cedefop forecasts are taking into consideration Eurostat's latest population projections (Europop 2013) as well as short-term economic forecasts of the European Commission. Public access to the results is available via the dedicated platform on Cedefop's website: <http://www.cedefop.europa.eu/en/events-and-projects/projects/forecasting-skill-demand-and-supply/skills-forecasts-main-results>



Chart 21: Structure of total job opportunities by occupations in EU-28, 2013-2025



Source: Cedefop skills forecasts (2015).

24% of all job opportunities in the EU, defined as new jobs created (expansion demand) as well as replacement needs, are forecast to be in the occupational group 'professionals', which includes high-skilled jobs in science, engineering, healthcare, business and education. The second most demanded occupational group (16% of all job opportunities) will be 'shops and market sales workers'. The lowest share (4%) of total job openings in the EU will be for the occupational group 'plant and machine operators', which includes different type of industrial or factory workers such as drivers. Chart 21 illustrates that even though it is expected that there will be a falling or stagnant expansion demand for people in medium-skilled occupations (e.g. clerks, skilled agricultural and fishery workers, craft and related trades workers), namely that few new jobs are expected to be created, all occupational categories are likely to experience positive demand growth due to high replacement needs in the European economy, related to the demographic crunch.

From the supply side, and given that only the population of individuals over 55 years old is expected to grow, the total labour force in the EU is projected to fall by 1%. However the European labour force will continue to become more highly qualified. The share of the total labour force with high qualifications is expected to grow from 31% in 2013 to 39% in 2025. The proportion of individuals with medium qualifications is expected to fall from 47% in 2013 to 44% in 2025. The share of those with low qualifications is expected to be slightly below 17% by 2025. However, Chart 22 illustrates that some EU countries, such as Malta, Spain, Italy and Greece will still have a relatively higher share of low-qualified individuals compared to other Member States.

### 3. SKILLS FOR A BETTER FUNCTIONING LABOUR MARKET – POSSIBLE POLICY OPTIONS

Education and training systems are the primary instruments to provide and update skills that are required in the labour market. Nowadays just over 80% of young people<sup>(40)</sup> in Europe attain at least an upper secondary education qualification<sup>(41)</sup>, with half of secondary students receiving a vocational qualification<sup>(42)</sup>. Around two thirds of young people access labour market with an upper secondary qualification while just over one third of them (37.9% in 2014)

<sup>(40)</sup> Based on age group 30-34.

<sup>(41)</sup> For statistical purposes, there is the International Standard Classification of Education (ISCED). Each qualification can be assigned to a certain level: i.e. ISCED levels 0-2 cover education pre-primary, primary and lower secondary education (usually until the age of 15); ISCED 3 covers upper secondary education (usually between age 16 and 18); ISCED 4 covers post-secondary non-tertiary education; while ISCED levels 5 and above cover tertiary education. In this chapter low level of education is considered below upper secondary (ISCED 0-2); medium level is considered- upper secondary and post-secondary non-tertiary (ISCED 3-4); while high level is considered- tertiary education (ISCED 5 and above).

<sup>(42)</sup> There are two orientations of education – general and vocational. According to the official definitions of the ISCED classification, vocational education is defined as educational programmes that are designed for learners to acquire the knowledge, skills and competencies specific for a particular occupation or trade or class of occupations or trades. On the other hand general education is defined as educational programmes that are designed to develop learners' general knowledge, skills and competencies and literacy and numeracy skills, often to prepare participants for more advanced educational programmes at the same or a higher ISCED level. General education includes educational programmes that are designed to prepare participants for entry into vocational educational programmes but do not prepare for employment in a particular occupation or trade or class of occupations or trades, nor lead directly to a labour market relevant qualification.

acquire higher education<sup>(43)</sup>. After finishing initial education, many adults continue to renew and update their skills<sup>(44)</sup>, albeit not regularly (in 2014, only 10.7% of adults aged 25-64 report attendance at training activities in the 4 weeks preceding the survey). Moreover, while those with higher education are well-placed to enter and continue in better jobs, this is not so often the case for those with a medium or low level of education and/or skills. Accordingly, effective performance of initial vocational education and training systems as well as adult learning systems are of crucial importance.

Initial Vocational Education and Training (I-VET) provides young people with a recognised qualification and training for a particular profession. Most I-VET is carried out as part of upper secondary education (between the ages of 16 and 19), though I-VET at higher levels (beyond upper secondary education) has significantly developed in recent decades in Europe.

Continuing Vocational Education and Training (C-VET) aims to provide employees with work-, profession- or career-related skills. C-VET is often non-formal and in most cases requires the participant to have a certain minimum level of basic skills (literacy, numeracy, digital) in order to be able to take part in the training. This is however only one of the options adults have to improve their skills. Thus a broader definition of adult learning is used to understand and analyse the activities that adults need undertake. Adult learning covers the entire range of formal, non-formal and informal learning activities, general and vocational, undertaken by adults after leaving initial education and training. Besides C-VET, other forms of adult learning include: provision of basic skills to adults needing them; language and other courses to support the integration of immigrants, 'second chance' education; learning for a formal qualification later in life, and courses undertaken for personal development and interest but not linked directly to the working life.

<sup>(43)</sup> Close to two fifths (37.9%) of the population aged 30-34 in the EU-28 had a tertiary education in 2014; [http://ec.europa.eu/eurostat/statistics-explained/index.php/Tertiary\\_education\\_statistics](http://ec.europa.eu/eurostat/statistics-explained/index.php/Tertiary_education_statistics)

<sup>(44)</sup> Up to 40% of the population aged 25-64 (more than 100 million adults) at least once a year attend some education or training. Eurostat Adult Education Survey (AES), 2011.

Chart 22: Changes in the labour force (15+) by qualification, 2013-2025, EU (%)

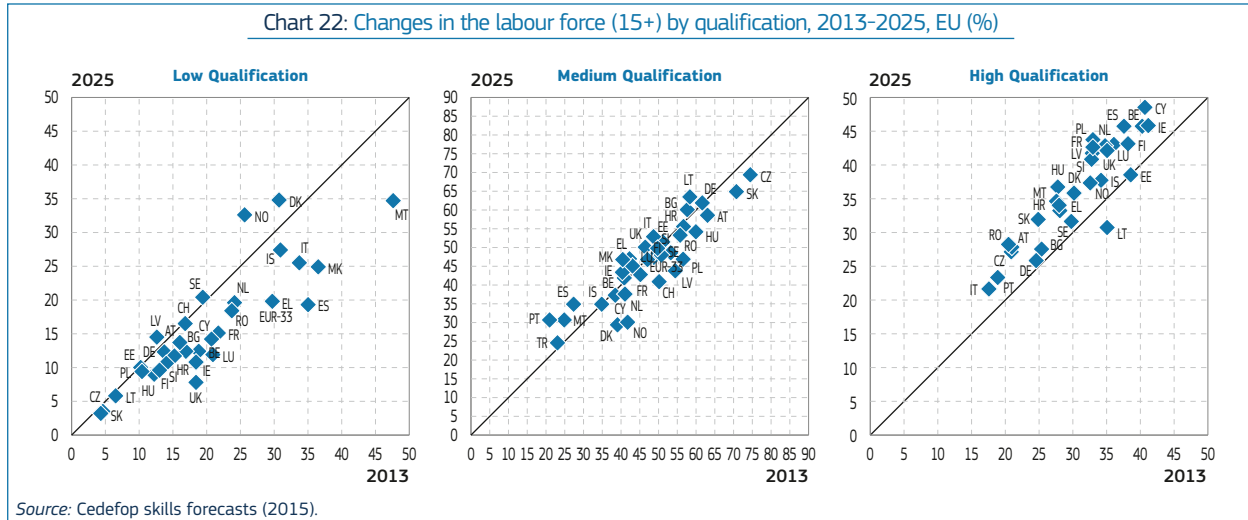
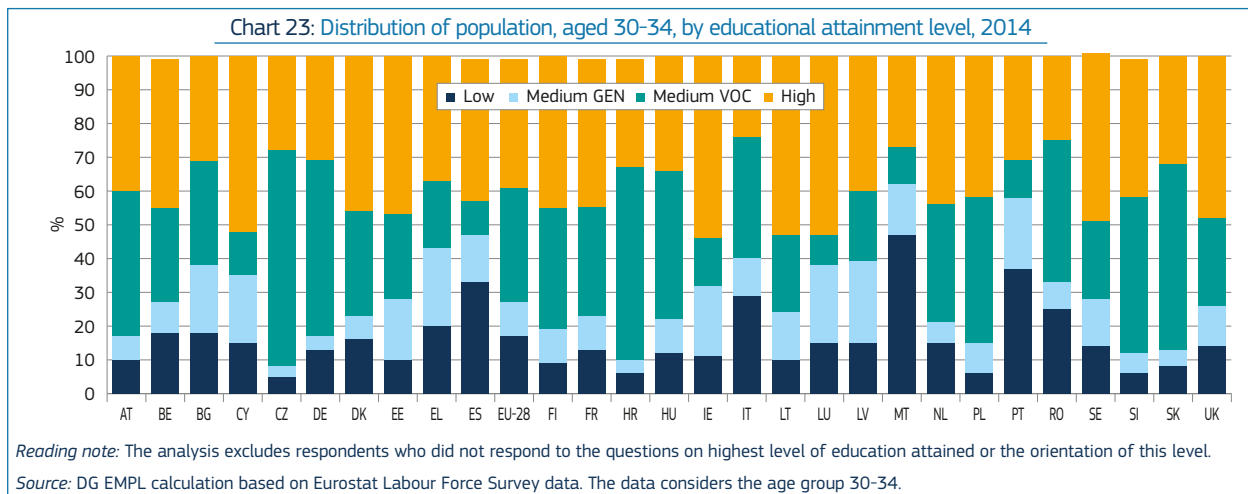


Chart 23: Distribution of population, aged 30-34, by educational attainment level, 2014



Some groups (low-skilled, unemployed, inactive, etc.) are a particularly important target group, as they often do not have access to C-VET. For these adults, general adult learning – often supported by public funding – is provided. It firstly targets the acquisition of basic skills. This branch of adult learning is also important for the workplace because – even if the learning is organised outside the workplace – it can help low-skilled adults acquire the basic competences that they need to be able to take part in work-related training. Because of their contribution to improving adults' skills, a key focus of policy is to raise levels of participation in both C-VET and general adult learning.

Within this Section we use the term Vocational Education and Training (VET) to refer primarily to the initial VET in secondary education, while for all the different forms of learning after initial education (including C-VET), we use the term 'adult learning'.

The Section will also explain the importance of ALMPs in providing individuals

with adequate skills and reducing skill shortages in the labour market. It will also illustrate policy options to make skills more visible and comparable.

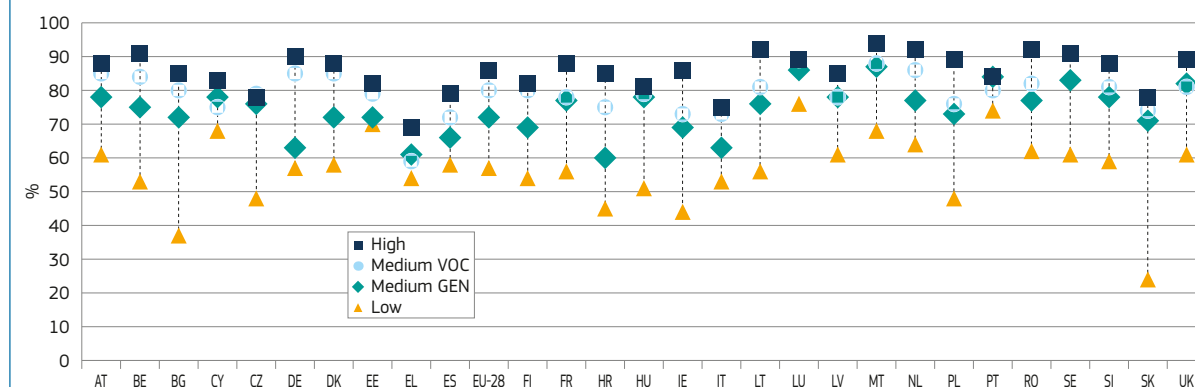
### 3.1. Initial education and training

Every year, more than 5 million youngsters enter the working-age population (in 2014 there were 5.3 million young people aged 15). Given the different ages and levels of educational attainment at which young people enter the labour market, it is not straightforward to assess the distribution of skills that is provided throughout the initial education systems, which start from early childhood education and for most end at upper-secondary or tertiary levels. Nevertheless, the EU has set for 2020 a twofold target of ensuring that at least 40% of young people have completed higher education by the time they reach the age of 30 (the target is measured for the age group 30-34) and no more than 10% leave school without achieving an upper-secondary qualification (measured for the age group 18-24). As most young people finish their initial

education before the age of 30, for practical purposes, the same age group as used for higher education attainment (30-34) can be used as a reference to assess the distribution of skills of young people leaving initial education.

As shown by Chart 23, in the EU-28 almost 20% of young adults (aged 30-34) have not achieved even upper secondary qualifications, while almost 38% have attained a university diploma. Another 10%, after finishing general upper secondary education do not continue further into higher education. The remaining 33% just achieve a vocational degree at the upper secondary level. However there is large variation across countries. It is interesting to note, that the share of low-skilled young people is also very similar for younger age groups (i.e. for 25-29 it was 16.6% and for 20-24 it was 17.8%). It is interesting to note that the low-attainment rises from the age of 20 to the age of 25 and then drops at the age of 30. If left unaddressed, the low attainment among the 20-24 group today will become a low attainment in the group 30-34 in 2024.

Chart 24: Employment rates of young adults aged 30-34 by level of education, 2014



Reading note: The analysis excludes respondents who did not respond to the questions on highest level of education attained or the orientation of this level or labour market status.

Source: DG EMPL calculation based on Eurostat Labour Force Survey data. The data considers the age group 30-34.

Almost 50% of EU students enrolled at upper secondary level undertake vocational education and training (I-VET), almost 40% of them undertake higher education making VET a key source of new skills and competencies for EU economies. Cedefop forecasts that by 2025 almost 85% of job opportunities will require at least medium-level qualifications and substantial vocational skills. This will also require a steep increase in the availability of high-level skills, where VET also has a key role to play, with an increasing number of countries setting up VET programmes at post-secondary and tertiary level. VET systems can provide vocational, job-specific skills that fit the needs of employers, but also equip learners with key competences enabling long-term employability and adaptability to manage transitions from education to employment, as well as from one employment position to another or from unemployment to employment.

In the EU-28, employment rates are highest for those with higher education or VET diplomas; those with (secondary level) general education suffer a substantial disadvantage in the labour market – approximately 13 percentage points less likely to be in employment – while those without an upper secondary diploma are a further 11 percentage points less likely to be in employment and are almost as likely to be employed as not. Nevertheless, there are substantial differences across countries. The employment rates for those who left education without a secondary diploma or a vocational qualification are substantially lower in most Member States. One way in which these adults could look to improve their employment prospects would be to pursue further education which includes a vocational qualification. This means that opportunities to learn later in the course of life are essential

to tackle unemployment, inactivity and social exclusion. But, as the following analysis shows, these same adults are also unlikely to undertake such learning without external support. Thus, there is a need for public intervention to facilitate access to learning.

### 3.2. Adult learning

Adults' current skills levels are largely determined by the education and training opportunities that were available to them in youth, through initial education and training. Nevertheless, the rapidly changing needs of the labour market require continuous updating of skills and knowledge. The description of the EU skills landscape above showed the untapped potential of adults in the EU: engaging them in education or training could bring the necessary skills and secure their employment. It would also help them participate and contribute more to society as a whole. Thus better-functioning and more comprehensive systems for adult learning and continuing training are needed (Bandi and Iannone, 2015).

This Section reviews the participation in adult learning in the EU, by also analysing how it varies across different groups of people. It then describes the provision of adult learning and tries to highlight the barriers that prevent a larger number of people from being involved in it.

#### 3.2.1. Participation in adult learning in the EU

Participation in learning brings a broad range of benefits (see European Commission, 2015)<sup>(45)</sup>. Individuals can

<sup>(45)</sup> European Commission (2015) 'An in-depth analysis of adult learning policies and their effectiveness in Europe'.

expect economic, social and well-being benefits from participation in learning, with the strongest evidence existing for the impact on employability. Employers also benefit from the impact on productivity and profitability of companies<sup>(46)</sup>. Finally, adult learning also brings broader benefits to society overall<sup>(47)</sup>.

Raising the levels of participation in both work-related and general adult learning has been a key focus of EU policy. In particular, the European Council has set a target: by 2020 the share of adults who have participated in adult learning should reach 15%<sup>(48)</sup>.

LFS data show that in 2014, only 10.7% of the EU adult population had undertaken education or training recently in the 4 weeks prior to the interview, which means that the EU is far from reaching this target. In the case of low-skilled adults the average is under 4%. AES data show that in total 40% of adults participate in education annually<sup>(49)</sup>. The fact that only 40% of adults have at

<sup>(46)</sup> Ibid.

<sup>(47)</sup> Ibid.

<sup>(48)</sup> 2009/C 119/02 Council conclusions of 12 May 2009 on a strategic framework for European cooperation in education and training ('ET 2020').

<sup>(49)</sup> Two main data sources provide statistical evidence on participation in adult learning in Europe, each measuring it in a different way: (1) 'Recent' adult participation in learning – at least one formal or non-formal learning activity during the last four weeks prior to the survey, collected through the European Labour Force Survey (LFS); (2) 'Annual' adult participation in learning – at least one formal or non-formal learning activity during the last 12 months prior to the survey, collected through the European Adult Education Survey (AES). While a reference period of 12 months is considered to allow a more comprehensive measure of participation in education and training, data from the AES are only available every 5 years. Due to a higher frequency of the availability of LFS data, results from the LFS were chosen to illustrate the progress towards the ET 2020 benchmark on participation in lifelong learning.

least one learning activity per year can be considered low in the context of the need for all adults to be learning constantly, in order to adapt to change and development. As a matter of comparison, in the United States the occasional participation rate (at least one learning experience per year) in 2012 was close to 60%<sup>(50)</sup>.

Countries that have a relatively high participation rate share similar characteristics: they have flexible and comprehensive LLL strategies in place, their adult learning offer fits into an overall quality assured framework for education and training, adult learning is adequately funded and differences in earnings and social status between the higher and lower skilled are relatively small.

It is important to distinguish formal, informal and non-formal modes of learning. Formal learning occurs in an organised and structured environment (e.g. in an education or training institution or on-the-job) and is explicitly designated as learning (in terms of its objectives, time or resources). It is intentional from the learner's point of view. It typically leads to validation and certification. Non-formal learning is embedded in planned activities; it is not always explicitly designated as learning but it contains an important learning element. It is intentional from the learner's point of view. Informal learning results from daily activities related to work, family or leisure. It is not organised or structured in terms of objectives, etc. It is mostly unintentional from the learner's perspective<sup>(51)</sup>.

Out of the adults who take part in learning, only around 12% take formal education courses; more than 90% take non-formal activities (around 5% do both)--. In the context of a discussion of the role played by adult skills in the EU's economy, it is encouraging to note that almost all the (recorded) adult learning that takes place is job-related. Out of all the adults who take part in learning, around 75% take part in non-formal and work-related training, giving it the largest share of adult learning activity.

Although adult learning comprises to a large extent non-formal and informal

learning, developments in validating and recognising this learning for career progression or towards further learning and qualifications are lagging behind, in both the public and private sector. Recent research by Cedefop shows that in-company developments in this area mirror the same problems and inequalities as we have noted in adult learning provision more generally<sup>(52)</sup>. It is worth noting, that in line with the 2012 Council Recommendation on validation of non-formal and informal learning<sup>(53)</sup>, the Member States have committed to set up national arrangements for validation of non-formal and informal learning by 2018 (for more information see Section 3.4).

Informal learning or learning through work<sup>(54)</sup> happens constantly at the workplace and is the mainstay of skills maintenance. Although it is not easily captured in data collections due to its complexity and omnipresence, past analyses (ESDE 2014, Chapter 2) suggest that using skills in the workplace is a key determinant of overall skills levels. To capture the results of this type of learning, career development plans and portfolios could be used better and more widely.

Participation in adult learning differs substantially across the population. There are some groups of adults who face particular challenges, requiring specific and targeted policy responses. The three groups which have the least access to adult learning are people who are low-qualified (including low-skilled), those not in employment, and those near retirement (aged 55-64).

Low-qualified adults are three times less likely to participate in learning compared to high-qualified adults. Not only do lower-qualified people need more of the learning opportunities, they also require most of the learning hours, if this is to have a durable impact on their skills levels and enable them to acquire a qualification. However, in practice, highly qualified adults receive around 45% of all training hours, medium-qualified people receive about 42% and low-qualified people receive only 13% of all hours.

Adults who are unemployed or inactive in the labour market are two times less likely to participate in learning than employed adults. Older adults aged 55-64 are also two times less likely to participate in learning as compared to the cohort aged 25-34. The rate of participation in adult learning on average decreases with age, but the difference between the 55-64 cohort and the 45-54 cohort is bigger than between other cohorts. This suggests that participation in adult learning is also strongly linked to labour market participation<sup>(55)</sup>.

Overall, in 2014 there were 65 million adults in the EU whose educational qualification was at most lower-secondary (ISCED 2). Out of those, around 27 million are employed, 22 million not active in the labour market, 10 million unemployed and around 7 million self-employed. On average, one out of four low-qualified adults takes part in training at least once a year. While this share is slightly higher for low-qualified adults who are employed (around one third), participation rates for the others low-qualified adults are even lower, as low as 8% for low-qualified inactive and 19% for low-qualified unemployed adults.

In terms of the incidence of low skills among people who are not employed<sup>(56)</sup>, 27% have low literacy skills and 34% have lower numeracy skills compared to the whole population (20% and 24%). In Ireland, Spain, France, Italy and the United Kingdom, where youth unemployment rates are higher than for people aged 25-64, a large share of young people (20% or above) have low skills in literacy or numeracy (i.e. at most at level 1).

Overall there were around 25 million unemployed adults aged 25-64 in the EU in 2011. Out of those, around 10 million were low-qualified (ISCED 0-2), 11 million had a medium qualification (ISCED 3-4) and around 4 million had a high qualification (ISCED 5-6). While almost 50% of the high-qualified unemployed participated in adult learning in 2011, only around 20% of adults with lower qualifications did so.

<sup>(50)</sup> Education at a Glance 2014: OECD Indicators, Indicator C6.

<sup>(51)</sup> Cedefop, (2009), European Guidelines for Validating Non-formal and Informal Learning, Luxembourg ISBN 978-92-896-0602-8.

<sup>(52)</sup> <http://www.cedefop.europa.eu/EN/publications/23963.aspx>

<sup>(53)</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2012:398:0001:0005:EN:PDF>

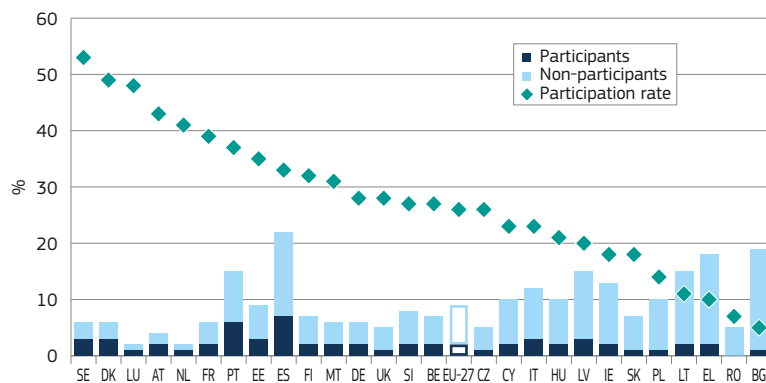
<sup>(54)</sup> For instance, by doing, by dealing with customers, by exchanging with colleagues or asking for their advice or assistance.

<sup>(55)</sup> DG EMPL analysis based on the Survey of Adult Skills (PIAAC) and Adult Education Survey.

<sup>(56)</sup> 'The survey of adult skills (PIAAC): implications for E&T policies in Europe', European Commission, Brussels, October 2013.



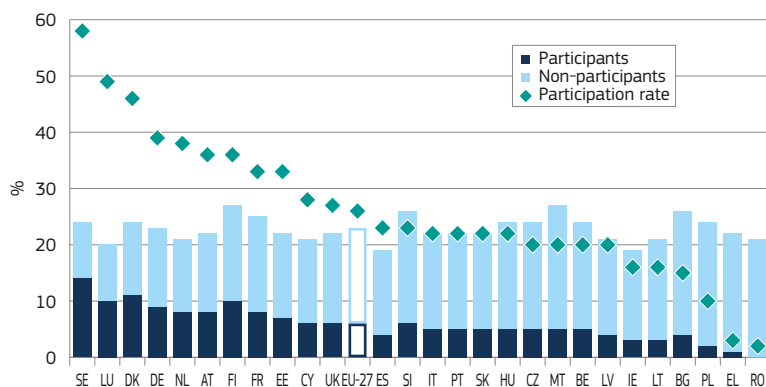
Chart 25: Rate of participation in adult learning and share of unemployed adults (25-64), 2011



Reading note: Data on participation of low-skilled unemployed individuals for LU, NL and RO is unreliable, based on Eurostat reliability thresholds: if for certain sub-population the number of respondents is lower than a set threshold, the data is flagged as unreliable (i.e. standard deviation beyond acceptable limit).

Source: DG EMPL calculation based on Eurostat Adult Education Survey data.

Chart 26: Rate of participation in adult learning and share of adults aged 55-64, AES 2011



Reading note: Data on participation in EL is unreliable.

Source: DG EMPL calculation based on Eurostat Adult Education Survey data.

Despite a high number of unemployed adults in Spain and Portugal, their rate of participation in learning was above the EU-28 average, whereas in Latvia, Lithuania, Greece and Bulgaria very few unemployed adults took part despite high rates of unemployment in those countries. The situation in Spain and Portugal shows that it is possible to provide unemployed adults with many learning opportunities. In Portugal, the New Opportunities Initiative (now reformed and delivered by the centres for qualification and vocational training, created in 2013) shows that with targeted policy it is possible to up-skill and offer qualifications to substantial numbers of low-skilled adults. In Spain progress towards the EU benchmark on adult participation has been continued. ICT has been used with some success in serving low-qualified adults through the *Aula Mentor* initiative<sup>(57)</sup>.

<sup>(57)</sup> <http://www.aulamentor.es/>

Finally, the participation rates of older people should increase significantly if the EU is to meet its 2020 target of a 75% employment rate. Overall there were around 60 million adults aged 55-64 in the EU in 2011. Out of those, around half (30 million) were inactive (mostly due to illness or retirement); around 26 million were employed and 4 million unemployed. Among the adults aged 55-64 who are employed, around 45% of employed older adults participated in adult learning in 2011, while only around 20% of the inactive or unemployed did so. Of all the inactive adults in the EU aged 25-64, half of them were older adults aged 55-64, while most of the rest were women withdrawn from the labour market due to childrearing or other family responsibilities.

Older adults are often at a great disadvantage. The Evaluation of European Social Fund (ESF) support

for LLL<sup>(58)</sup> shows that even when ESF measures are targeted, older workers (despite their skill and learning needs) receive fewest opportunities. In ESF-funded measures, 2007-2010, the level of older workers' participation was lower than that of the other two target groups examined (young people and low-skilled). The 55-64 age group as a proportion of the working-age population across the EU-27 was 17.5% in 2008, yet on average across Member States just under 5% of participants in ESF were from this age group. In some countries this group was not prioritised or targeted; more activities were found in countries already preoccupied with reacting to demographic change (e.g. Austria, the Netherlands and the United Kingdom). The same tendency has been identified by the latest ESF ex-post evaluation for the period 2007-2013, indicating that across the EU-27, the ESF investment in human capital reached 4% of young people (aged 15-24) in the programming period (annual average), ranging from 29% per year in Estonia to below 1% in Cyprus and Sweden. The coverage rate of older people (aged 55-64) was lower, at 1% at the EU-27 level, with highest levels (4%-5%) in Estonia, Portugal and Slovenia<sup>(59)</sup>.

### 3.2.2. Provision of adult learning

The European Adult Education Survey<sup>(60)</sup> has provided evidence that most of the training in Europe as well as key motivations and barriers related to training are all job-related. Furthermore, two thirds of all work-related non-formal learning is provided or sponsored by the employer. Therefore employer participation in providing learning opportunities is of key importance.

But this differs depending on the size of the company: big employers (250+ employees) provide training opportunities on average for half of their employees; medium-sized employers (50-250 employees) provide it for a third of their employees; while small employers (10-50 employees) provide it for only a quarter of employees.

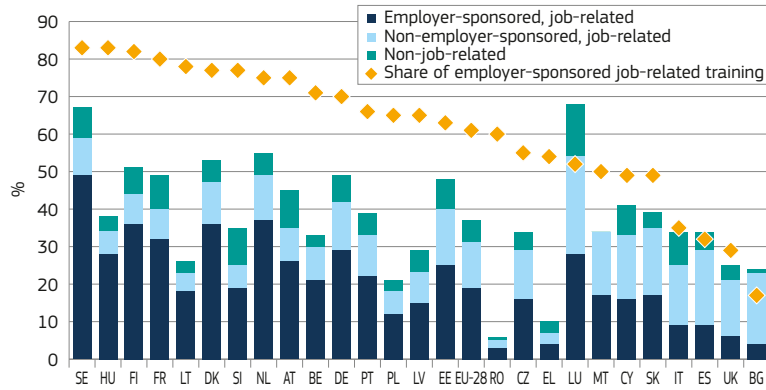
<sup>(58)</sup> European Commission (2012b) Evaluation of the ESF support for Lifelong Learning.

<sup>(59)</sup> European Commission (2015) ESF 2007-2013 Ex-post Evaluation: Investment in Human Capital

<sup>(60)</sup> [http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Adult\\_education\\_survey\\_\(AES\)](http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Adult_education_survey_(AES))



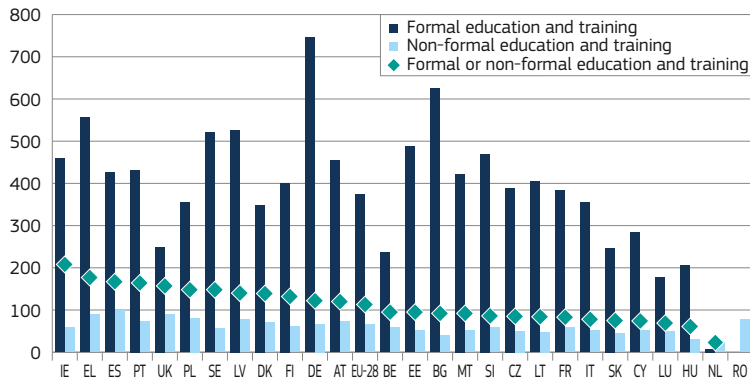
Chart 27: Share of non-formal education and training sponsored by employers, EU-28, 2011



Reading note: In this graph employers include both private and public organisations.  
Source: DG EMPL calculation based on Eurostat Adult Education Survey data.

Beyond participation, the issues of quality or sufficiency of training activities are also essential – one aspect of this can be illustrated by looking at the average duration of training episodes (Chart 28).

Chart 28: Average training hours per participant, EU-28, 2011



Reading note: Data on average duration of Formal education and training is not available for Romania. Results for the Netherlands are unreliable.  
Source: DG EMPL calculation based on Eurostat Adult Education Survey data.

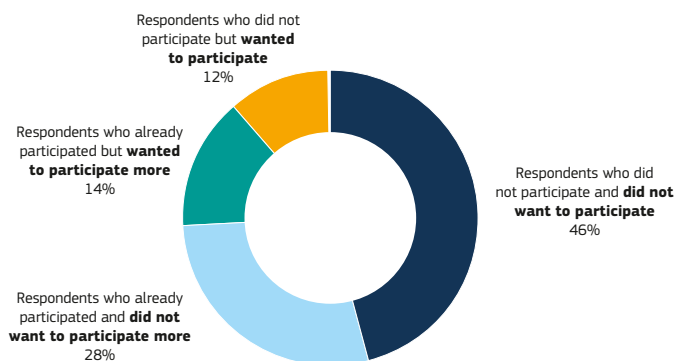
Formal programmes are longest in duration (on average 374 hours per year), while non-formal programme participants participate in training on average 65 hours per year. Finally, training provided and/or funded by the employers is particular as it tends to be of very short duration: on average participants receive only 25 hours per year. However it is estimated that training in excess of 100 tuition hours is required to make significant learning progress, particularly for those who lack basic skills<sup>(61)</sup>.

### 3.2.3. Overcoming barriers to participation

Given that many opportunities for learning exist, especially for employees of larger enterprises, it is necessary to examine what factors hinder adults from undertaking learning, such as lack of willingness to learn and situational barriers.

Recent research<sup>(62)</sup> shows that non-participation in adult learning can be caused by several kinds of factors, each requiring a different policy response. The factors are: situational (e.g. job or family), institutional (e.g. procedures that discourage participation), dispositional (e.g. attitudes and self-perceptions), or lack of information or finance. Public policy, including social and educational can seek to reduce the impact of these factors.

Chart 29: Distribution of the will to participate, or participate more, in lifelong learning, EU-28, 2011



Reading note: Participation in education and training considered with at least one learning occasion during the last 12 months.  
Source: Eurostat Adult Education Survey data.

Detailed information on the different barriers and obstacles to learning, including lack of financial resources, lack of time or lack of learning opportunities, is available from the Adult Education Survey<sup>(63)</sup>. This is summarised in Chart 29.

Almost half (46%) of adults in the EU-28 did not participate and do not want to participate in learning the future. Two thirds of those who already participate in learning (i.e. 28% of the total adult population) did not want to participate in more adult learning (their learning needs were 'satisfied'), whereas 14% would have liked to participate more than they actually did (especially in Luxembourg, Denmark,

The employers' role in encouraging and funding learning by their employees is crucial. Encouraging employers – especially smaller and medium-sized employers – to develop learning opportunities is essential. In countries where smaller companies are at a large disadvantage,

measures could include skills needs and skills fit analyses or audits as well as training and career plans. At the same time, large companies are much more likely to report that public policies have had an influence on their training provision.

<sup>(61)</sup> Vorhaus et al. (2011).  
<sup>(62)</sup> Desjardins and Rubenson (2013).  
<sup>(63)</sup> [http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Adult\\_education\\_survey\\_\(AES\)](http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Adult_education_survey_(AES))

Cyprus, Sweden and Slovakia). On the other hand, 12% of European adults aged 25-64 were not engaged in learning but were willing to.

Most adults who did not participate in learning indicate a strong link between learning and requirements on-the-job. Provided that the tasks required to be performed at one's job do not indicate a lack of skills or do not require updating of skills, many adults do not see the value and benefit of learning. The key reasons for lack of willingness to learn are: (a) unwillingness to do more learning, because of previous failure or lack of opportunity to put results to good use; (b) assuming that learning has to be related to the current job which particularly for the low-skilled might not require any additional skills; (c) possible unawareness of the possible benefits of continued learning.

Nevertheless, a substantial number of adults (26% of total EU adult population aged 25-64) were willing but unable to access enough learning. This includes both those without opportunities to learn and those who have had some opportunities to learn but were willing to learn more than earlier opportunities allowed them.

While a lack of awareness of the need for learning is a key reason cited as the main obstacle to learning, other reasons, notably the lack of time due to family responsibilities and/or due to working schedules are also very frequent. A lack of financial resources, health/age reasons, limited access to relevant learning opportunities, or insufficient employer and public support were other reasons often cited as limiting opportunities to learn.

Situational barriers are easier to deal with, usually through public intervention often through structural measures (e.g. childcare, services long-term care services time off work for studying). Such interventions may often be outside the realm of education policy (e.g. activating and enabling social protection benefits and services labour regulation policies, etc.) (Heidenreich and Rice, 2016).

Policies can also tackle the other specific barriers to participation identified by those who say they are willing to learn. For example: 'lack of time due to family reasons' could be addressed by improving the provision of care and similar services or wider use of distance learning; 'lack of time due to conflict

Table 6: Main obstacles to participation in learning, all adults in the EU-28, 2011

Obstacle	2011
Respondent did not need it for the job	50%
Respondent did not have time because of family responsibilities	21%
Training conflicted with the work schedule	18%
Respondent did not need it for personal (not related to job) reasons	15%
Training was too expensive or respondent could not afford it	13%
Health or age	9%
Respondent experienced difficulties in finding what he/she wanted	9%
Lack of employer's support or public services support	8%
Other	14%

Reading note: The obstacles to participation are reported here both by those who participated and those who did not.

Source: Eurostat Adult Education Survey data.

Table 7: Reasons cited by companies for not providing employee training, EU-28, 2010

Reason	2005	2010
Employees skills are sufficient	74	77
People with relevant skills were recruited externally	53	49
Available training was too expensive	23	32
Company focused the training for those still in education	10	25
Other reasons	21	17
Lack of suitable training courses in the market	15	14
Company faced difficulties to assess its training needs	10	13
Major training effort realised in a previous year	8	12
Employees had no time to participate in training	32	11

Reading notes: Eurostat Continuous Vocational Training Survey covers only those employers who employ 10 or more employees and pursue activities in the business economy and other non-market services (NIAAC sectors B to N, R and S). The wording of the items in the tables has been rephrased for the reasons of simplicity.

Source: Eurostat Continuous Vocational Training Survey data.

with job schedule' could be addressed by implementing effective training leave rules; 'cost' issues could suggest the need for targeted support for those on low incomes; health/age barriers could require adapted training or facilities.

Although it is not one of the main barriers to learning, the offer of funding for adult learning can improve take-up; higher national spending on this is linked to higher participation rates. Experiments with vouchers targeted at adults who need learning most has found them to be less successful for low-skilled people; tax incentives, 100% grants and loans appear to be more suited to their needs<sup>(64)</sup>.

Not having learning opportunities close to home or place of work is another barrier. The High Level Group on Literacy pointed to the potential use of libraries to provide literacy locally and to develop inter-generational reading activities for older people and children, incentives for older people to stay in reading and digital reading opportunities for adults and

older people. The Commission will shortly publish a study on the potential of open educational resources for adult learners.

A big number of employers, who do not provide training for their employees, indicate a number of reasons for not providing the training. In particular, these include a good fit between employee skills and jobs' requirements as well as a possibility to find relevant talent on the labour market when needed.

Some countries have managed to include low-skilled groups by extending the length of learning programmes to enable the learner to achieve a higher level or qualification, by embedding basic skills in VET, work-based or community learning, in cooperation with the media, cultural and civil society organisations, and by developing the competences of teachers.

Research<sup>(65)</sup> shows that incorporating basic skills development in the provision of courses helps attract potential learners, and is an effective way of improving learning outcomes and learner retention.

<sup>(64)</sup> [http://ec.europa.eu/education/library/study/2013/adult-financing\\_en.pdf](http://ec.europa.eu/education/library/study/2013/adult-financing_en.pdf)

<sup>(65)</sup> European Commission (2015) 'Study on the analysis of adult learning policies and their effectiveness in Europe'.

Other ways to effectively promote active inclusion are involving intermediary organisations such as community groups and trade unions to engage harder to reach adults in learning, and providing guidance and counselling services to attract learners to adult learning.

Those who are unemployed may benefit from ALMPs geared towards helping them return to work. Such measures are often job-related training offers. In the period 2000–2006, over 40% of the European Social Fund (ESF)<sup>(66)</sup> financed a number of such programmes, which reached 3.9 million citizens. While many focused on the acquisition of vocational skills or qualifications for expanding sectors, some included ICT or literacy and numeracy, such as the project Care Training, in England. Monitoring of the Spanish programmes showed that only 23% of the training participants subsequently found a job. Similarly, during the 2007–2013 period a substantial number of unemployed adults has been reached. Across the EU, the ESF investment in human capital reached 3% of the unemployed people (annual average), ranging from 42% per year in Portugal to below 1% in eight Member States. The coverage rate for long-term unemployed was slightly lower at 2%, ranging from 27% in Portugal to below 1% in 14 Member States<sup>(67)</sup>.

Keeping adults in work with the help of continuing education and training is likely to be a self-sustaining policy, as those adults who work are in general more likely to participate in training and at the same time keeping them well-skilled allows them to stay in the work force. In Poland the government has amended the Polish Labour Code, so that employees aged 45 or more can benefit from the services provided by jobcentres (the financing of training, examinations and educational loans) in the same way as unemployed people and to specify employers' minimum obligations to train older employees.

Low-qualified older people who are inactive are a group particularly hard to attract to adult learning. This challenge could be approached by combining social and health services with opportunities to learn, covering topics like healthy

behaviours, community activities or self-care. Policies to support activation and active aging are also likely to have a positive impact on participation of these adults in education.

Research in this field<sup>(68)</sup> suggests that participation in adult learning is strongly linked to the availability of learning opportunities, in particular by the level of work-based and job-related training available, and related to the disposition of adults towards learning in general and the habit of learning.

This, in conjunction with the foregoing analysis, provides some indications about ways forward that could overcome those barriers and significantly increase participation rates in adult learning. To do so they should be carefully targeted at the specific needs of different groups, ensuring that they acquire necessary skills for successful participation in the rapidly changing economic environment.

### 3.3. Active Labour Market Policies

#### 3.3.1. Better Vocational Education and Training and Vocational Guidance

When skill deficits are the underlying source of shortages and mismatches in the labour market, education and training measures, activation policies and measures to increase labour productivity assume great importance. Work-based learning programmes such as apprenticeship schemes provide young people with work experience and a mix of job-specific and transversal skills, necessary for overcoming the negative perceptions of employers regarding the work attitudes, soft skills and behavioural traits of younger individuals (Cedefop, 2015d)<sup>(69)</sup>. Improving the quality and relevance of vocational education and training (VET) systems is also a key prerequisite for enhancing the attractiveness of apprenticeship and vocational tracks to

students and young adults which feed into occupations that suffer from skill shortages<sup>(70)</sup>.

Training programmes, as part of Active Labour Market Policies (ALMPs) for both the unemployed and the employed are best provided in close alignment with areas of the economy affected by skill shortages. In some Member States targeted training programmes have been recently introduced, tailored to particular local labour market needs and sectors considered as 'critical' or of high growth potential (Cedefop, 2015c). By collaborating closely with regional or local economic development authorities, training programmes are typically offered by local public employment services (PES) that focus on specific technologies (e.g. IT sector) and skills (e.g. environmental) identified as important by local employers (see Box 3 in the Annex of this chapter for examples).

Targeted training initiatives can help ensure the provision of skills to individuals who are in demand in the labour market and alleviate skill shortages over the medium term. However a number of important caveats must be taken into account. First, the considerable lags involved in the upskilling or reskilling of (unemployed) individuals highlight the danger of excessively relying on such measures for the purposes of meeting any immediate job vacancies of companies. By contrast, investing in the key competences and adaptability of the workforce is likely to be an automatic stabiliser of future skill shortages (de Beer et al., 2015)<sup>(71)</sup>. Key competences (including basic and career management skills) are a foundation for the sustained matching of people's skills to evolving job requirements and new work contexts, particularly when job-specific skills can

<sup>(66)</sup> The European Social Fund: Active Labour Market Policies and Public Employment Services, European Commission.

<sup>(67)</sup> European Commission (2015) ESF 2007–2013 Ex-post Evaluation: Investment in Human Capital.

<sup>(68)</sup> European Commission (2015) 'Study on the analysis of adult learning policies and their effectiveness in Europe.'

<sup>(69)</sup> Such schemes have moved high up on national, EU and international policy agendas and are clearly visible in the policy developments of recent years, from the Youth on the Move flagship initiative (Council of the EU, 2010) to the Youth Guarantee (Council of the EU, 2013). EU policy-makers have also committed to maximising work-based learning, including apprenticeships, as part of the Bruges Communiqué and the European Alliance for Apprenticeships (Cedefop, 2015c).

<sup>(70)</sup> In a 2013/14 survey of the European Quality Assurance in VET (EQAVET) network, most EU Member States reported that they had devised a national quality assurance approach and have set up national reference points (NRPs) to promote the EQAVET framework, though not all NRPs deal with all types of programmes in I-VET (Cedefop, 2015d).

<sup>(71)</sup> Spurred by the recent emphasis on learning outcomes, work on educational and vocational standards and revisions of core curricula, several Member States have paid increasing attention to including key competences as part of their IVET programmes. Assessing key competences, in particular soft skills, in the context of occupational skills demonstrations, within training firms or projects that learners carry out jointly with or for enterprises is a strategy that can contribute to the alleviation of future skill shortages among young labour markets entrants (Cedefop, 2015d).

quickly become outdated. In this respect, a challenge in designing training programmes tailored to areas of specific skill shortages is providing an adequate skill mix that is specific enough to meet occupational needs whilst also taking into account the limits of transferability of tightly-knit job-specific skills.

Qualitative shortages that arise because of an absence of sufficient labour market intelligence and information should be tackled instead via the provision of better guidance and career counselling within schools and tertiary education institutions. Steering young people towards specific training and educational pathways in greater demand in the labour market can mitigate the risk of ill-informed choices, which often arise not because of a lack of awareness regarding the benefits of practical professions but due to their poor image and social desirability pressures (MCG, 2012). Better job matching by Public Employment Services (PES) that exploits newly developed and innovative digital platforms and ICT tools, which profile the skills of job applicants and vacancies, can further ameliorate information mismatches (Cedefop, 2015c). In addition, although significant progress has been made in recent years in the development of systems of labour market intelligence and skills anticipation in several EU countries, the existing statistical infrastructure with regard to monitoring vacancies and skill shortages is relatively weak. Significant challenges also exist with regards to achieving a better integration of the information received by labour market monitoring tools in the actual design of labour market policies, as a means of increasing the quality and effectiveness of labour market programmes (OECD–Cedefop–ETF–ILO, 2015).

### 3.3.2. A skill matching perspective for ALMPs

ALMPs and Public Employment Services (PES) are often criticised on the grounds that they focus on the immediate placement of individuals in jobs rather than on the provision of adequate support and retraining so that unemployed persons can find a sustainable job match over the long term (Ohlsson and Storrie, 2007). For instance, the success of ALMPs is often evaluated by measuring the share of employment achieved among participants but without including criteria related to the quality of the

skill match realised and/or the sustainability of employment (Cedefop, 2015b). When deadweight, locking-in and other displacement effects are taken into account, only a marginal positive effect of such policies is often revealed (Card et al., 2010; Kluve, 2010)<sup>(72)</sup>.

Effective ALMPs should therefore be evaluated based on the extent to which training instruments for the long-term unemployed (LTU) improve their position in the labour market in the long term. The LTU encounter a number of disadvantages when looking for jobs and, therefore, have multiple and complex needs (Zimmermann, 2015). They may require a significant number of different interventions over an extended period of time, including training in a broader set of basic competences that improve individual employability, before a successful match of their skills in the labour market can take place via targeted or more specific interventions. Nevertheless, 'most training programmes tend to focus on job-specific skills and do not target the development of key competences in a systematic way and the approach taken to integrate these competences in "return to work" programmes seems to be implicit and lack comprehensiveness' (Cedefop, 2013, p. 10).

An inventory of skill matching instruments implemented in various Member States shows that many have adopted or have revised training instruments geared towards the general skills upgrading of the unemployed in the aftermath of the economic recession (see Cedefop, 2015b). Crucial ingredients identified as necessary for the effectiveness of such ALMPs are the provision of vocational certificates to the unemployed following the completion of a training course as well as the ability to improve skills within a real work context as opposed to an exclusive reliance on classroom training. Work-based learning (WBL) programmes, in particular, constitute effective instruments of ALMPs targeted at overcoming potential barriers that low-qualified LTU individuals face in (re-)entering employment (Cedefop, 2013).

Member States also increasingly understand that a well-defined connection between skill needs anticipation and ALMPs is crucial to support

the unemployed in finding sustainable employment. Linking training offered to the unemployed to labour market needs is a strategy adopted by several EU countries in the aftermath of the economic recession. PES and Ministries of Labour and Education in several EU countries (e.g. the Czech Republic, Denmark, France, Austria, Croatia, Ireland, Estonia and Portugal) rely on analyses of skills assessments and forecasting to inform the provision of re-training, on-the-job training programmes and/or the design of apprenticeship schemes (OECD/Cedefop, 2015). PES in Belgium, Croatia and Estonia actively guide the specific training of the unemployed towards occupations identified as having shortages or towards those sectors deemed to be critical for future strategic development priorities.

To maximise the effectiveness of ALM policies and programmes, integrated labour market intelligence and skill anticipation systems are essential. However, the current data architecture in several EU countries is characterised by serious deficiencies<sup>(73)</sup>. Most importantly, there is a significant shortage of information on actual skill needs and skill supply in different occupations. As a consequence, policy-makers and relevant educational and labour market actors often have to rely on imperfect signals of skill needs, such as vacancy data or claims of recruitment difficulties by employers (as discussed in Section 1.3 'Where the EU stands' above). Designing ALMPs to respond to contemporaneous vacancies per se, however runs the risk that a significant proportion of those trained to cater to specific shortage areas will be simply augmenting an already adequate supply of skills. Distinguishing vacancies between those representing additional job opportunities and those which are filled as a result of normal turnover is therefore an important prerequisite for ensuring lasting job prospects for both job-ready and disadvantaged job seekers<sup>(74)</sup>.

<sup>(73)</sup> Transitions data between and within occupational groups, employability data on transitions from school to work and graduate employability based on tracer studies, correspondence between educational programmes and occupational choices are just some examples of data gaps affecting most labour market analyses that could inform a better design of ALMPs.

<sup>(74)</sup> Pouliakas, K., and McGrath, J., presentations at European Parliament workshop 'The impact of the crisis on skill shortages', Brussels, 23 March 2015, available at: <http://www.europarl.europa.eu/committees/en/empl/events-workshops.html?id=20150323CHE00091>

<sup>(72)</sup> However, training instruments as part of ALMPs are also often found to have intangible benefits, such as the creation of a feeling of higher self-esteem among the LTU (Andersen, 2010).



### 3.4. Making skills visible and comparable

#### 3.4.1. Validating and recognising skills

The lack of relevant skills is not the only cause for low employability and skills mismatches. In many cases, skills exist in the labour market but are not identified, exploited or rewarded. Skills and qualifications acquired in a given country and in a specific economic sector might not be recognised or even properly understood by prospective employers of other countries and sectors. Skills acquired on the job or through other relevant experiences are not necessarily recorded in a qualification or documented. The problem is particularly acute for third-country nationals, and the potential contribution of migration to assuage the skills needs of the labour market remains virtually untapped.

According to a recent Eurobarometer, 6.0% of EU citizens have tried to work or study in another EU Member State but were not able to do so. This was partly due to a lack of recognition of their qualifications and related support and information. In comparison to this, 3.3% of the total labour force in 2013 was mobile. It is evident that there is potential for greater mobility also based on improved recognition of qualifications at EU level.

#### 3.4.2. Recognition and transparency of skills and qualifications

When moving to a new job or to further learning, whether within or across borders, learners and workers require a fair, reliable and efficient system for recognition of their skills and qualifications. As can be seen below, the term 'recognition' is used in different contexts, can have different meanings and can refer to different aspects of recognition.

Regarding recognition of qualifications in regulated professions, i.e. professions access to which and pursuit of which is subject by virtue of legislative or administrative provisions to the possession of specific professional qualifications<sup>(75)</sup>, the European Union has developed a comprehensive system of legal texts and case law in order to allow the holder of a

professional qualification to access and pursue that profession, or part of that profession as appropriate, in another Member State on a permanent or occasional and temporary basis, under the same conditions as nationals. The main tool is the 2005/36/EC Directive<sup>(76)</sup> on the recognition of professional qualifications besides some specific directives for given professions e.g. lawyers. The 2005/36/EC Directive provides for three systems of recognition. One allows the automatic recognition of professional qualifications acquired and concerns 5 health professions, the profession of architect and of veterinary surgeons. The second system of recognition is based on professional experience and concerns professions mainly related to the crafts and trade domain. The remaining system, the general system, enounces the general principle of freedom to access and pursuit of a regulated profession to the holder of the related qualification in another Member State under the same conditions as nationals with applications of compensatory measures in case of substantial differences. The general system allows also to take due account of the professional experience as appropriate.

Academic recognition focuses on recognition of periods of study or qualifications issued by an education or training provider with regard to a person wishing i) to begin studying ii) to continue studying or iii) to use an academic title. Recognition of higher education qualifications or qualifications giving access to higher education, is provided for in the context of the Lisbon Recognition Convention<sup>(77)</sup>.

The Commission has launched a range of tools aimed at making skills and qualifications more transparent and comparable. These tools create a better understanding of skills and qualifications (e.g. by employers) and make their recognition easier, so their portability across the EU is increased. Work on the comparability of qualifications across Europe started a decade ago and the European Qualifications Framework (EQF) has advanced Member States' trust in the quality of each other's qualifications. To

<sup>(75)</sup> Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications (Text with EEA relevance) OJ L 255, 30.9.2005, pp. 22–142.

<sup>(77)</sup> <http://conventions.coe.int/Treaty/en/Treaties/Html/165.htm>

date, 22 Member States have referenced their national qualifications frameworks to the eight European levels provided for in the EQF and the remaining countries plan to do so in the course of 2015 and 2016.

Other tools include: the European Job Mobility Portal; EURES; the EU Skills Panorama, which is a central access point for information on skills and jobs intelligence across Europe, ESCO and Europass, a set of documents including a CV to make skills and qualifications clearly and easily understood., The European taxonomy on Skills, Competences, Qualifications and Occupations (ESCO), still in development, aims at making skills more transparent in the European labour market and the education and training sector. It should enable better services in two basic steps.

First, it provides a vocabulary and basic information on occupations, knowledge, skills, competences and qualifications in Europe. ESCO links this vocabulary systematically to the other European and international transparency instruments, such as the EQF, the e-Competence Framework (e-CF), the Statistical Classification of Economic Activities in the European Community (NACE) and the International Standard Classification of Occupations (ISCO). This way, ESCO not only contributes to interoperability with national and international classifications, it also puts the knowledge, skills and competences of people in focus.

Second, ESCO makes the vocabulary and information reusable in applications. Tools and services can use ESCO to deliver better services, for example through better user interfaces, search functionality or job matching algorithms. This way, ESCO enables competence-based job matching, and allows jobseekers and employees to identify new career paths and learn how their specific skills match with different occupations. End users will benefit from these enhanced services, often without even knowing about ESCO. The Commission integrates ESCO with other European projects, such as EURES, the EQF, Europass and the European Skills Panorama, in order to enhance their quality and potential impact.

Qualifications awarded by international sectorial bodies or multinational companies cannot be directly related to the European levels of the EQF and rely exclusively on national processes. This generates parallel recognition processes,

<sup>(75)</sup> See article 3(1)(a) of Directive 2005/36/EC.



resulting in cumbersome procedures and sometimes inconsistent results across countries for similar qualifications. Such situations hinder cross-European mobility.

### 3.4.3. Validating skills acquired outside the formal education and training system

Based on the 2012 Council Recommendation on the validation of non-formal and informal learning (VNFIL), inroads have been made on the validation of skills acquired outside of the formal education and training system, for example through work experience, in-company training, digital resources, volunteering and life experience in general. Member States have agreed to put in place arrangements for the validation of VNFIL experiences by 2018 enabling individuals to obtain a qualification (or part of it) on the basis of their validated experiences. These experiences would be linked to qualifications and in line with the EQF and would have the same or equivalent standards as qualifications obtained through formal education. Opportunities and uptake of validation, however, still vary significantly across Member States. Some of the major challenges include: the low level of awareness regarding the possibilities and potential value of validation, especially amongst the general public; the social and labour market acceptance of validation which, whilst growing, remains in many countries lower than the acceptance of formal education; the level of bureaucracy and costs involved in validation; and the lack of a long-term and comprehensive approach to validation, which in many cases remains a collection of initiatives and projects with low coordination between stakeholders and across sectors. Identification of validation of skills is particularly relevant for people with lower qualifications, the unemployed or those at risk of unemployment, and for those who need to change their career paths, i.e. to identify further training needs and access re-qualification opportunities.

### 3.4.4. What needs to be done? Adjustments required at EU level

Based on progress already made, a new level of ambition is necessary to make skills and qualifications recognised and valuable to employers across Europe and economic sectors. In this regard, a revision of the Council Recommendation on

the European Qualifications Framework is planned and the possibility of giving European levels to qualifications awarded by international sectorial bodies or multinational companies is being considered. Furthermore a mechanism should be established through which EQF levels are attributed to 'Common Training Frameworks' as provided by Directive 2005/36/EC<sup>(78)</sup>. The revision of the EQF should also contemplate the opportunity of aligning mature qualifications frameworks of non-European countries to the EQF. This would support comparability and recognition of qualifications of non-EU nationals and Europeans seeking job and learning opportunities in other parts of the world. Finally, the various web tools and services to support skills documentation as well as transparency and recognition mentioned above should be streamlined into one single service in order to improve their effectiveness.

## 4. CONCLUSIONS

Well-functioning labour markets rely on a match between the skills and formal qualifications of the workers and those that the jobs require and employers look for. Formal qualifications are often quite different from the real skills workers have but are nevertheless an important way to signal skill levels.

In popular discourse, 'skills' are used as an all-encompassing term and often interchangeably with competencies, qualifications and behavioural traits. Yet labour market economists, policy-makers, education and HR practitioners may insist on more precision seeking to distinguish between, for example, formally acquired attested skills or qualifications, skills in the narrow sense or what one is capable of doing, acquired during formal education but also through experience, soft skills, and finally competencies (i.e. how well one's skills are applied in practice, a concept that captures also attitudes, motivation and personality traits).

The fast changing economy of today, with ever stronger knowledge and innovation components, is rendering people's skills obsolete more quickly than ever before. Demand for entirely new kinds of skills is emerging. This imposes new requirements on workers, employers, policy-makers and research. Workers need to upgrade their skills to adjust to

changing demands. Employers need and are expected to offer good training opportunities for workers and modernise their recruiting and HR policies. Effective and efficient investments in education and training for skills and implementation of instruments that foster their development are necessary; this requires a long-term perspective, based on predictions from research about the likely future labour market demand. The attainment of high-quality and relevant formal qualifications is also needed along with mechanisms for the validation of workers' non-formal and informal learning.

This agenda could apply for any country or region in the world. The EU faces special challenges. The shrinking of its labour force due to declining fertility, combined with increased life expectancy – a fast ageing society – means that the current standard of living can be sustained in the future only through higher productivity. Opportunities for productivity increases lie mainly in knowledge sectors that require a high level of skills, creativity and flexibility.

Governments, businesses and workers alike have high stakes in predicting the future evolution of the labour market demand for skills. Skill demand forecasting will help to make for good investment decisions and career choices.

In anticipation of the future needs of the labour markets, the EU adopted a 2020 policy target of a 40% share of tertiary level graduates amongst 30-34 year olds. The rate stood at 36.9% in 2013 and is likely to be met in 2020 extrapolating the trends since 2010<sup>(79)</sup>. In the past, higher education was strongly linked with higher job quality and higher pay. However it is not certain to what extent the current and future graduates will be able to replicate the job market success of older cohorts, with many graduates experiencing over-qualification.

Some Member States seem well placed to confront the challenge of global competition but others not. The latest PISA results for secondary schools see a number of Member States below the United States which is already well under the OECD average. Some school systems need major improvements. Adult skills,

<sup>(78)</sup> <http://conventions.coe.int/Treaty/en/Treaties/Html/165.htm>

<sup>(79)</sup> For more information see Education and Training Monitor [http://ec.europa.eu/education/tools/et-monitor\\_en.htm](http://ec.europa.eu/education/tools/et-monitor_en.htm).

as measured by PIAAC, also show poor skills in several Member States reinforcing the urgency of improving worker training programmes in them.

In the EU it emerges that a tertiary degree is increasingly a prerequisite, but not a guarantee, of employment in mid- and higher-paying jobs. It remains to be seen to what extent the link between higher education and better jobs has been permanently changed by the employment slump in the crisis. Cedefop, the EU's skills research agency, still predicts that the largest share of job openings (24%) in 2025 will be in the 'professional' high-skilled job sectors.

Well-designed, efficient and accessible education systems and training schemes, with strong links to the labour market, are crucial for building up and maintaining the required level of skills in the labour force. When it comes to education and training of adults, particular attention should be devoted to the workers currently disadvantaged on the labour market, i.e. the low-skilled, unemployed and inactive. Job-oriented training also appears essential for assuring a transition from school into the labour market. In most EU Member States and among the population aged 20-35 without a tertiary education degree, the employment levels are higher in workers who received

job-oriented training as opposed to those who did not.

Training programmes should be regarded as a key part of ALMPs and therefore a responsibility of governments. Employers could be encouraged to engage in continued improvement of their staff's skills. In addition, motivation by workers themselves to upgrade their skills is necessary.

Finally, there is a particular role for Europe with regard to transnational skill recognition. Continued administrative and legal efforts are important to assure the EU-wide comparability of professional qualifications and validity of diplomas obtained in another country.

## ANNEX

## Box 3: Examples of policy instruments providing training specifically tailored towards areas of skill shortage in EU Member States

Several EU countries and regional authorities have recently adopted or adjusted their active or adult vocational training programmes, to correspond to areas of their economies explicitly identified as suffering from a skill shortage (Cedefop, 2015b).

#### *Examples of instruments targeted at the unemployed*

In Spain local PES offices have offered training courses to the unemployed, explicitly oriented to the upgrading of skills in **SAP technology**. This was as a response to the industry demand for computer programmers with skills in the SAP programming language.

The instrument **Cloud Academy (United Kingdom – Northern Ireland)** offers a 21-week training programme to provide the unemployed with the skills and experience required to take up new opportunities in the IT industry. Irish employers increasingly identify cloud computing as a critical area of growth in the ICT sector. Funding is provided by the PES while the training is delivered by employers.

**Ways to nursing (Austria)** seeks to combat current / future shortages in the healthcare sector by fully supporting and financing the unemployed in their education to start a career as a healthcare professional. The instrument seeks to meet the growing unmet demand for personnel in healthcare by overcoming the lack of attractiveness of the care sector and by upgrading the skills of the low-qualified, spurring their interest in pursuing a new career in the field of care and nursing.

#### *Examples of instruments targeted at the employed*

**Addressing Skill mismatches in the Aviation Maintenance Industry (Malta)** is a training instrument targeted at different educational levels with the aim of providing basic and advanced training in various skills related to aviation maintenance. Training is provided in aircraft maintenance, avionics systems, aircraft structures and composites as a response to the identified lack of skills in the aviation maintenance sector.

The **Energy Challenge Fund (United Kingdom – Scotland)** aims to address skill shortages identified in the Scottish renewable energy sector, which cannot be tackled only by graduates of the initial education system. Therefore this fund enables new entrants to Scotland's energy sector to receive qualifications necessary for working in renewables, oil and gas, subsea and micro-renewables. The initiative is related to and supports the government's Energy Skills Investment Plan.

**Skillnets (Ireland)** are Irish enterprise-led support bodies, supported by the government, whereby skill networks are formed by employers in similar sectors to determine skill needs, and promote and facilitate enterprise training and workplace learning. Training is provided by the network of companies on wide-ranging specific skills that are relevant for working in the entire sector, not only in particular companies. Over 60 of these training networks are currently supported.

The **Centre for Resource Efficiency (VDI ZRE, Germany)** is closely linked to the Association of German Engineers and offers qualification courses for employees of companies and consultants giving basic technological insights to saving materials and energy in processes and conveying methods for efficiency increases. The offer includes general courses for all sectors as well as sector-specific courses. VDI ZRE offers seminars at different universities in order to integrate resource efficiency aspects in existing courses, as well as support to universities in setting up study courses on resource efficiency.

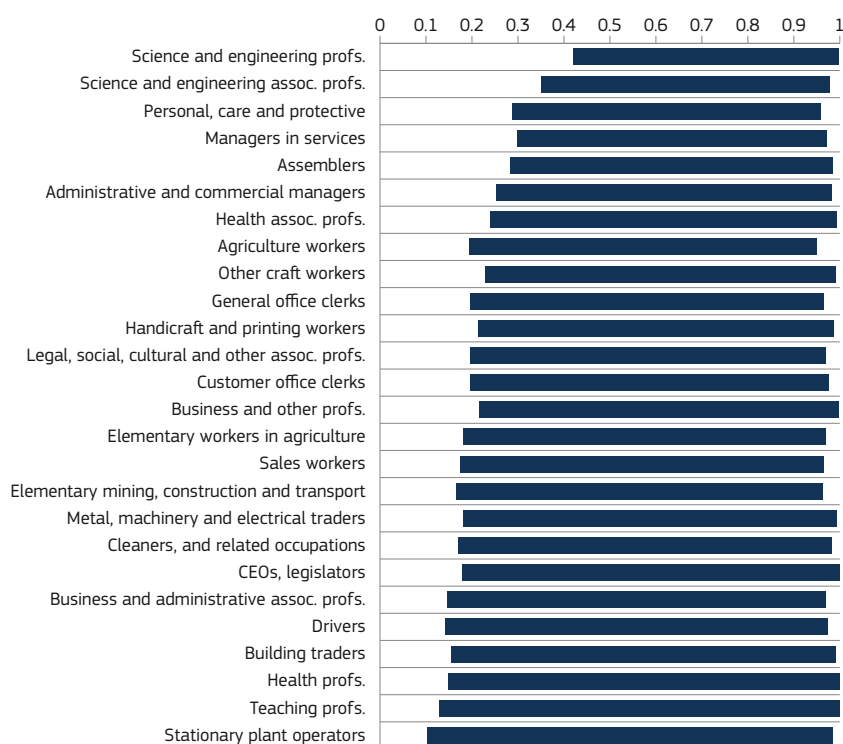
#### Box 4: Anticipated labour market imbalances in the EU labour market

Cedefop's skills forecasts enable the detection of key economic sectors and occupational groups which are likely to experience labour market imbalances in the next decade. By comparing forecasted employment trends broken down by different occupations with the anticipated labour supply patterns in each country, Cedefop has constructed a series of potential labour market imbalances indicators which depict (in a non-dynamic equilibrium framework) their inclination towards future quantitative labour shortages or surpluses in European countries. Such future imbalances reflect a projected (hypothetical) reality that may occur under the strict assumption that current trends in labour demand and supply will not experience significant changes or breaks in the series. It is expected, however, that dynamic market economies are likely to experience adjustments in wage levels, changed labour market participation rates and migration flows that may disturb the future evolution of imbalances.

Chart 30 indicates the variation of one such indicator, namely an indicator of anticipated 'difficulties to hire' by 2-digit occupational groups, across the European countries. Values close to 1 imply that the expected demand for professionals in a specific occupational group is likely to be sufficiently met with the existing supply of individuals in each labour market, whereas values further away from 1 signify the possibility of intense labour market imbalances. Occupations with the greatest spread of the indicator exhibit the possibility of the greatest 'labour market tensions' affecting the EU labour market, since jobs in the specific occupations are likely to be filled more easily in some Member States, while others will be prone to experiencing marked labour/skill shortages.

In general, labour market imbalances are found to prevail across all occupations and there is a marked divergence in the propensity of different EU countries to experience labour shortages in the future. For instance, *stationary plant and machine operators* is the occupational group predicted to have the greatest variance of hiring difficulties across EU countries, with some countries (e.g. Germany, Finland, France, the United Kingdom) being less likely to experience labour shortages in this occupation as opposed to Cyprus, Denmark, Sweden and Italy. *Teaching and health professionals*, but also several medium- and lower-skilled occupations (e.g. *drivers, cleaners*) are predicted to face imbalances in future EU economies (the latter arising due to a consistently declining supply of individuals allocated to such occupations). Intra-EU tensions are likely to be smaller for *science and engineering professionals*, although some countries (e.g. Spain, Ireland) are forecasted to encounter significant bottlenecks for such professionals.

Chart 30: Variation in indicator of 'anticipated difficulty to hire' across EU Member States by occupation, 2014-2025



Source: Cedefop skill forecasts <http://www.cedefop.europa.eu/en/events-and-projects/projects/forecasting-skill-demand-and-supply/skills-forecasts-main-results>

### Box 5: Linking active public training policies ad skills anticipation

As part of the instrument **Training for the unemployment (Croatia)** the PES draws up an annual training plan on the basis of:

- (a) an analysis of statistical indicators for labour supply and demand;
- (b) expert opinions;
- (c) an employer survey;
- (d) development programmes implemented at county level.

Based on these inputs, annual training plans, including specific proposals for training programmes to be offered to the unemployed, are drawn up at the local level. These training programmes last approximately 6 months and are offered by the local PES. A crucial condition for this to work is the historically close connection between the Croatian PES and the training providers.

Another interesting ESF-funded approach was adopted in Ireland, where an instrument has been developed that contributes to skill matching for longer-term unemployed individuals to meet local labour market needs. This instrument, **Momentum**, focuses primarily on improving the employability of long-term unemployed individuals, by providing training in areas with recognised skill shortages and existing vacancies. The programme funds the provision of free education and training projects to allow 6 500 long-term unemployed individuals (who have been unemployed for 12 months or longer) to gain skills and to access work opportunities in identified growing sectors. Momentum is an initiative supported by public funding, delivered in partnership with both public and private education and training providers that work closely with local employers. The instrument includes specific projects targeting individuals younger than 25 years of age, but is primarily targeted towards the wider target group of longer-term unemployed individuals. Its focus on sectors with current or future shortages shows how instruments for the unemployed can be used to mitigate skill shortages in certain sectors or occupations.

Source: Cedefop (2015b).

Table 8: PIAAC – Average results in literacy by country and age group

	16 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64
OECD Average	275	283	285	283	281	277	271	265	258	253
Australia	284	284	287	288	291	286	281	272	269	257
Austria	270	284	283	276	279	272	269	263	251	248
Canada	270	280	286	284	283	276	272	265	263	258
Czech Republic	275	284	285	288	278	272	268	263	264	261
Denmark	271	281	284	280	284	279	268	263	257	249
Estonia	282	291	288	284	279	276	271	267	262	259
Finland	288	304	307	310	305	293	291	276	265	255
France	271	279	280	276	272	262	255	253	243	241
Germany	275	282	285	278	274	276	267	260	260	247
Ireland	267	274	275	276	273	270	258	261	251	250
Italy	265	255	264	257	253	253	249	248	238	230
Japan	295	303	309	309	308	306	300	294	284	267
Netherlands	288	300	299	297	296	292	280	274	262	259
Norway	268	282	288	289	288	288	282	273	266	258
Poland	281	281	281	273	270	266	263	255	252	246
Republic of Korea	292	294	292	287	285	271	264	254	250	238
Slovakia	273	278	279	278	282	273	273	267	265	267
Spain	260	267	264	262	263	256	253	244	228	225
Sweden	271	291	293	287	290	285	282	270	271	257
United States	264	277	278	272	274	272	266	266	262	264

Source: PIAAC – 2012.



Table 9: PIAAC – Average results in literacy by country and gender

	Male	Female
OECD Average	274	272
Australia	281	279
Austria	272	267
Canada	275	272
Czech Republic	276	272
Denmark	271	271
Estonia	275	277
Finland	286	289
France	262	262
Germany	272	267
Ireland	268	265
Italy	250	251
Japan	298	295
Netherlands	287	281
Norway	280	276
Poland	264	270
Republic of Korea	276	269
Slovakia	273	274
Spain	254	249
Sweden	281	278
United States	270	269
Flanders (Belgium)	278	273
England and Northern Ireland (United Kingdom)	274	271

Source: PIAAC – 2012.

Table 10: PIAAC – Average results in literacy by country and level of education

	ISCED 1	ISCED 2	ISCED 3A-B	ISCED 3C shorter than 2 years	ISCED 3C 2 years or more	ISCED 5B	ISCED 5A, bachelor degree	ISCED 5A, master degree
OECD Average	223	252	278	253	261	287	300	308
Australia	232	265	292	:	271	287	308	312
Austria	:	253	269	257	:	285	307	309
Canada	214	247	:	:	:	285	308	313
Czech Republic	:	259	283	243	259	293	298	303
Denmark	195	249	292	254	261	287	293	306
Estonia	236	260	273	249	255	277	309	297
Finland	236	273	:	:	:	294	314	326
France	206	244	271	:	251	288	295	305
Germany	253	245	261	:	:	280	292	304
Ireland	220	246	:	:	:	279	298	304
Italy	209	242	267	245	251	:	281	287
Japan	:	267	289	279	289	304	318	332
Netherlands	248	259	292	:	266	294	309	323
Norway	:	255	286	267	264	289	299	310
Poland	244	249	269	:	242	:	291	299
Republic of Korea	223	257	273	:	270	283	295	304
Slovakia	:	249	283	251	265	:	292	296
Spain	218	241	264	:	247	267	279	296
Sweden	213	259	283	238	269	299	309	310
United States	190	237	:	:	:	283	298	310
Flanders (Belgium)	226	251	275	:	249	295	296	316
England and Northern Ireland (United Kingdom)	:	233	283	251	265	280	:	:

Source: PIAAC – 2012.

Table 11: PIAAC – Average results in numeracy by country and age group

	16 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64
OECD Average	266	276	280	279	277	274	268	263	256	250
Australia	270	270	274	276	279	273	270	259	255	246
Austria	274	284	287	277	284	279	276	273	259	256
Canada	262	273	276	277	274	270	265	257	255	248
Czech Republic	268	286	289	288	277	278	271	273	268	259
Denmark	265	281	288	286	290	290	280	273	270	262
Estonia	272	283	283	284	276	274	270	267	261	258
Finland	277	292	301	304	297	288	285	274	263	258
France	259	268	271	268	268	257	246	246	234	234
Germany	270	280	286	277	276	280	272	264	264	249
Ireland	253	263	263	268	261	259	251	248	240	236
Italy	257	244	266	259	252	250	245	243	236	225
Japan	275	289	299	296	298	295	292	291	282	268
Netherlands	281	289	292	294	290	285	280	274	262	262
Norway	264	278	280	289	289	289	282	278	272	259
Poland	265	271	271	270	263	260	261	248	242	245
Republic of Korea	281	281	284	277	277	265	256	247	241	221
Slovakia	276	280	280	278	284	278	280	270	267	264
Spain	250	259	255	259	258	252	245	240	225	216
Sweden	265	288	292	283	288	284	281	271	273	265
United States	238	258	261	258	261	255	247	252	248	247

Source: PIAAC – 2012.

Table 12: PIAAC – Average results in numeracy by country and gender

	Male	Female
OECD Average	275	263
Selected countries	275	263
Australia	274	261
Austria	282	268
Canada	273	258
Czech Republic	280	271
Denmark	283	273
Estonia	276	270
Finland	287	277
France	260	249
Germany	280	263
Ireland	262	250
Italy	252	242
Japan	294	282
Netherlands	289	272
Norway	286	271
Poland	261	259
Republic of Korea	269	258
Slovakia	277	275
Spain	252	240
Sweden	286	272
United States	260	246
Flanders (Belgium)	288	272
England and Northern Ireland (United Kingdom)	269	255

Source: PIAAC – 2012.

Table 13: PIAAC – Average results in numeracy by country and status in employment

	Full-time employed	Part-time employed	Unemployed	Pupil, student	Apprentice, internship	In retirement or early retirement	Permanently disabled	Fulfilling domestic tasks or looking after children/family	Other
OECD Average	278	265	249	279	260	252	221	247	256
Selected countries	278	265	249	279	260	252	221	247	256
Australia	279	264	249	282	:	254	:	236	253
Austria	282	272	260	298	257	253	:	261	269
Canada	273	260	243	277	270	254	212	238	256
Czech Republic	281	267	261	284	:	262	244	271	:
Denmark	290	275	258	279	261	247	:	257	265
Estonia	278	275	259	285	:	251	238	264	264
Finland	290	281	257	289	:	250	236	292	285
France	264	246	239	274	248	240	207	217	237
Germany	282	266	240	293	273	247	215	247	262
Ireland	271	247	241	267	:	248	188	238	242
Italy	257	249	236	263	:	234	:	221	234
Japan	297	277	271	289	:	281	:	280	:
Netherlands	290	281	255	290	272	271	236	251	271
Norway	290	269	254	277	246	259	241	231	:
Poland	268	261	242	276	257	244	220	244	249
Republic of Korea	265	255	255	286	:	:	:	250	253
Slovakia	287	270	245	289	:	259	241	261	:
Spain	259	246	233	266	:	217	199	219	243
Sweden	290	277	258	276	:	251	:	230	262
United States	262	249	225	257	:	249	206	249	255
Flanders (Belgium)	292	273	261	288	:	262	230	247	:
England and Northern Ireland (United Kingdom)	273	261	235	264	:	264	206	233	246

Source: PIAAC – 2012.

Table 14: PIAAC – Average results in problem solving by country and age group

	16 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64
OECD Average	291	297	297	294	288	282	276	268	262	255
Australia	296	295	296	295	296	286	285	282	272	267
Austria	288	299	298	294	285	284	278	270	261	258
Canada	293	295	293	291	290	285	278	270	264	258
Czech Republic	295	298	296	298	279	274	271	269	267	259
Denmark	288	299	308	298	295	287	280	269	262	249
Estonia	290	296	290	288	279	270	262	256	251	248
Finland	298	307	311	309	303	290	283	271	257	249
Germany	292	298	300	291	286	285	279	266	265	253
Ireland	284	288	285	284	279	270	270	263	255	247
Japan	297	302	310	309	304	299	287	276	273	252
Netherlands	296	304	300	301	293	292	280	274	266	256
Norway	289	302	302	301	296	289	280	274	264	255
Poland	289	285	281	280	274	268	262	252	246	242
Republic of Korea	302	305	299	287	284	270	263	259	256	255
Slovakia	287	286	284	285	280	278	277	272	269	275
Sweden	293	308	309	300	300	288	285	271	267	254
United States	278	291	287	279	285	273	274	267	269	265
Flanders (Belgium)	294	303	300	294	289	283	275	263	256	250
England and Northern Ireland (United Kingdom)	284	290	291	292	285	281	277	266	266	260

Source: PIAAC – 2012.

Table 15: PIAAC – Average results in problem solving by country and gender

	Male	Female
OECD Average	286	280
Australia	289	289
Austria	289	279
Canada	283	281
Czech Republic	285	281
Denmark	285	281
Estonia	280	276
Finland	291	288
Germany	285	280
Ireland	280	274
Japan	298	289
Netherlands	290	282
Norway	289	283
Poland	279	271
Republic of Korea	286	280
Slovakia	282	280
Sweden	290	286
United States	280	275
Flanders (Belgium)	284	278
England and Northern Ireland (United Kingdom)	285	276

Source: PIAAC – 2012.

Table 16: PIAAC – Average results in problem solving by country and status in employment

	Full-time employed	Part-time employed	Unemployed	Pupil, student	In retirement or early retirement	Fulfilling domestic tasks or looking after children/family	Other
OECD Average	285	279	273	301	254	274	275
Australia	291	287	274	304	273	275	286
Austria	286	277	274	308	256	279	277
Canada	284	279	272	300	260	278	272
Czech Republic	282	287	281	302	259	290	:
Denmark	287	275	280	298	243	:	284
Estonia	275	276	268	299	245	282	262
Finland	289	288	277	309	243	306	280
Germany	284	276	270	307	260	266	283
Ireland	282	271	265	291	246	264	256
Japan	299	281	281	307	:	284	:
Netherlands	290	288	268	306	260	255	283
Norway	291	274	279	299	243	:	:
Poland	274	283	264	296	240	260	253
Republic of Korea	280	273	286	307	:	269	284
Slovakia	281	275	270	292	272	:	:
Sweden	290	283	281	302	247	286	280
United States	280	274	261	290	262	278	279
Flanders (Belgium)	286	271	269	304	251	254	:
England and Northern Ireland (United Kingdom)	286	277	267	293	260	263	278

Source: PIAAC – 2012.

## REFERENCES

- Abraham, K. G., 'Is Skill Mismatch Impeding U.S. Economic Recovery?', *Industrial and Labor Relations Review*, Vol. 68, No 2, 2015, pp. 291-313.
- Accenture in collaboration with Manufacturing Institute, *Skills shortage threatens growth for US manufacturing*, 2014, out of inventory, available at <http://www.themanufacturinginstitute.org/Research/Skills-and-Training-Study/~media/70965D0C4A944329894C96E0316DF336.ashx>
- Acemoglu, D., 'Changes in Unemployment and Wage Inequality: An Alternative Theory and Some Evidence', *The American Economic Review*, Vol. 89, No 5, December 1999, pp. 1259-1278.
- Aghion, P., Boustan, L., Hoxby, C. and Vandenbussche, J., *The Causal Impact of Education on Economic Growth: Evidence from the United States*, 2009, available at [http://scholar.harvard.edu/files/causal\\_impact\\_of\\_education\\_0.pdf](http://scholar.harvard.edu/files/causal_impact_of_education_0.pdf)
- Aghion, P. and Akcigit, U., *Innovation and Growth: The Schumpeterian Perspective*, Survey Report of FP7 Project Cooperation on European Research in Economics (COEURE), 2015. <http://www.coeure.eu/wp-content/uploads/Innovation-and-Growth.pdf>
- Allen, J. and van der Velden, R., *The flexible professional in the knowledge society: New challenges for higher education*, Springer, 2011.
- Almeida, R., Behrman, J. and Robalino, D., *The Right Skills for the Job? Rethinking Training Policies for Workers*, IBRD/World Bank, Washington, 2012.
- Almlund, M., Duckworth, A., Heckman, J.J., Kautz, T., 2011. Personality psychology and economics. In: Hanushek, E.A., Machin, S., Wößmann, L. (Eds.), *Handbook of the Economics of Education*, vol. 4. Elsevier, Amsterdam, pp. 1-181.
- Andersen, T., Hansen, M. & Moltesen, J., *Anticipating skill needs of the labour force and equipping people for new jobs. Which role for Public Employment Services in early identification of skill needs and labour up-skilling?*, a study commissioned by the European Commission DG EMPL to the Danish Technological Institute/ ÖSB Consulting/Warwick Institute for Employment Research, 2010.
- Arrow, K. J. and Capron, W., 'Dynamic shortages and price rises: the engineer-scientist case', *Quarterly Journal of Economics*, Vol. 73, No 2, 1959, pp. 292-308.
- Autor, D. H., Katz, L. F. and Kearney, M. S., 'The Polarization Of The U.S. Labor Market', *American Economic Review*, Vol. 96, No 2, May 2006, pp. 189-194.
- Bandi, U. and Iannone, R. L., *Human resource strategies are the key to bolstering lifelong learning circumstances at the enterprise level*, Policy Brief FP7 Project LLLight'in'Europe, 2015. [http://www.lllightineurope.com/fileadmin/lllightineurope/download/LLLight\\_Human\\_Resources\\_Pivotal\\_for\\_LLL\\_policybrief\\_E3\\_20150922.pdf](http://www.lllightineurope.com/fileadmin/lllightineurope/download/LLLight_Human_Resources_Pivotal_for_LLL_policybrief_E3_20150922.pdf)
- Barnow, B. S., Trutko, J. and Piatak, J. S., *Occupational Labor Shortages: Concepts, Causes, Consequences and Cures*, W. E. Upjohn Institute for Employment Research: Michigan, 2013.
- Battu, H., Belfield, C. R. and Sloane, P. J., 'Overeducation among graduates: a cohort view', *Education Economics*, 17(1): 1999, pp. 21-38.
- Beblavy, M. and Veselkova, M., *Future of Skills on Europe: Convergence or Polarisation*, Report FP7 Project NEUJOBS, 2014.
- Bennett, J. and McGuinness, S., 'Assessing the impact of skill shortages on the productivity performance of high-tech firms in Northern Ireland', *Applied Economics*, Vol. 41, No 6, 2009, pp. 727-737.
- Berger, J., Keuschnigg, C., Keuschnigg, M., Miess, M., Strohner, L. and Winter-Ebmer, R., *Modelling of Labour Markets in the European Union – Final Report*, 2009, available at <http://ec.europa.eu/social/BlobServlet?docId=4275&langId=en>
- Bessen, J., *Employers are just whining: The skills gap is real*, 2014, available at <https://hbr.org/2014/08/employers-arent-just-whining-the-skills-gap-is-real>
- Bewley, T., *Why Wages Don't Fall During a Recession*, Harvard University Press: MA, 1999.
- Bils, M. and Klenow, P. J., 'Does Schooling Cause Growth?' *American Economic Review*, 90(5), 2000, pp. 1160-1183.
- Booth, A., and Snower, D., *Acquiring Skills Market Failures, their Symptoms and Policy Response*, 1996.
- Boyatzis, R. E., Batista-Foguet, J. M., Fernández-i-Marín, X. and Truninger, M., 'El competencias as a related but different characteristic than intelligence', *Frontiers in Psychology*, Vol. 6, 2015, available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4322617/>
- Brown, P., Lauder, H. and Ashton, D., *The Global Auction*, Oxford: OUP, 2011.
- Brynjolfsson, E. and McAfee, A., *The Second Machine Age: Work, progress and prosperity in the time of brilliant technologies*, 2013.
- Büchel, F., 'The effects of overeducation on productivity in Germany – the firms' viewpoint', *Economics of Education Review*, 21(3), 2002, pp. 263-275.
- Burgess, S., *Human Capital and Education: The State of the Art in the Economics of Education*, Survey Report FP7 Project COEURE, 2015. <http://www.coeure.eu/wp-content/uploads/Human-Capital-and-education.pdf>
- Burtless, G., *Unemployment and the 'skills mismatch' story: Overblown and unpersuasive*, 2014, available at <http://www.brookings.edu/research/opinions/2014/07/29-skills-mismatch-overblown-burtless>
- Cappelli, P. H., 'Skill gaps, skill shortages and skill mismatches: evidence and arguments for the US', *Industrial and Labor Relations Review*, Vol. 68, No 2, 2015, pp. 251-290.
- Card, D., Kluge, J. and Weber, A., 'Active Labour Market Policy Evaluations: A Meta-Analysis', *The Economic Journal*, Vol. 120, Issue 548, 2010, pp. 452-477.
- Cedefop, *The skill matching challenge: Analysing skill mismatch and policy implications*, Luxembourg: Publications Office, 2010, [www.cedefop.europa.eu/EN/Files/3056\\_en.pdf](http://www.cedefop.europa.eu/EN/Files/3056_en.pdf)
- Cedefop, *A strategy for green skills?*, Briefing note, February 2012, [www.cedefop.europa.eu/EN/Files/9067\\_en.pdf](http://www.cedefop.europa.eu/EN/Files/9067_en.pdf)
- Cedefop, *Future skill supply and demand in Europe*, Cedefop Research Paper No 26, Luxembourg: Office for Official Publications, 2012.



Cedefop, *Return to work: Work-based learning and the reintegration of unemployed adults into the labour market*, Cedefop Working Paper, No 21, Luxembourg: Office for Official Publications, 2013.

Cedefop, *Attractiveness of initial vocational education and training: identifying what matters*, Research Paper No 39, Luxembourg: Publications Office of the European Union, 2014.

Cedefop, *Skill shortages and skill gaps in European enterprises: Striking a balance between vocational education and training and the labour market*, Cedefop Reference series, 2015a, <http://www.cedefop.europa.eu/en/publications-and-resources/publications/3071>.

Cedefop, *Skills, qualifications and jobs in the EU: The making of a perfect match?*, Cedefop reference series report, 2015b, <http://www.cedefop.europa.eu/en/publications-and-resources/publications/3072>

Cedefop, *Tackling unemployment by addressing skill mismatch: lessons learned from policies and practices in EU countries*, Cedefop research report, 2015c, <http://www.cedefop.europa.eu/en/publications-and-resources/publications/5546>

Cedefop, *Stronger VET for better lives: Cedefop's monitoring report on vocational education and training policies 2010-2014*, Reference series 98, Luxembourg: Office for Official Publications, 2015d.

Chevalier, A. and Lindley, J., 'Overeducation and the skills of UK graduates', *Journal of the Royal Statistical Society: Series A, Statistics in Society*, 172(2), 2009, pp. 307-337.

De Beer, P., Gerard, M. and Meierkord, A., *Labour Market Shortages in the European Union*, presentation at European Parliament workshop 'The impact of the crisis on skill shortages', 2015, available at [http://www.europarl.europa.eu/RegData/etudes/STUD/2015/542202/IPOL\\_STU%282015%29542202\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2015/542202/IPOL_STU%282015%29542202_EN.pdf)

Desjardins, R., 'Rewards to skill supply, skill demand and skill match-mismatch: Studies using the Adult Literacy and Lifeskills survey', *Lund Economic Studies*, No 176, 2014.

Desjardins, R. and Rubenson, K., 'Participation Patterns in Adult Education: the role of institutions and public policy frameworks in resolving coordination problems' *European Journal of Education*, Vol. 48, No 2, 2013.

Dolton, P. J. and Vignoles, A., 'The incidence and effects of overeducation in the UK graduate labour market', *Economics of Education Review*, 19(2), 2000, pp. 179-198.

Dunbar, M., *Engaging the Private Sector in Skills Development*, report from HEART project, 2013, <http://r4d.dfid.gov.uk/Output/193702/Default.aspx>.

Elias, P. and Purcell, K., 'Classifying graduate occupations for the knowledge society', *Futuretrack* working paper 5, 2013, [http://www2.warwick.ac.uk/fac/soc/ier/futuretrack/findings/elias\\_purcell\\_soche\\_final.pdf](http://www2.warwick.ac.uk/fac/soc/ier/futuretrack/findings/elias_purcell_soche_final.pdf)

Eurofound, *More and better jobs: patterns of employment expansion in Europe, 1995-2007*, Publications Office of the European Union, Luxembourg, 2008.

Eurofound, *Shifts in the job structure in the EU during the Great Recession*, Publications Office of the European Union, Luxembourg, 2011.

Eurofound, 'Employment polarisation and job quality during the crisis', *European Jobs Monitor 2013*, Publications Office of the European Union, Luxembourg, 2013a, <http://www.eurofound.europa.eu/publications/report/2013/labour-market-business/employment-polarisation-and-job-quality-in-the-crisis-european-jobs-monitor-2013>

Eurofound, 'Third European company survey: first findings', Luxembourg: Publications Office, 2013b, [www.eurofound.europa.eu/publications/htmlfiles/ef1386.htm](http://www.eurofound.europa.eu/publications/htmlfiles/ef1386.htm)

Eurofound, *European Company Survey 2013*, 2013c, <http://www.eurofound.europa.eu/surveys/data-visualisation/3rd-european-company-survey-ecs>

Eurofound, 'Upgrading or polarisation? Long-term and global shifts in employment structure', *European Jobs Monitor 2015*, Publications Office of the European Union, Luxembourg, 2015.

European Commission, 'Employer's perception of graduate employability: analytical report', *Flash Eurobarometer*, No 304, 2010, [http://ec.europa.eu/public\\_opinion/flash/fl\\_304\\_en.pdf](http://ec.europa.eu/public_opinion/flash/fl_304_en.pdf)

European Commission, *Employment and Social Developments in Europe 2012*, Poulidakas, K., Ch. 6, 'The Skill mismatch challenge in Europe', Publications Office of the European Union, Luxembourg, 2012a.

European Commission, *Long-term unemployment, European Employment Observatory Review*, Publications Office of the European Union, Luxembourg, 2012b.

European Commission, *Employment and Social Developments in Europe 2013*, Publications Office of the European Union, Luxembourg, 2013.

European Commission, *European vacancy and recruitment report 2014*, Publications Office of the European Union, Luxembourg, 2014a, <http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=7711>

European Commission, *Mapping and analysing bottlenecks in EU labour markets: overview report: final*, Publications Office of the European Union, Luxembourg, 2014b.

European Commission, *Employment and social developments in Europe 2014*, Publications Office of the European Union, Luxembourg, 2014c.

European Commission, *EU Employment and Social Situation: Quarterly Review*, Special supplement 'Recent trends in job vacancies and hirings in Europe', Publications Office of the European Union, Luxembourg, December, 2014d.

European Commission, 'An in-depth analysis of adult learning policies and their effectiveness in Europe' (to be published in early November 2015), 2015.

Fernández-Macías, E., 'Job polarization in Europe? Changes in the Employment Structure and Job Quality', *Work and Occupations*, 39(2), 2012, pp. 157-182.

Fernández-Macías, E., Hurley, J. and Storrie, D., (eds.), *Transformations of the Employment Structure in the EU and USA, 1995-2007*, London, Palgrave, 2012.

- Flisi, S., Goglio, V., Meroni, E., Rodrigues, M. and Vera-Toscano, E., *Occupational mismatch in Europe: Understanding overeducation and overskilling in policy making*, a Science and Policy Report by the Joint Research Centre of the European Commission, Luxembourg, Publications Office of the European Union, 2014.
- Frey, C. B. and Osborne, M. A., *The Future of Employment: How Susceptible Are Jobs to Computerisation?*, Working paper of the Oxford Martin Programme on the Impacts of Future Technology, University of Oxford, 2013, available at <http://www.futuretech.ox.ac.uk/future-employment-how-susceptible-are-jobs-computerisation-oms-working-paper-dr-carl-benedikt-frey-m>
- Goldin, C. D. and Katz, L. F., *The race between education and technology*, Harvard University Press, 2009.
- Goleman, D., Boyatzis, R. E. and McKee, A., *Primal Leadership: Unleashing the Power of Emotional Intelligence*, Harvard Business Review Press, 2013.
- Green, F., *Skills and skilled work. An economic and social analysis*, Oxford University Press, 2013.
- Goos, M., Manning A. and Salomons, A., 'Job Polarization in Europe', *American Economic Review*, Papers and Proceedings 99, 2009, pp. 58-63.
- Green, F., *Skills and Skilled Work: An Economic and Social Analysis*, Oxford University Press, 2013.
- Hartog and Jonker, N., 'A Job to Match your Education: Does it Matter?' in Heijke, H. and Borghans, L., (eds), *Towards a Transparent Labour Market for Educational Decisions*, Avebury, Aldershot, 1997.
- Haskel, J. and Holt, R., *Anticipating Future Skill Needs: Can It Be Done, Does It Need To Be Done?*, Department for Education and Employment, London, 1999.
- Haskel, J. and Martin, C., 'Skill Shortages, Productivity Growth and Wage Inflation' in Booth, A. and Snower, D., (eds.), *Acquiring Skills: Market Failures: Their Symptoms and Policy Responses*, Cambridge University Press, 1996, pp. 147-174.
- Healy, J. et al., 'Adjusting to skill shortages in Australian SMEs', *Applied Economics*, Vol. 47, No 24, 2015, pp. 2470-2487.
- Heckman, J. J. and Kautz, T., 'Hard evidence on soft skills', *Labour Economics*, 19(4), 2012, pp. 451-464.
- Heckman, J. J. and Kautz, T., *Fostering and Measuring Skills: Interventions That Improve Character and Cognition*, NBER Working Paper 19656, November 2013.
- Heckman, J. J. and Rubinstein, Y., 'The Importance of Noncognitive Skills: Lessons from the GED Testing Program, in *The American Economic Review*, Vol. 91, No 2, Papers and Proceedings of the Hundred and Thirteenth Annual Meeting of the American Economic Association (May 2001), 2001, pp. 145-149, [http://jenni.uchicago.edu/papers/Heckman\\_Rubinstein\\_AER\\_2001\\_91\\_2.pdf](http://jenni.uchicago.edu/papers/Heckman_Rubinstein_AER_2001_91_2.pdf)
- Heidenreich, M. and Rice, D., *Integrating Social and Employment Policies in Europe: Active Inclusion and Challenges for Local Welfare Governance*, FP7 Project Local Worlds of Social Cohesion (LOCALISE), Edward Elgar Publishing, forthcoming 2016.
- Holmes, C., 'Has the expansion of higher education led to greater economic growth?', *National Institute Economic Review*, 224(1), 2013, pp. 29-47.
- Holmes, C. and Mayhew, K., *Over-qualification and skills mismatch in the graduate labour market*, CIPD, London, 2015.
- ILO Report to the Meeting of Experts on Labour Statistics, Updating the International Standard Classification of Occupations (ISCO), International Labour Organization, Geneva, 2007.
- IMD World Competitiveness Centre: World competitiveness online (database) [www.imd.org/wcc/wcy-world-competitiveness-yearbook-online](http://www.imd.org/wcc/wcy-world-competitiveness-yearbook-online)
- Jaimovich, N. and Siu, H., *The Trend is the Cycle: Job Polarization and Jobless Recoveries*, NBER Working Paper No 18334, 2012.
- Kahn, L. M., 'Skill shortages, skill mismatches and structural unemployment: A symposium', *Industrial and Labor Relations Review*, Vol. 68, No 2, 2015, pp. 247-250.
- Keep, E. and Mayhew, K., 'Moving beyond skills as a social and economic panacea', *Work, employment and society*, 24(3), 2010.
- Kiker, B., Santos, M. and Mendes de Oliveira, M., 'Overeducation and undereducation: evidence for Portugal', *Economics of Education Review*, 16(2), 1997, pp. 111-125.
- Kluge, J., 'The effectiveness of European active labor market programs', *Labour Economics*, 17 (6), 2010, pp. 904-918.
- Krusell, P., Ohanian, L. E., Rios-Rull, J. V. and Violante, G. L., 'Capital-Skill Complementarity and Inequality: A Macroeconomic Analysis', *Econometrica*, Vol. 68, No 5, 2000, pp. 1029-1053.
- Livingstone, D. W., *The education-jobs gap: Underemployment or economic democracy?*, Garamond Press, Ontario, 1999.
- McClelland, D.C., 'Testing for competence rather than for intelligence', *American Psychologist*, Vol. 28(1), January 1973, pp. 1-14.
- Mahy, B., Rycx, F. and Vermeylen, G., *Educational mismatch and firm productivity: do skills, technology and uncertainty matter?*, IZA DP No 8885, 2015.
- Manning, A., *Monopsony in motion: Imperfect competition in Labor Markets*, Princeton University Press, NJ, 2003.
- ManpowerGroup, *The talent shortage continues: how the ever changing role of HR can bridge the gap*, a report from the 2014 Talent Shortage Survey, 2014, [www.manpowergroup.com/talent-shortage-explorer](http://www.manpowergroup.com/talent-shortage-explorer)
- Mariani, M., 'Replace with a database: O\*NET replaces the Dictionary of Occupational Titles', *Occupational Outlook Quarterly*, Spring 1999.
- Marin, D., *Globalisation and the rise of the robots*, VoxEU, 2014, [www.voxeu.org/article/globalisation-and-rise-robots](http://www.voxeu.org/article/globalisation-and-rise-robots)
- MCG, *Education to employment: designing a system that works*, MCG, McKinsey Centre for Government, 2012, [http://mckinseyonsociety.com/downloads/reports/Education/Education-to-Employment\\_FINAL.pdf](http://mckinseyonsociety.com/downloads/reports/Education/Education-to-Employment_FINAL.pdf)

McGoldrick, K. and Robst, J., 'Gender differences in overeducation, a test of the theory of differential overqualification', *American Economic Review*, 86(2), 1996, pp. 280-284.

McGrath, J., *Tackling unemployment and skill mismatch through Active Labour Market Policies*, discussion paper, European Parliament workshop: 'The impact of crisis on skill shortages', 2015, [www.europarl.europa.eu/committees/en/empl/events-workshops.html?id=20150323CHE00091](http://www.europarl.europa.eu/committees/en/empl/events-workshops.html?id=20150323CHE00091)

Mincer, J., 'Investment in Human Capital and Personal Income Distribution', *Journal of Political Economy*, 66/4, 1958, pp. 281-302.

Mincer, J., 'The Production of Human Capital and the Life Cycle of Earnings: Variations on a Theme', *Journal of Labor Economics*, Vol. 15, No 1, Part 2: Essays in Honor of Yoram Ben-Porath, January 1997, pp. 26-47.

Murray, A., *The state of knowledge on the role and impact of labour market information: a survey of the Canadian evidence*, Ottawa: CSL5, Centre for the Study of Living Standards. CSL5 research report, No 2010-04, 2010, <http://www.csls.ca/reports/csls2010-04.pdf>

OECD, *OECD Skills Outlook: First findings from the Survey of Adult Skills*, OECD, Paris, 2013.

OECD, *Matching economic migration with labour market needs*, OECD Publishing, Paris, pp. 315-348, 2014, <http://dx.doi.org/10.1787/9789264216501-en>

OECD-Cedefop-ETF-ILO, Joint Project on Assessing and Responding to Future Skill Needs, 2015, [http://www.etf.europa.eu/eventsmgmt.nsf/%28getAttachment%29/D3ACABAD67C41C22C1257D8500520118/\\$File/2.7%20Questionnaire%20on%20Assessing,%20anticipating%20and%20responding%20to%20changing%20skill%20needs%20ETF.pdf](http://www.etf.europa.eu/eventsmgmt.nsf/%28getAttachment%29/D3ACABAD67C41C22C1257D8500520118/$File/2.7%20Questionnaire%20on%20Assessing,%20anticipating%20and%20responding%20to%20changing%20skill%20needs%20ETF.pdf)

Oesch, D., *Occupational change in Europe: How technology and education transform the job structure*, Oxford University Press, 2013.

Ohlsson, H. and Storrie D., *Long term effects of public policy for displaced workers in Sweden: shipyard workers in the West and miners in the North*, Uppsala University, Department of Economics, Working Paper 19, 2007.

Patt, A., *Income returns to complex problem solving skills are strongly significant*, Policy Brief FP7 Project LLLight'in'Europe, 2015. [http://www.lllightineurope.com/fileadmin/lllightineurope/download/LLLight\\_Income\\_Returns\\_to\\_CPS\\_policybrief\\_P6\\_20150922.pdf](http://www.lllightineurope.com/fileadmin/lllightineurope/download/LLLight_Income_Returns_to_CPS_policybrief_P6_20150922.pdf)

Peschner, J. and Fotakis, C., *Growth potential of EU human resources and policy implications for future economic growth*, European Commission working paper, No 3/2013, Publications Office of the European Union, Luxembourg, 2013.

Pouliakas, K., *Skills and the crisis: Implications for policy*, discussion paper: European Parliament workshop: 'The impact of the crisis on skill shortages', 2015, [www.europarl.europa.eu/committees/en/empl/events-workshops.html?id=20150323CHE00091](http://www.europarl.europa.eu/committees/en/empl/events-workshops.html?id=20150323CHE00091)

Pouliakas, K. and Russo, G., *Heterogeneity of skill needs in relation to job tasks: evidence from the OECD PIAAC survey*, IZA Discussion paper 9692, September 2015, <http://ftp.iza.org/dp9392.pdf>

Pouliakas, K. and Theodossiou, I., 'Rewarding carrots, crippling sticks: Eliciting preferences for the optimal incentive design', *Journal of Economic Psychology*, Vol. 33, No 6, 2013, pp. 1247-1265, <http://www.sciencedirect.com/science/article/pii/S016748701200092X>

Richardson, S., *What is a skill shortage?*, Adelaide: NCVET, National Centre for Vocational Education Research, 2007, <http://files.eric.ed.gov/fulltext/ED495918.pdf>

Rumberger, R., The impact of surplus schooling on productivity and earnings, *Journal of Human Resources*, 22(1), 1987, pp. 24-50.

Sattinger, M., 'Qualitative mismatches', *Foundations and Trends in Microeconomics*, Vol. 8, No 1-2, 2013, pp. 1-168.

Schwab, K., *The Global Competitiveness Report*, World Economic Forum, Geneva, 2014, [www.weforum.org/gcr](http://www.weforum.org/gcr)

Shah, C. and Burke, G., *Skill shortages: concepts, measurement and implications*, Victoria: CEET Centre for the Economics of Education and Training, Working paper, No 52, Monash University, November 2003, <http://monash.edu/education/non-cms/centres/ceet/docs/workingpapers/wp52nov03shah.pdf>.

Stevens, M., 'Human capital theory and UK vocational training policy', *Oxford Review of Economic Policy*, 15 (1), 1999, pp. 16-32.

Tijdens, K. and van Klaveren, M., *A skill mismatch for migrant workers? – Evidence from WageIndicator survey data*, Paper presented at the Nederlandse Arbeidsmarkt Dag 2013, Den Haag, 2013.

Timmer, M. P., Erumban, A. A., Los, B., Stehrer, R. and de Vries, G. J., *Slicing Up Global Value Chains*, Groningen Growth and Development Centre, Faculty of Economics and Business, University of Groningen, the Netherlands, May 2013.

UKCES, *Product Strategies, Skills Shortages and Skill Updating Needs In England: New Evidence from the National Employer Skills Survey*, 2009. London: UKCES, UK Commission for Employment and Skills. Evidence report; No 30, July, 2011.

UKCES, *Employer's skills survey 2013: UK results*. London: UK Commission for Employment and Skills. Evidence report; No 81, 2014.

van Ark, B., Chen, V., Colijn, B., Jaeger, K., Overmeer, W. and Timmer, M., 'Recent Changes in Europe's Competitive Landscape – How the Sources of Demand and Supply are Shaping Up', *European Economy, Economic Papers* 485, April 2013.

Verdugo, R. and Verdugo, N., 'The impact of surplus schooling on earnings', *Journal of Human Resources*, 22(4), 1989, pp. 690-695.

Verhaest, D. and Omey, E., 'The impact of overeducation and its measurement', *Social Indicators Research*, 77, 2006a, pp. 419-448.

Verhaest, D. and Omey, E., 'Measuring the incidence of over- and undereducation', *Quality and Quantity*, 40, 2006b, pp. 783-803.

Vorhaus, J., Lister, J., Frearson, M. and Johnson, S., *Review of Research and Evaluation on Improving Adult Literacy*

*and Numeracy Skills*, Research Paper Number 61. Department For Business, Innovation and Skills, London, UK, 2011.

Wiederhold, S. and Woessmann, L., *European economies benefit greatly from a higher-skilled workforce*, Policy Brief, FP7 Project LLLight'in'Europe, 2015. [http://www.lllightineurope.com/fileadmin/lllightineurope/download/LLLight\\_Benefits\\_of\\_Higher\\_Skilled\\_Workforce\\_policybrief\\_C6\\_20150922.pdf](http://www.lllightineurope.com/fileadmin/lllightineurope/download/LLLight_Benefits_of_Higher_Skilled_Workforce_policybrief_C6_20150922.pdf)

Wright, E. O. and Dwyer, R. E., 'The Patterns of Job Expansions in the United States: A Comparison of the 1960s and 1990s', *Socio-Economic Review*, 1, 2003, pp. 289-325.

Zimmermann, K., *Active Inclusion and the Fight against Poverty: The Challenge of Integrated Services*, European Policy Brief FP7 Project Combating Poverty in Europe (COPE), 2015. [http://cope-research.eu/wp-content/uploads/2015/01/COPE-290488\\_Deliverable-8.8\\_Policy.pdf](http://cope-research.eu/wp-content/uploads/2015/01/COPE-290488_Deliverable-8.8_Policy.pdf)





# The efficiency and effectiveness of social protection systems over the life course<sup>(1)</sup>

## 1. INTRODUCTION

Since 2009, the economic crisis has put social protection systems under heavier financial strain, adding cyclical shorter-term challenges to long-term challenges such as demographic ageing and socio-economic trends, in particular increasing polarisation on the labour market and changes in households' structures. In this context, as highlighted in the European Commission's 2016 Annual Growth Survey "More effective social protection systems are needed to confront poverty and social exclusion, while preserving sustainable public finances and incentives to work; Social protection systems should be modernised to efficiently respond to risks throughout the lifecycle while remaining fiscally sustainable in view of the upcoming demographic challenges".

This chapter analyses recent developments in the effectiveness and efficiency of social protection systems in Europe following a life-course approach and focuses in particular on family policies and policies that promote longer working lives. In doing so, it relies particularly on the framework for the assessment of the effectiveness and efficiency of social protection systems recently adopted by the Social Protection Committee (which was initially presented in the 2013 edition of the ESDE review)<sup>(2)</sup>.

The chapter first reviews most recent developments in expenditure trends and in the orientation of social protection systems over the life course. While expenditure patterns have been affected during the crisis, notably in the second phase of the crisis when public budgets were under heavier scrutiny, it seems particularly relevant to review whether the actual shifts in expenditure patterns that took place are likely (or not) to lead to increases in the effectiveness of spending in the EU.

The chapter then focuses on two specific stages in the life cycle, namely having children and late careers. It reviews key dimensions in the design of family policies that impact on employment and social outcomes of families, with a particular focus on the impact of childcare and leave arrangements on mothers' employment. It finally reviews key dimensions in social protection systems that contribute to promoting longer working lives. The concluding section summarises the main findings.

## 2. RECENT TRENDS IN EFFECTIVENESS AND EFFICIENCY OF SOCIAL PROTECTION SYSTEMS

This section briefly presents the most recent developments in terms of social protection spending and focuses on the question of whether recent shifts in the allocation of social protection

expenditure were likely to result in more effective systems over the life course<sup>(3)</sup>.

### 2.1. Social protection expenditure trends

#### 2.1.1. Overall expenditure trends

This section reviews overall trends relating to social protection expenditure and its orientation along the main risks (pensions, health and disability, unemployment, family, exclusion and housing) since the beginning of the crisis.

#### *Social expenditure trends since the beginning of the crisis*

At the onset of the crisis (2007-2009), social protection benefits were the main contributing factor to the stabilisation of household incomes in Europe, but their effect weakened over time as they were not designed for a prolonged recession<sup>(4)</sup> and in some countries were affected by fiscal consolidation measures following the crisis. In 2014, employment incomes started to increase again, reflecting an improvement in

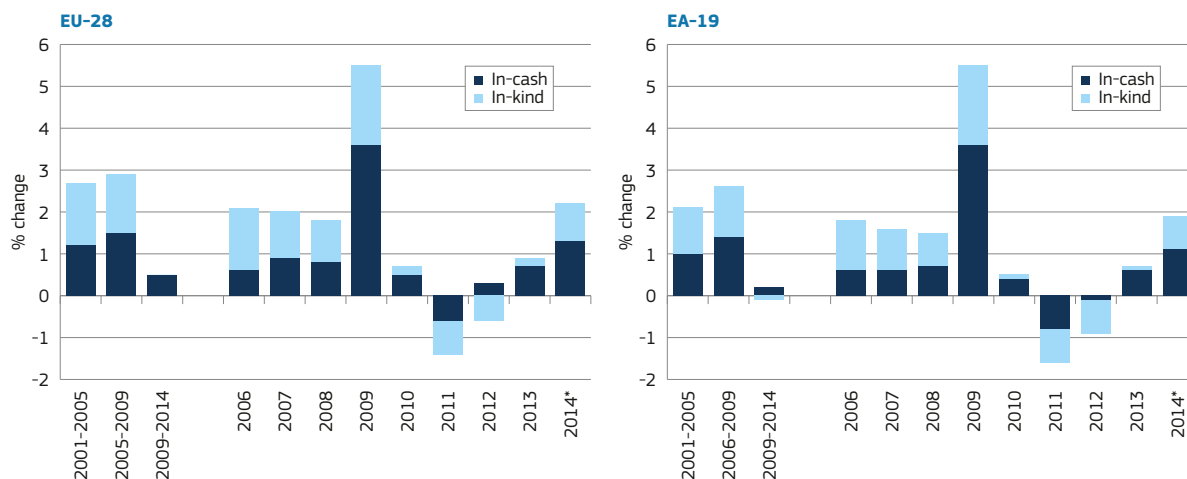
<sup>(1)</sup> By Olivier Bontout, Virginia Maestri and Maria Vaalavuo.

<sup>(2)</sup> 'Social protection systems in the EU: financing arrangements and the effectiveness and efficiency of resource allocation', Report jointly prepared by the Social Protection Committee and the European Commission Services (2014).

<sup>(3)</sup> The section builds on previous work (ESDE 2013 and 2014, 2015 SPC-FEE report).

<sup>(4)</sup> The stabilising role of social benefits is analysed in detail in the 2013 review Employment and Social Developments in Europe.

Charts 1a and 1b: Breakdown of the annual change in real public social expenditure between the contributions from in-cash and in-kind benefits (2001-2014) in the EU-28 and EA-19



Source: Eurostat (NA and DG EMPL calculations).

Notes: The values for 2014 are an estimate based on national accounts.

When no data is available in the national accounts (annual), the data was either based on national accounts (quarterly) or in a few cases the AMECO database (in the latter case by applying calculated growth rates to the data available from annual national accounts).

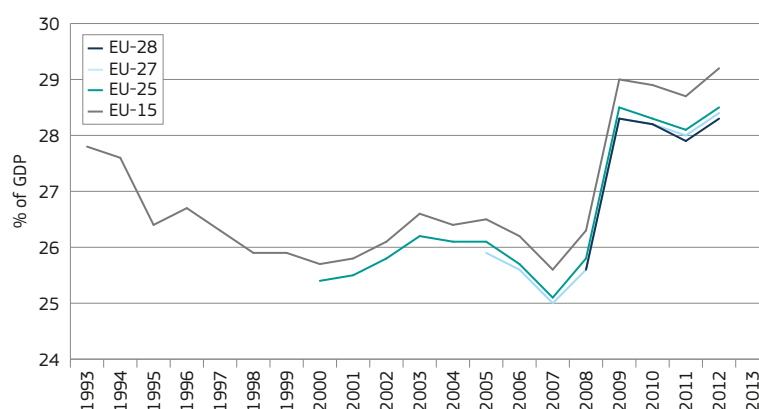
labour market conditions. Social benefits<sup>(5)</sup> continued to increase slightly in comparison to 2013 in real terms, probably due to indexation mechanisms anchored on 2013 inflation rates, which were higher than in 2014 (see below and see also Matsaganis and Leventi, 2014).

In 2014, while the economic environment improved, both cash and in-kind expenditure increased in the EU and the euro area at a quicker pace than in 2013 (see Chart 1a). The increase of in-kind benefits in 2014 only partly compensates for the declines observed between 2011 and 2012. Most Member States registered similar increases. However, in-kind benefits continued to decline in some Member States (Ireland, Greece, Spain, Cyprus, Croatia and Slovenia), while cash benefits actually recorded real increases in all Member States (except Ireland, Chart 1b).

These dynamics of social protection expenditure translated into a significant increase in the share of social protection expenditure in GDP in 2009, which subsequently slightly declined in 2010 and 2011 and slightly increased in 2012.

<sup>(5)</sup> Social protection expenditure generally helps to stabilise the economy in difficult economic times, since social benefits partly compensate for the decline in households' market income. Unemployment benefits typically have a stabilising function, as do means-tested benefits of various sorts (typically social exclusion, family or housing). Health and pensions expenditure play a role too, but generally to a lesser extent (since they generally increase or remain constant, while market incomes decline).

Chart 2: Social protection expenditure as a % of GDP (1993-2012)



Source: Eurostat (ESSPROS).

The dynamics of social expenditure in relation to developments of the economic cycle can be compared over recent years to developments in past recessions (see Chart 3)<sup>(6)</sup>. Based on past experience, social expenditure is expected to grow above the trend when the output gap (i.e. the gap between potential and actual GDP) declines and particularly when it is negative, and to adjust downwards and return to the trend when the output gap recovers.

Compared to past recessions, the recession (in year N, 2009 in most countries) was much deeper in this crisis, and led to a strong increase in public social expenditure well above the trend. In past recessions, the output gap was generally smaller and the deviation from the trend of social expenditure was

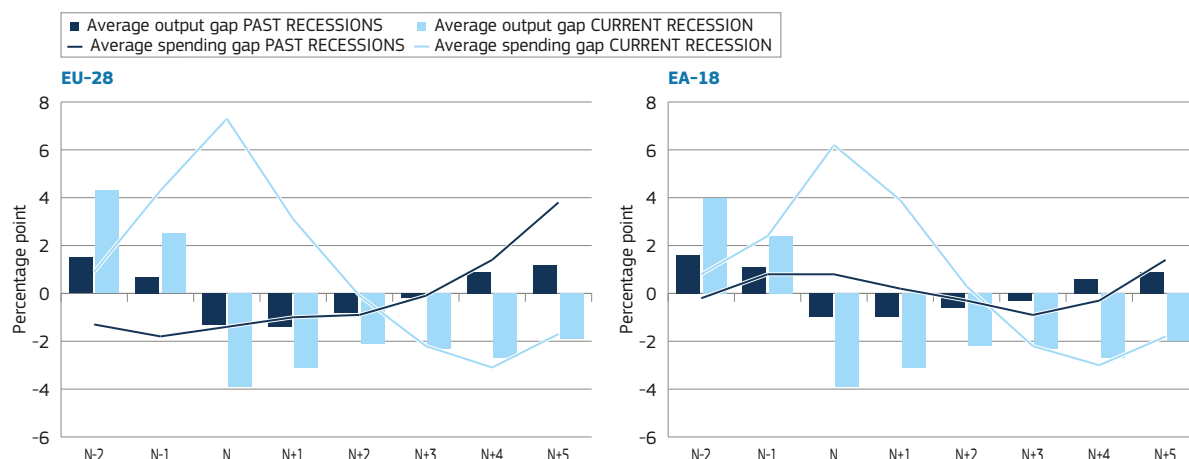
also smaller<sup>(7)</sup>. During the following 2 years (N+1, 2010 in most countries and N+2, 2011 in most countries), the output gap improved and social expenditure approached trend levels, as one would expect.

However, in 2012 and 2013 (in most countries), social expenditure grew well below the trend and went on adjusting downwards despite a worsening of the output gap, contrary to what happened in past instances of declining and negative output gap. This represents a weakening of the economic automatic stabilisation function of social protection systems in Europe and EMU, which were actually pro-cyclical in 2012. This partly reflected the exceptional scale of the fiscal consolidation needed during this crisis, which translated into a significant

<sup>(6)</sup> For a detailed description of the method, see 2013 review of Employment and Social Developments in Europe p. 328.

<sup>(7)</sup> The increase in social expenditure in the first year of this crisis was more sensitive to the economic cycle, probably reflecting greater increases in unemployment levels, as well as the play of indexation mechanisms in a context of a declining inflation.

Chart 3: Deviation from the trend of public social expenditure and GDP output gap in current and past recessions EU-28 and EA-18

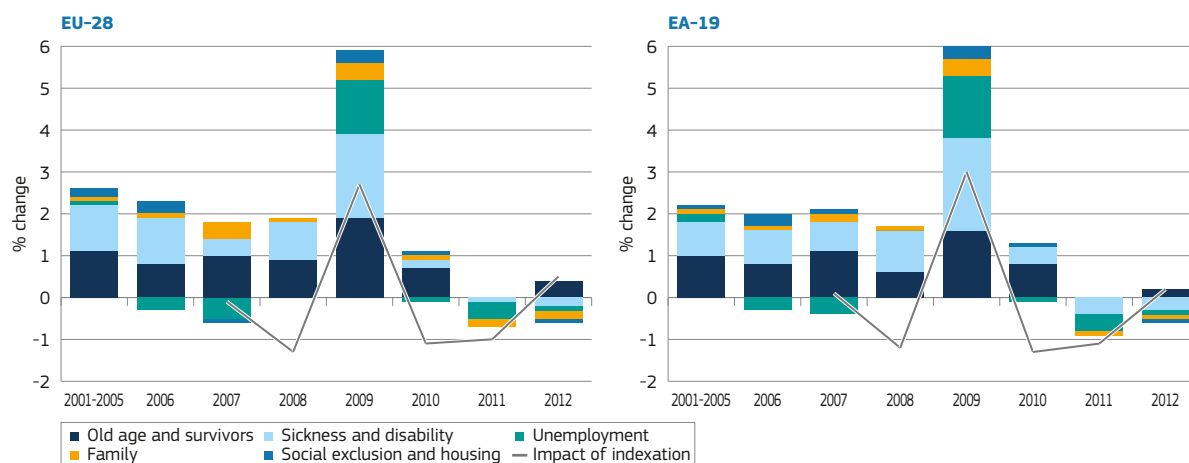


*Reading notes:* In the year of the recession, in the current crisis, social expenditure was about 5% above the trend in Europe, while the GDP was about 4% below its potential (output gap of -4%). Averages are unweighted country averages (since countries do not always experience a recession the same year).

*Source:* Eurostat, national accounts, DG EMPL calculations.

*Notes:* 2014 data is estimated based on quarterly data from the first 3 quarters. In the current recession, N is year 2009. Estimates of the deviation from the trend in social protection expenditures are based on a standard Hodrick-Prescott filter.

Chart 4: Overall social protection expenditure real growth trends (2001-2012) in the EU and EA



*Source:* ESSPROS, calculations DG EMPL, HICP used as a deflator, see Box 1. Inflation reflects the differential in HICP growth from one year to the other. When inflation is constant it has no impact, when inflation is declining it contributes positively, when inflation increases it contributes negatively.

downward adjustment in the cyclical component of social protection expenditure, and potentially a more permanent adjustment of the trend of social protection expenditure.

In 2014 (i.e. 5 years after the first recession year in most countries), the output gap improved (narrowed) and social protection expenditure started to grow again at a pace closer to its former long-term trend. This evolution may have a pro-cyclical impact even if part of the growth in expenditure can be seen as an adjustment following the downward developments of the previous 2 years.

### 2.1.2. Shifts in the orientation of social protection expenditure in the crisis

The decline of overall social protection expenditure in real terms in 2012 affected

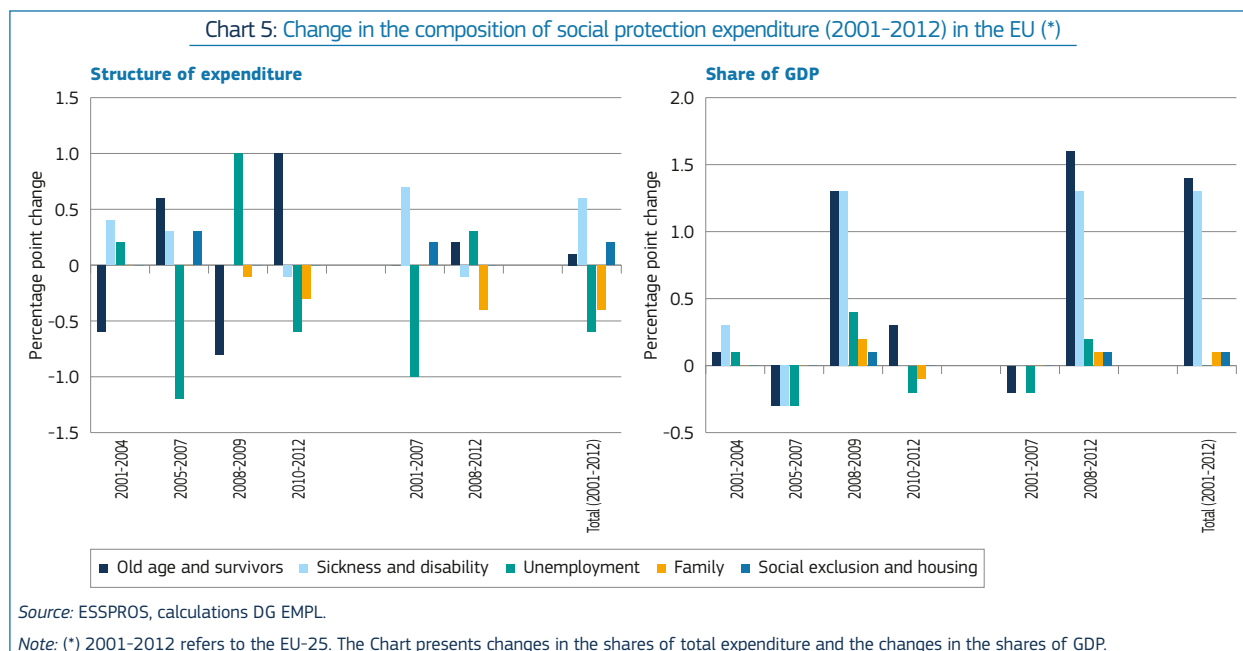
all functions except pensions: sickness and disability, and also family and unemployment expenditure declined, while old-age expenditure started to grow again. Reforms implemented in the context of fiscal consolidation (see above) explain part of the reduction in expenditure, while indexation mechanisms based on declining inflation mostly contributed positively in 2012 (due to the lag in indexation). The increase in old-age expenditure remained mainly driven by demographic factors (more people retiring with higher entitlements), but stayed below its long-term trend due to negative developments of average pension expenditure per person aged 65 and over (see below).

In 2012, unemployment expenditure continued to decrease slightly, despite the increase in unemployment. This decline followed on from the strong decrease

observed in 2011. It contrasts with the strong growth in unemployment expenditure recorded in 2008 and 2009, which reflected increases in the number of unemployed persons (see Chart 4), while the contribution of pensions and health expenditure reflected the automatic impact of indexation mechanisms in a context of inflation slow-down.

These trends translated into a shift in the orientation of social protection expenditure by functions. Over the whole period since 2001, there has been an increase in the share of health and disability expenditure (by 0.6 of a percentage point) and of old-age and survivors pensions (of 0.1 ppt) and social exclusion and housing expenditure (of 0.3 ppt) in the overall structure of expenditure. Conversely, there has been a decline in the share of unemployment expenditure

Chart 5: Change in the composition of social protection expenditure (2001-2012) in the EU (\*)



(by 0.6 ppt) and a steady decline in the share of family expenditure (by 0.4 ppt), which have been mainly concentrated over the most recent period (2010-2012). See Chart 5.

These shifts in the structure of expenditure can also be observed in terms of the change in the share of expenditure as a proportion of GDP. Over the whole period 2001-2012, the increase in expenditure as a share of GDP was mainly driven by an increase in the share of pensions and healthcare expenditure and to a minor extent other functions (but not unemployment), and the bulk of this increase took place over the period 2008-2009.

## 2.2. Have expenditure trends during the crisis been conducive to more effective systems over the life course?

This section assesses whether during the second phase of the crisis (2010-2012), when social protection expenditure was under particular budgetary pressure in Europe, more dynamic expenditure increases were devoted to areas (social protection functions) of higher needs or by contrast to areas that were underperforming. It updates a former analysis, which focused on the initial stage of the crisis 2009-2010 (ESDE 2013).

### 2.2.1. A framework to review effectiveness and efficiency

The approach used in this section relies on the framework that was adopted in late 2014 by the Social Protection Committee

and the European Commission<sup>(8)</sup> and was initially presented in a previous edition of this review (ESDE 2013, Chapter 6)<sup>(9)</sup>.

Effective and efficient social protection systems relate to ensuring adequate outcomes, including notably adequacy of incomes and participation in the labour market. Such outcomes need to be analysed together with expenditure levels (inputs), as well as the different actual needs or risks (such as typically the share of the population that is potentially in need, for instance the unemployment rate in relation to unemployment expenditure) and the objectives of the systems.

This approach focuses on the main risks (pensions, health and disability, unemployment, family, social exclusion and housing) and for each of these dimensions (except health) links in a stylised way expenditures with key outcomes mostly related to the adequacy of the protection related to the given area and to the links with the labour market for that same given area (see Annex for the list of outcomes considered).

### 2.2.2. Pensions

Average developments in relation to pension expenditure in Europe (and

in the euro area), have unsurprisingly been mainly driven by changes in average expenditure per (potential) beneficiary (as reflected by the number of beneficiaries of old age or survivors pensions).

The acceleration in expenditure growth in 2009 was very significant and actually mainly reflected the impact of price indexation mechanisms which are usually attached to these benefits, and generally work with a lag of 1 year (inflation from year N-1 is used to index benefits in year N)<sup>(10)</sup>. Indeed, the relatively high inflation observed in 2008 was only translated into benefit levels in 2009, where inflation was in general relatively low. This design of indexation mechanisms with a lag of 1 year, together with the specific sequence of indexation over 2008-2011, translated into an acceleration of the real growth of benefits in 2009 and a relatively low pace of real growth in 2010 and especially in 2011<sup>(11)</sup>.

<sup>(10)</sup> It can be noted that price indexation is not necessarily the target of pension indexation, as indexation rules on other indexes than price indexes are quite common among Member States (such as nominal wages, partial nominal wages, mixed indexation on wages and prices, see Ageing report 2015 for a detailed overview).

<sup>(11)</sup> This impact can account for an increase in the growth rate of expenditure which was adjusted based on inflation of around 2 percentage points in 2009 (since inflation had been particularly strong in 2008, 3.7% for the EU, and actually weak in 2009 at 1%), while it can contribute by around 1 percentage point to the lower growth rate observed in 2010 and 2011 (inflation further resumed in 2010 and more strongly in 2011, at 2.1% and 3.1%, respectively, for the EU), and contributes positively again in 2012.

### Box 1: Sources and measurement of social protection expenditure

Social protection expenditure trends can be assessed in different ways and are most frequently looked at as a share of GDP or as a share of other public expenditures, or in volumes (deflated by some price index, generally HICP) or expenditure per capita. This chapter focuses on trends in volumes, since other measures actually reflect a number of other effects, such as changes in GDP levels or changes in the levels of other public expenditures. Two main data sources on social protection expenditures are used in this analysis, the European System of Integrated Social Protection Statistics (ESSPROS) and the National Accounts.

ESSPROS data on social protection expenditure is compiled by Eurostat in accordance with the methodology of the European System of Integrated Social Protection Statistics 'ESSPROS Manual 2011'. Social protection is defined as encompassing 'all interventions from public and private bodies intended to relieve households and individuals of the burden of a defined set of risks or needs, provided that there is neither a simultaneous reciprocal nor an individual arrangement involved'. As such, the field of observation of the ESSPROS goes beyond that of social security (i.e. social protection provided by governments) to include benefits provided by private social protection schemes, in so far as they have similar effects on social security for the beneficiary. Social protection expenditure includes social benefits, classified by function, and administrative and other costs incurred by social protection schemes. At the time of drafting this review, this data was available for up until 2012 and in gross terms. An exercise to provide net data as well has been the subject of pilot programmes and is now in the regulation process. The eight policy areas covered in the ESSPROS are the following: sickness/healthcare, disability, old age, survivors, family/children, unemployment, housing, social exclusion. ESSPROS also provides the information whether given benefits are provided in cash or as services directly to citizens ('in kind'), and also whether they are means-tested or not. As regards healthcare, information based on ESSPROS has been used to ensure consistency, while some information is also available from the System of Health Accounts (SHA), which also covers health promotion and community health programmes (that are not necessarily included in ESSPROS), while ESSPROS data refer to various types of schemes which are not only government expenditure.

Data on social protection expenditure from the National Accounts is in accordance with the European System of Accounts (ESA2010) and covers 'Social transfers in kind' and 'Social benefits other than social transfers in kind'. Generally speaking, the levels for total expenditure on social protection are somewhat higher than in the ESSPROS. For more details on the main differences compared with the European System of Integrated Social Protection Statistics (ESSPROS) in the way social benefits in cash and in kind are distinguished please refer to the Manual on sources and methods for the compilation of COFOG Statistics, page 65–66, Eurostat<sup>(1)</sup> and ESDE 2013, Chapter 6, Annex 1.

Furthermore, to reflect on trends in real social expenditure, the deflator used here is the HICP, since it allows for estimating the trend in the overall real value or purchasing power provided by social expenditure. Indeed, the HICP is a price index that reflects changes in a basket of goods and services, which appears closer to the actual expenditure on consumption of households in comparison to the deflator of household consumption from the National Accounts (which also for instance includes imputed rents). Furthermore the deflator of consumption in the National Accounts reflects changes in the structure of consumption over time and thus appears less suitable than the HICP which does not directly reflect yearly changes in the consumption structure, which are partly a reaction to price changes.

(1) [http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-RA-07-022/EN/KS-RA-07-022-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-07-022/EN/KS-RA-07-022-EN.PDF)

Beyond the impact of indexation mechanisms, the actual remaining of the dynamics of the average pension expenditure over the period mostly remained positive, though it appears to have faded in 2011 and 2012. In other words, the structural trend towards higher average pension, which notably results from new pensioners generally having higher pensions than older ones (mainly as a result of higher average wages over their working lives due to overall growth), weakened. This weakening probably reflects different types of factors, depending on Member States, including possibly a trend towards relatively lower pensions of new pensioners (as a result of phasing in pension reforms or of an increase in the share of women in the flow of new pensioners, since there generally remains a significant gender pension gap), but is also probably the

result of a softening of indexation mechanisms (or actual declines in pensions) in 2011 and 2012 as a result of the pressure on public budgets.

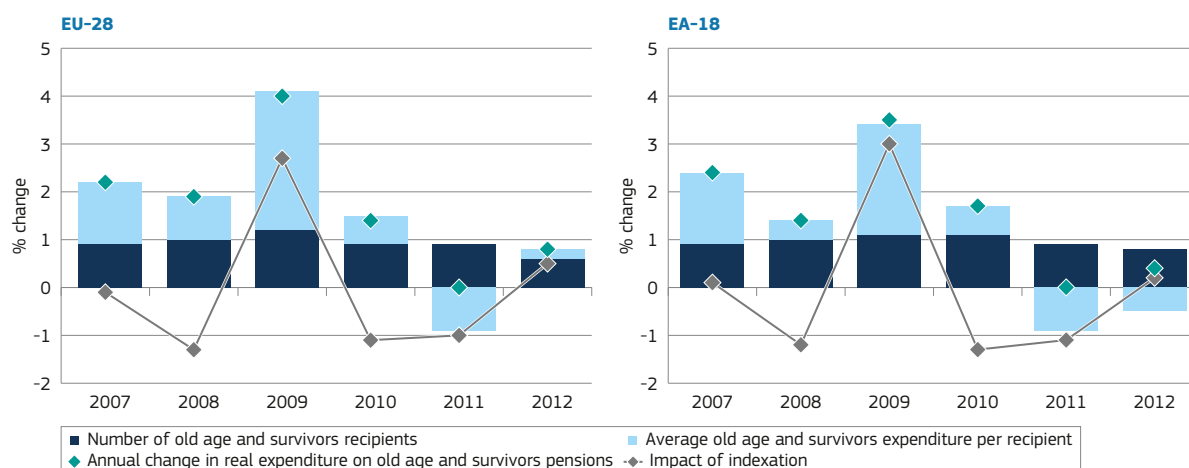
Such developments suggest that the design of indexation mechanisms contributed significantly to pension expenditure growth in 2009, providing a strong stabilisation of household incomes. This type of stabilisation impact is probably not the most efficient from an economic point of view since on the one hand pensioners' incomes were not the most affected by the crisis in a context of massive increases in unemployment, and on the other hand the propensity to save is relatively high among pensioners (thus reducing the stabilisation impact). Furthermore, the significant increase observed in 2009 weighted pension expenditure levels for the following years

and it was followed by declines in 2011 and 2012 that go beyond inflation developments (see Chart 6).

In this respect, the design of pension indexation mechanisms would gain much if it were reviewed in order to better smooth the indexation of pensions over the economic cycle, for instance on the basis of a moving average of inflation over several years. Such a smoothing of the price indexation of pensions would keep the target of price indexation of pensions unaffected over the economic cycle and could leave fiscal room for other benefits to fully play their stabilisation role. Such a smoothing mechanism is in place in some countries though not necessarily based on price developments, while countries like Germany, Spain and Sweden have legislated an automatic balancing mechanisms that



Chart 6: Annual change in real pension expenditure (2007-2012)



Source: ESSPROS, DG EMPL calculations. HICP used as a deflator, see Box 1

Note: This graph shows the annual change in real expenditure on pensions (as a %) and the main factors that influence it: the pension expenditure per beneficiary and the number of recipients as reflected in ESSPROS. The contributions of these factors are expressed as percentage points.

Table 1: Pension expenditure trends (2010-2012) and performance in the area of pensions in 2012

		Change in real pension expenditure per population aged 65 and over (2010-2012)				Performance in 2012				
		Large negative	Small negative	Small positive	Large positive	Low	Average (-)	Average (+)	High	
<b>Pension expenditure per population aged 65 and over (in 2010, as a share of GDP per capita)</b>	Low	<b>BG, EE, IE, LV, RO</b>	CZ, DE, HR, SK	LT	LU	<b>BG, EE, HR</b>	IE, LT, LV	CZ, DE, RO, SK	LU	
	Middle (below EU average)	ES, MT, PT, SI	BE, FI, SE, UK		HU	BE, MT, SI	FI	ES, HU, PT, UK	SE	
	Middle (above EU average)									
	High	DK, IT, NL, PL	FR	EL, AT	<b>CY</b>	<b>CY</b>	EL, IT, PL	AT, DK, FR	NL	

Source: Eurostat, DG EMPL calculations.

Notes: Member States are regrouped in four groups according to their expenditure levels based on levels of pension expenditure per population aged 65+ as a share of GDP per capita in 2010 (low corresponds to levels below 61% and high above 72%) and related trends of real expenditure per population 65+ from 2010 to 2012 (large developments below -3% and above +3%). Levels of performance (on average over the main outcome dimensions identified for this function), are regrouped with values higher than +0.5 reduced standard deviation or lower than -0.5 reduced standard deviation.

The main outcomes considered are (see details in Annex 1) : income replacement (median relative income of people aged 65 and more, aggregate replacement ratio), at-risk-of-poverty rate among the population aged 65 and more, longer and less interrupted working lives (employment rate for the population aged 55-64 and average duration of working lives).

In terms of developments between 2010 and 2012, some countries with relatively high spending and average or low performance have actually experienced a rather dynamic trend in pension expenditure, controlled for the growth in the population aged 65 and over (in particular Cyprus and to a lesser extent Greece and Austria), which does not seem to reflect higher needs as regards performance (since expenditure levels were already relatively high). Conversely, some Member States with relatively low levels of expenditure and average or low performance acknowledged large declines in their real levels of pension expenditure, controlled for the growth of the 65 and over population (in particular Bulgaria, Estonia, Latvia and Ireland). In these countries, the negative growth in real pensions does not seem to reflect needs, given the relatively low expenditure levels and low or average performance.

affect (reduce) pension indexation in the event of a fall in employment (see for instance Ageing Report 2015). The same effect has been sometimes obtained throughout discretionary measures temporarily reducing or freezing pension indexation.

In 2012, several Member States experienced significantly better performance than the EU average (such as the Netherlands with high levels of expenditure, Sweden with average levels and Luxembourg with low levels of

expenditure), while some experienced a significantly lower performance: Cyprus (with relatively high levels of expenditure), Belgium, Malta and Slovenia (with average levels of expenditure) and Bulgaria, Estonia and Croatia (with lower levels of expenditure). See Table 1.

### 2.2.3. Health and disability

As the performance of healthcare expenditure is not included at this stage within the stylised assessment framework, the analysis here focuses on its

contribution to the overall evolution of social protection expenditure. Between 2010 and 2012, a number of countries with relatively high levels of expenditure experienced relatively dynamic health and disability expenditure growth (Ireland and to a lesser extent Germany, Finland and Sweden). Conversely, some Member States with originally low or average expenditure levels experienced significantly negative expenditure growth in health and disability (in particular Cyprus and Romania, but also to a lesser extent Poland, Slovakia, Greece, Spain,

Hungary, Italy, Portugal and Slovenia). This suggests that the dynamics of expenditure may have been unbalanced during the crisis in these countries. See Table 2.

## 2.2.4. Unemployment

Trends in unemployment expenditure reflect the change in the number of unemployed people as well as developments in average unemployment benefit per unemployed individual. Chart 7 illustrates that the cutback in unemployment expenditure observed since 2010 is mainly due to a decline in average unemployment expenditure per unemployed person of nearly 10% a year. This decline was especially strong in 2012 when the number of unemployed people, including the newly unemployed, increased.

If unemployment benefit rules were more responsive to the economic cycle (for instance by increasing duration in a downturn and reducing it when the labour market picks up again), the stabilisation function of unemployment expenditure would be higher.

As regards unemployment expenditure, most Member States experienced average performance in 2012, while some

**Table 2: Summary of health and disability expenditure (2010-2012)**

		Change in real expenditure per capita (2010-2012)			
		Large negative	Small negative	Small positive	Large positive
<b>Expenditure per capita as a share of GDP per capita in 2010</b>	Low	CY, RO	PL, SK	EE, LT, LV, MT	BG
	Middle (below EU average)	EL, ES, HU, IT, PT, SI	AT, CZ, LU	BE	
	Middle (above EU average)		HR	UK	
	High		DK, FR, NL	DE, FI, SE	IE

*Source:* Eurostat, DG EMPL calculations.

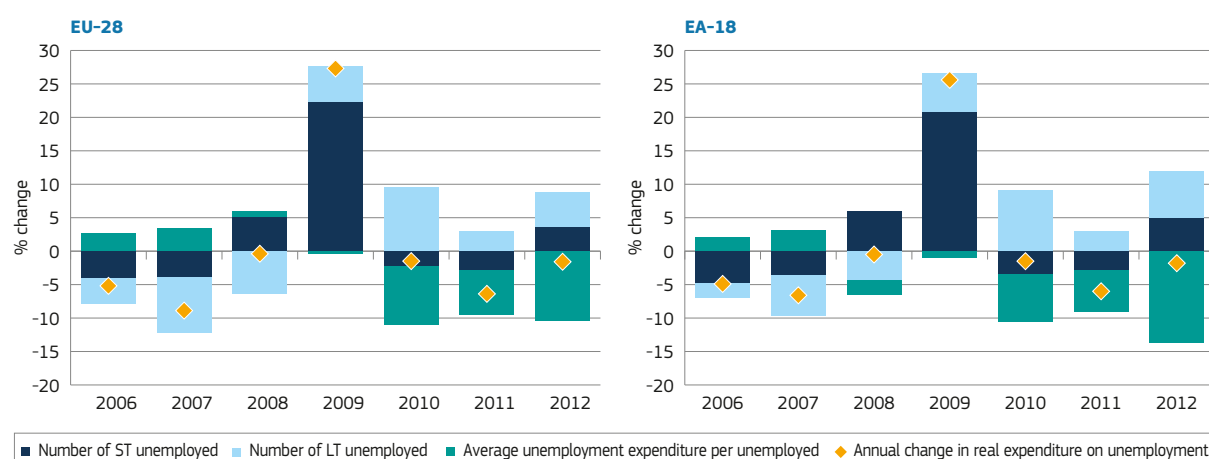
*Note:* Member States are regrouped in four groups according to their expenditure levels, based on levels of health expenditure as a share of GDP per capita in 2010 (low below 7.5% and high above 11%) and related trends of real health expenditure from 2010 to 2012 (large developments below -5% and above +5%).

experienced lower performance than the average (notably Greece, Spain and Hungary with average expenditure levels and Bulgaria, Croatia, Lithuania and Latvia with low levels of expenditure) and some higher than the average (Sweden with average levels of expenditure and Austria, Denmark, Finland, France, Luxembourg and the Netherlands with higher levels of expenditure).

Once controlled for the change in the number of unemployed people over 2010-2012, among countries with relatively high or average spending and

average performance, only Belgium has experienced more dynamic unemployment expenditure. Conversely, some Member States with low expenditure levels and low performance (Bulgaria, Croatia, Lithuania and Latvia) or lower than average expenditure and performance (Greece, Spain, Hungary, Italy, Poland, Slovakia and Romania) experienced large drops in real average expenditure per unemployed individual (see Table 3). In these countries, the decline in expenditure does not seem to reflect needs, given the relatively low expenditure levels and low or average performance.

Chart 7: Decomposition of unemployment expenditure trends (2006-2012) in the EU-28 and EA-18



*Sources:* Eurostat, ESSPROS, LFS, DG EMPL calculations. HICP used as a deflator, see Box 1.

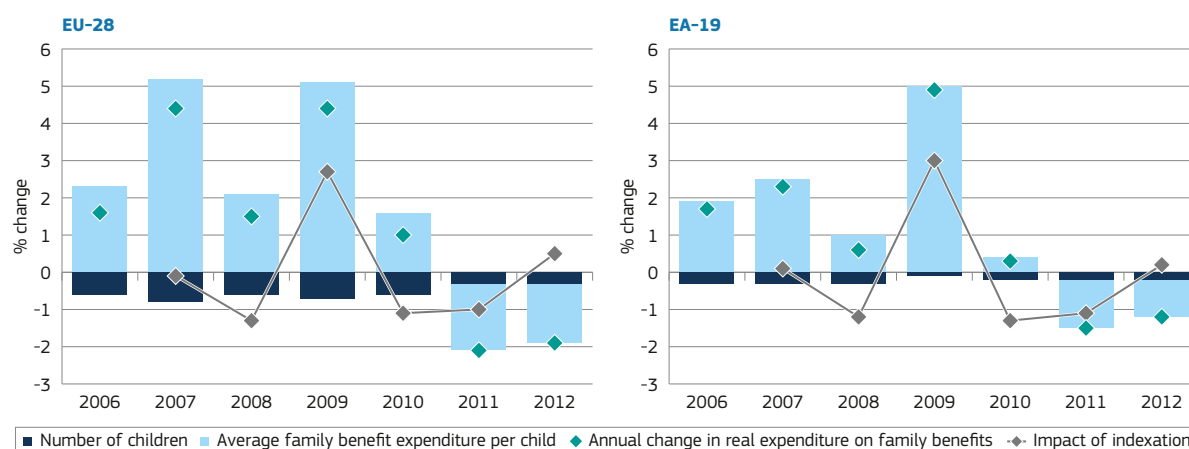
Table 3: Summary of unemployment expenditure (2010-2012)

		Change in real expenditure per unemployed person (2010-2012)				Performance in 2012			
		Large negative	Small negative	Small positive	Large positive	Low	Average (-)	Average (+)	High
Expenditure per unemployed person, as a share of GDP per capita (in 2010)	Low	BG, HR, LT, LV, PL, SK			EE	BG, HR, LT, LV	EE, PL, SK		
	Middle (below EU average)	CY, CZ, EL, ES, HU, IT, PT, RO	SE, SI, UK		MT	EL, ES, HU	IT, RO, SI	CY, CZ, MT, PT, UK	SE
	Middle (above EU average)								
	High	LU	AT, DE, DK, FI, FR, IE, NL		BE		IE	BE, DE	AT, DK, FI, FR, LU, NL

Source: Eurostat, DG EMPL calculations.

Notes: Member States are regrouped in four groups according to their expenditure levels, based on levels of pension expenditure per population unemployed as a share of GDP per capita in 2010 (low below 15% and high or above 45%) and related trends of real expenditure per unemployed from 2010 to 2012 (large developments below -10% and above +5%). Average levels of performance are based over the main outcome dimensions identified for this function, with thresholds of higher than +0.5 reduced standard deviation or lower than -0.5 reduced standard deviation). The main outcomes considered are (see details in Annex 1) : income replacement (coverage, net replacement rate in the initial period (two months) of unemployment and after 12 months of unemployment, poverty rate of unemployed persons) and reintegration into the labour market (unemployment rate and long-term unemployed rate, share of unemployed people participating in life-long learning and unemployment trap).

Chart 8: Annual change in real family expenditure (2006-2012)



Source: ESSPROS, Demo, DG EMPL calculations. HICP used as a deflator, see Box 1

Note: This graph shows the annual change in real expenditure on family benefits (as a %) and the main factors that influence it: the average expenditure per child and the number of children. The contributions of these factors are expressed as percentage points.

### 2.2.5. Family

As regards family expenditure, as for pension expenditure, expenditure dynamics have been mainly driven by changes in the average expenditure per (potential) beneficiary (population aged under 18). It is striking that the acceleration in expenditure growth

in 2009 was also strong, notably in the euro area, which also reflects the price indexation mechanisms usually attached to these benefits. In 2011 and 2012, expenditure dynamics were very slow, with a slowing down going beyond what the standard play of indexation mechanisms would suggest, thus showing some additional downward

pressure on real expenditure per child, in both the EU and the EA.

As for pensions, these reductions in real terms in 2011 and 2012 would probably not have been needed as much in a context in which the indexation mechanism of family benefits is smoothed over the cycle. See Chart 8.

While most Member States performed averagely in 2012 with respect to family expenditures, some had significantly lower performance than the average (notably Hungary with relatively high expenditure, Bulgaria, Greece, Croatia, Lithuania, Romania and Slovakia with average levels of expenditure and Poland with low levels of expenditure). At the same time, some performed significantly above the average (Belgium and Slovenia

with average levels of expenditure, and Germany, Denmark, Finland, Sweden with higher levels of expenditure and the Netherlands with relatively low expenditure levels).

Countries with relatively high spending and average or low performance (Bulgaria, Hungary, Austria and Luxembourg) have all acknowledged declines in expenditure levels (controlled

for trends in the number of children). Conversely, some Member States with low expenditure levels and low or average performance also acknowledged declines in family expenditure (in particular Spain, Latvia, Poland and Portugal). In these countries, the decline in expenditure does not seem to reflect needs, given the relatively low expenditure levels and low or average performance (see Table 4 below).

Table 4: Summary of family expenditure (2010-2012)

		Change in real expenditure per child (2010-2012)				Performance in 2012			
		Large negative	Low negative	Low positive	Large positive	Low	Average (-)	Average (+)	High
<b>Expenditure per child (population aged 0-17), as a share of GDP per capita (in 2010)</b>	Low	CZ, ES, LV, NL, PL, PT		IT	MT	PL	ES, IT, LV, MT, PT	CZ	NL
	Middle (below EU average)	CY, EL, LT, RO	BE, FR, HR, UK	SK		EL, HR, LT, RO, SK	CY, UK	FR	BE
	Middle (above EU average)	EE	BG, SI			<b>BG</b>		EE	SI
	High	HU	AT, DK, IE, LU	DE, FI	SE	<b>HU</b>	<b>AT, LU</b>	IE	DE, DK, FI, SE

Source: Eurostat, DG EMPL calculations.

Notes: Member States are regrouped in four groups according to their expenditure levels, based on levels of pension expenditure per population aged 18 and less as a share of GDP per capita in 2010 (low with levels below 9% and high above 14%) and related trends of real expenditure per unemployed from 2010 to 2012 (large developments below -5% and above +10%). Average levels of performance are based over the main outcome dimensions identified for this function, with thresholds of higher than +0.5 reduced standard deviation or lower than -0.5 reduced standard deviation. The main outcomes considered are (see details in Annex 1): relative income of households with children compared to the one of all households, poverty prevention (child poverty, child severe material deprivation and poverty reduction by social transfers), child development (share of children aged 0-3 in childcare and share of children between age three and mandatory school age in childcare), parents' labour market participation (employment rate of women aged 20-49 with youngest child below six years of age and involuntary part-time women aged 20-49).

## 2.2.6. Social exclusion and housing

As regards social exclusion and housing expenditure, while most Member States had average performances in 2012, four experienced lower performance than average (Greece with relatively high expenditure and Bulgaria, Latvia and Romania with low levels of expenditure) and a few significantly higher than average performance levels (Finland and France). Countries with higher than

average expenditure generally experience higher than average performance (except Denmark).

Over the period 2010-2012, expenditure growth has been significantly positive only in three countries (Czech Republic with lower than average expenditure levels, Lithuania average and Finland higher than average levels). On the reverse, expenditure has significantly declined (by more than 10% in real terms) in nearly one third of Member States, including

in countries with low expenditure levels and lower (Poland) or significantly lower than average performance (Romania). Furthermore, in spite of low initial levels compared to the average in 2010 and lower than average performance in 2012, expenditure also declined in real terms in some other Member States (Croatia, Italy), though to a lesser extent. In these countries, the decline in expenditure does not seem to reflect needs, given the relatively low expenditure levels and low or average performance (see Table 5).

Table 5: Summary of social exclusion and housing expenditure (2010-2012)

		Change in real expenditure (2010-2012)				Performance in 2012			
		Large negative	Low negative	Low positive	Large positive	Low	Average (-)	Average (+)	High
Expenditure per capita as a share of GDP per capita in 2010	low	PL, PT, RO	EE, HR, IT	BG, LV	CZ	BG, LV, RO	HR, IT, PL	CZ, EE, PT, SK	
	middle	ES, HU, IE, MT	DE, LU, SK	AT, SI	LT		ES, HU, IE, LT	AT, DE, LU, MT, SI, SK	
	high (below EU average)	EL		BE		EL		BE	
	high (above EU average)	CY	NL, UK	DK, FR, SE	FI		DK	CY, NL, SE, UK	FI, FR

Source: Eurostat, DG EMPL calculations.

Notes: Member States are regrouped in four groups according to their expenditure levels, based on levels of expenditure as a share of GDP per capita in 2010 (low below 0.5% and high above 1.1%) and related trends of real expenditure per unemployed from 2010 to 2012 (large developments below -10% and above +10%). Average levels of performance are based over the main outcome dimensions identified for this function, with thresholds of higher than +0.5 reduced standard deviation or lower than -0.5 reduced standard deviation. The main outcomes considered are (see details in Annex 1): prevention of poverty and social exclusion (poverty rate, severe material deprivation, share of jobless households and poverty reduction), re-integration into the labour market (inactivity trap) and access to decent housing (housing cost overburden of the poor and overcrowding rate of poor people).

### 2.3. Main findings

Social protection expenditure grew significantly in the initial phase of the crisis, significantly contributing to the stabilisation of household incomes, before declining in 2011-2012, in a procyclical manner in 2012 and resuming growth in 2013 and more significantly in 2014. Expenditure growth reflected the impact of changes in unemployment (though average expenditure per unemployed declined in real terms over the period 2010-2012), but was also significantly impacted by the design of indexation mechanisms.

The design of indexation mechanisms strengthened the stabilisation impact in 2009, though probably not in the most effective way (in particular as regards pension expenditure) and weighted on expenditure levels and structure for the following years. Over the period 2001-2012, the share of pension and health expenditure increased and that of unemployment and family expenditure declined, with significant developments over the more recent years (2010-2012), in spite of a context of high unemployment levels and weakened household incomes.

Social protection systems could be made more effective in their stabilisation function in various ways. For example, public authorities could, on the one hand, smooth indexation mechanisms of most benefits over the cycle (in particular for pensions). On the other hand, they could ensure that average expenditure levels for the active age population, in particular average unemployment expenditure per unemployed and average family expenditure per child, is less prone to decline over the

cycle, for instance by making the duration of unemployment benefits more sensitive to the cycle. A better smoothing of the indexation of benefits over the economic cycle, could for instance be achieved by averaging inflation over several years. This would keep the target of price indexation of pensions unaffected over the economic cycle and could leave fiscal room for other benefits to fully play their stabilisation role.

In 2011 and 2012 when expenditure declined in real terms in Europe, more dynamic expenditure increases were not always devoted to areas (social protection functions) of higher needs. On average, there were significant declines in unemployment expenditure per unemployed person and to a lesser extent in family expenditure per child, while pension and health expenditure were relatively less affected.

Some countries with relatively high spending and low (or average) performance have actually experienced a relatively dynamic expenditure growth, such as in the area of pensions (Cyprus and to a lesser extent Greece and Austria), which does not seem to reflect higher needs (since expenditure levels were already relatively high and performance relatively low). Conversely, some Member States with relatively low levels of expenditure and average or low performance saw large declines in their real levels of expenditure, in the area of pensions (Bulgaria, Estonia, Latvia and Ireland), family (Spain, Latvia, Poland and Portugal) and social exclusion and housing (Croatia, Italy). This has also been the case in nearly half of the Member States as regards unemployment expenditure (Bulgaria, Croatia, Lithuania, Latvia, Greece, Spain, Hungary, Italy, Poland, Slovakia and Romania). In these

countries, these declines in expenditure do not seem to reflect needs, given the relatively low expenditure levels and low or average performance.

## 3. FAMILY POLICIES SUPPORTING ADEQUATE INCOMES AND LABOUR MARKET PARTICIPATION

This section analyses the role of family policies in supporting mothers' labour market attachment and families' economic well-being. Family policies are regarded here as encompassing a variety of instruments and do not only include family expenditure<sup>(12)</sup>.

The section first discusses the multiple objectives of these policies focussing thereafter on the Europe 2020 objectives of employment and reduction in poverty and social exclusion. It then sets out to analyse how the EU Member States compare in terms of mothers' employment and children's well-being and institutional factors related to these outcomes. The main determinants of mothers' employment and poverty – identified in previous research – are discussed and analysed empirically (with EU-SILC data). Boxes with country cases illustrate in more detail the policies and their outcomes across the European Union.

### 3.1. The multiple objectives of family policies

As in most policy domains, family policies include a variety of policy measures to achieve equally numerous objectives. On the instrument side, family policies entail

<sup>(12)</sup> Some specific situations are not separately considered, such as the situation of families with children with disabilities.



cash transfers, provision of services, and tax benefits. As regards the policy goals, they vary across countries, but generally address the following policy areas: child poverty and household income, employment, children's well-being and development, fertility and gender equality (see Annex 2).

This section mainly focuses on the objectives of employment and the maintenance of household income and poverty reduction, while it is important to recognise the equal importance and interconnectedness of all these objectives.

Effective family policies are crucial for achieving two of the five policy targets set out in the Europe 2020 strategy. The objective of higher employment rates strongly relies on further increasing the female labour force participation<sup>(13)</sup><sup>(14)</sup><sup>(15)</sup>, and poverty reduction depends on investing in children and widening the economic opportunities of parents<sup>(16)</sup>. This section looks at how countries are making progress in achieving these targets and the institutional settings that support positive developments.

The Social Investment Package, and in particular the Commission Recommendation on Investing in Children (European Commission, 2013b), called on the EU Member States to support early childhood development and invest in

children and families from a life-course perspective. Policy recommendations included, *inter alia*, improving access to affordable early childhood education and care, providing adequate income support such as child benefits and stepping up access to quality services that are essential to children's outcomes.

In order to achieve the Europe 2020 targets, the Country-Specific Recommendations (CSRs) adopted by the Council have advocated the provision of high-quality and affordable childcare as well as measures targeted at low income or other marginalised families (see Table A.1 in Annex 2).

### *Several family policy models in Europe*

European countries have organised their welfare states in a number of ways, relying to various degrees on market, family and the State. The combinations of these three vary remarkably in the domain of family policies. The overall level of family expenditure is not necessarily linked to the gender equality friendliness of policies, but the countries that make the most effort to encourage the employment of mothers through paid leave and public childcare are also the countries with high female employment rates and high ratios of female earnings as a share of household income. Consequently, these also impact on the overall gender equality in society and the economic independence of women (Lambert, 2008).

Based on a Cluster analysis using the information on the major social and employment outcomes related to families, it is possible to identify some clusters of Member States<sup>(17)</sup>. This analysis is based namely on mothers' employment rates, the employment gap between parents, the employment gap between mothers and

women without children, children at-risk-of-poverty (AROP), the share of children living in households of very low work intensity, relative severe material deprivation of children (compared to adults), relative income of families with children (compared to total population) and income inequality among families with children (Chart 9)<sup>(18)</sup>. There are obviously outliers in each group for different indicators and some countries are more central to the Cluster than others, but this type of clustering helps to illustrate the inputs and corresponding outputs across the 28 EU Member States (see Annex 2, Chart A.1. for the clustering tree and for detailed information on clusters Table A.2-A.5).

- The best outcomes in terms of both low poverty risk and high relative and absolute employment are found in Sweden, Denmark, the Netherlands and Slovenia.
- Austria, Luxembourg, Cyprus, France, Belgium, Germany and Finland also reach good outcomes, but they are more often characterised by mothers' labour market attachment being weaker.
- The worst outcomes in term of mothers' employment are found in Hungary, Slovakia and the Czech Republic. With the exception of Hungary, the child poverty rate is nevertheless lower than in the EU in general.
- The opposite is true in Lithuania, Latvia, Portugal, Poland and Romania, where mothers work, but poverty outcomes are weak.
- The worst performers in terms of both poverty results and employment are Estonia and, in Southern Europe, Bulgaria, Spain, Croatia, Greece, Italy and Malta.
- Ireland and the United Kingdom are characterised by the high share of children living in households with very low work intensity and a relatively high share of children in severe material deprivation (compared to adult population).

<sup>(13)</sup> The gender gap in employment is still high, at 11.5 percentage points in 2014, but the European Commission has been committed to working to improve women's participation in the labour market by facilitating the work-life balance and promoting female entrepreneurship (see chapter I.1).

<sup>(14)</sup> Supporting gender equality through mothers' greater participation in the labour market at present is likely to have long-term consequences as well. A recent study shows that adult daughters of employed mothers have a higher probability of being employed, holding supervisory responsibilities, working more hours, and earning higher wages than women whose mothers were home full-time. Mothers' work also has an equalising impact on the division of household chores: sons of working mothers take part in domestic work to a greater extent than sons of mothers who stayed at home (McGinn et al., 2015).

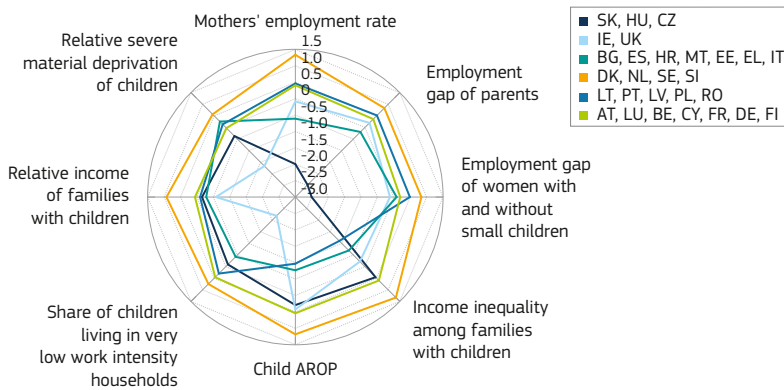
<sup>(15)</sup> There is also evidence of the importance of work-family reconciliation policies for gender equality in entrepreneurship. Thébaud (2015) finds that institutional context with work-family conflict can fuel women's representation in business activities, but it also amplifies the gender segregation in entrepreneurship as these women tend to work in less growth-oriented and lower-status ventures.

<sup>(16)</sup> Family policies supportive of early childhood development are equally important in helping achieve the Europe 2020 target of reducing early school leaving rates below 10%.

<sup>(17)</sup> The variables used in the Cluster analysis have been chosen to closely follow the framework for assessing the performance of countries (see Annex 1), and to focus in particular on the factors that illustrate mothers' absolute and relative labour market attachment, children's economic position in society, and also the equality of outcomes in terms of income inequality among families with children – the key interests of this section. Other indicators could be used and this would somewhat change the clustering of the countries, while some countries tend to group together even with various different indicators (such as Sweden and Denmark). However, while a simplification, clustering is an efficient way of summarizing key aspects of policies that we are mainly interested in here.

<sup>(18)</sup> Cluster analysis was carried out using Ward's linkage in Stata. It minimises the total within-Cluster variance. At the start, all clusters are single countries, but at each step the pair of clusters with minimum between-Cluster distance is merged (see also Bamba, 2007).

Chart 9: Social and employment outcomes, country clusters



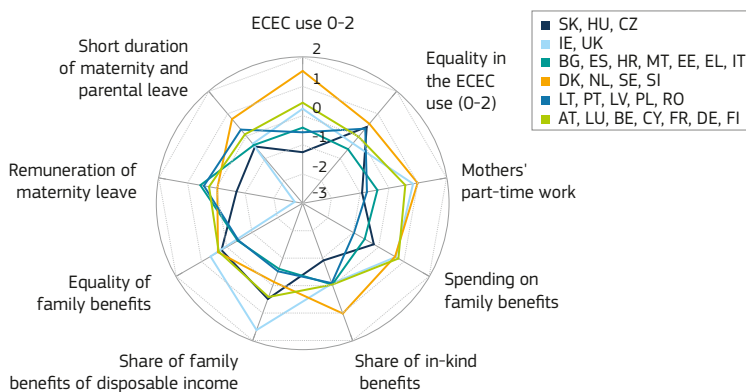
Source: DG EMPL calculations based on the most recent Eurostat data and EU-SILC 2012 [udb 2012]<sup>(1)</sup>.  
 Note: The Chart displays the Cluster standardised score compared to the EU average (the standardisation is based on the country average and standard deviation). For instance, Cluster scores show negative values when the Cluster average is below the EU average and positive values when it is above<sup>(2)</sup>.

- <sup>(1)</sup> The most recent data refers to the availability of the data at the time of writing in September 2015.
- <sup>(2)</sup> EU-28 average for AROP for children = 20.2%, mothers' employment rate = 62.4%, employment gap between mothers and fathers of young children = 1.47 (fathers' rate divided by mothers' rate), employment gap between women with and without small children = 1.29 (rate of women without small children divided by the rate of women with small children), income inequality among families = 28.6, relative income of families (share of median income of families with children of median income of entire population) = 0.97, relative severe material deprivation (SMD) of children = 1.2 (SMD of children divided by SMD of adult population), and children living in household with very low work intensity = 9.1%.

It appears that the countries with the best outcomes have a distinguished set of policies, with a significantly above EU-average share of small children using ECEC services, a high share of women working part-time, generous spending on family benefits and a relatively high share of in-kind benefits, while having below-average duration of maternity and parental leave and less generous remuneration of maternity leave.

The differentiated outcomes, i.e. low child poverty and low employment rate of mothers, in the sixth Cluster (Slovakia, Hungary, Czech Republic) also appear to be linked to the design of family policies. (Thévenon and Neyer, 2014)<sup>(19)</sup>. These countries are characterised by a relatively high level of family spending that supports low-income families and weak childcare provision together with long leave periods that do not encourage women to participate in the labour market. The following sections provide a discussion on the impact of these various policies.

Chart 10: Institutional characteristics, country clusters



Sources: The most recent data from Eurostat, OECD (2014), calculations based on EU-SILC 2012 [udb 2012] and European Parliament (2014)<sup>(1)</sup>.

Note: Figure shows the Cluster standardised average score (standardisation based on country average and standard deviation). In addition, group scores show negative values when they perform worse than the EU and positive values when they perform better<sup>(2)</sup> <sup>(3)</sup>.

- <sup>(1)</sup> The most recent data refers to the availability of the data at the time of writing in September 2015.
- <sup>(2)</sup> In some cases it is not clear what is to be considered a better/worse performance. This is the case for example for female part-time work, which is here considered positive as it is connected to mothers' labour market participation.
- <sup>(3)</sup> EU-28 average for ECEC below 3 years = 24.6%, share of women in part-time work = 22.1%, spending on family benefits as % of GDP = 1.95, share of in-kind benefits of total family spending = 28%, duration of maternity/parental leave = 113 weeks, remuneration of maternity leave = 84.2%, equality in the use of ECEC below 3 (Q5/Q1) = 2.6, distribution of family benefits (Q5/Q1) = 1.5, and the share of family benefits of disposable family income = 9.7%.

### 3.2. A better reconciliation of family life and work is crucial for increasing employment rates

The EU2020 objective of an employment rate of 75% strongly relies on a greater involvement of women in the labour market. Policies to facilitate the combination of work and family life are essential to promoting this. Fostering gender equality and supporting female labour force participation is not only a question of fairness but also a determinant of economic performance. Indeed, investment in the employment of women boosts economic development and competitiveness. On average, across the OECD, halving the gender gap in labour force participation could lead to an additional gain of 6% in GDP (Thévenon et al., 2012).

The employment rate of 20-64 year-old women in the EU-28 increased from 58% in 2002 to 64% in 2014. In spite of this positive trend, the female employment

<sup>(19)</sup> The state-of-the-art on the multiple objectives of family policies in Europe (fertility, work, care, laws and self-sufficiency) is provided by the FP7 project FamiliesAndSocieties. This project aims to further the understanding of family development in Europe and of challenges associated with it. It examines the causes and consequences of family change, of changes in the parental and gender roles as well as in intergenerational relationships for families and for European societies at large. It analyses the impact of economic, social and policy contexts on family development, family change and the well-being of women, men (mothers, fathers) and children. To provide reliable insights into causes and consequences of family changes, the project looks at family trajectories from a life-course and comparative perspective.

Outcomes in terms of mothers' employment and child poverty are connected to the inputs in the domain of family policies (including relevant labour market and other social policies). Some country groups also illustrate how a combined focus on both employment and social outcomes is necessary.

Chart 10 illustrates the Cluster scores for childcare use for children below 3 years old, inequality in this use, female take-up of part-time work, maternity leave remuneration, the duration of combined maternity and parental leave, spending in family benefits, share of in-kind benefits of total family spending, and distribution of family benefits across income quintiles.

rate is still significantly below that of men, which stands at 75% (see Annex 2 Chart A.2.)<sup>(20)</sup>. During the economic crisis, the narrowing of the gender employment gap was actually mainly due to the falling employment rate of men (European Commission, 2013b; Richardson and Pacifico, 2015). However, considerable variation can be found across the EU Member States. Especially large gender gaps are found in Greece, Italy and Malta. On the other hand, in the Nordic countries and Germany, the female employment rate is high and the gender gap is low, though only Sweden has reached the 75% target for both genders (Oláh, 2015).

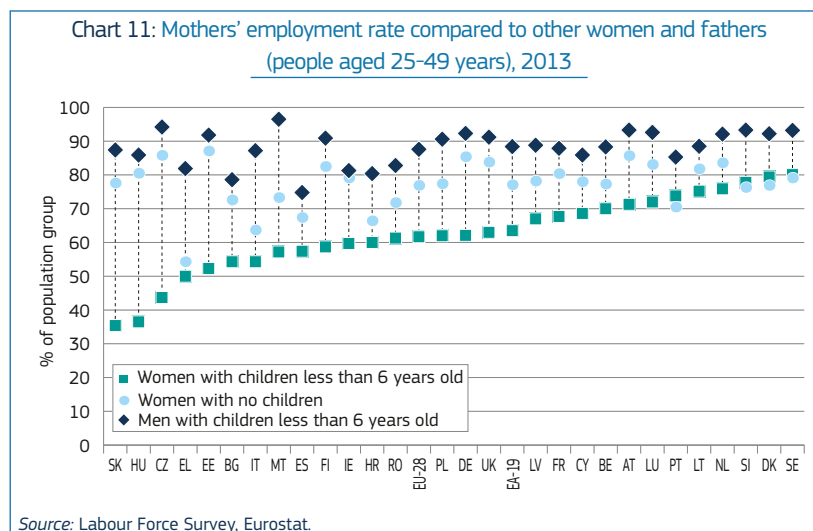
### 3.2.1. Motherhood a key determinant of women's employment

Women's employment patterns throughout the life cycle are strongly linked to household structures. Indeed, motherhood strongly impacts on women's participation in the labour market as well as their work-intensity<sup>(21)</sup> and one of the key obstacles to increasing female labour force participation is the compatibility of childrearing and employment. Labour supply models generally consider that the presence of children raises the value that women place on their time outside of paid work, while lowering women's effective labour market wages due to childcare costs (see Gornick et al., 1997). Women can adjust their working arrangements when they have children by taking leave, reducing the number of working hours or withdrawing from the labour market.

There are remarkable differences between countries in mothers' employment (Chart 11 and also Annex 2 Charts A.3-A.4). In Slovakia, where mothers of small children participate least in paid work, the employment gap between mothers and other women is more than 40 percentage points. Similar large gaps, thus demonstrating a huge potential for improvement in labour market participation, can be found in Hungary, the Czech Republic and Estonia. In some other Member States with overall high female employment rates, the gap is also significant: Finland, Germany and the

<sup>(20)</sup> The gender gap is even larger when *full-time* equivalent is looked at. Few Member States (mainly the Nordic and Baltic countries) succeed in combining high female employment rates with a low gender gap in hours worked (European Commission, 2013b) (for mothers with young children, see Chart 15).

<sup>(21)</sup> For an extensive literature review on the explanations for women's employment patterns, see Steiber and Haas (2012).



United Kingdom stand out especially. On the reverse, in Sweden, Denmark and Slovenia this gap is negligible, which illustrates how combining work and family can be possible for mothers. For men, the opposite is usually true: fathers work more than men without children. Bünning and Pollman-Schult (2015) analyse the effect of family policies also on fathers' working patterns. Their results indicate that fathers work fewer hours than childless men if they live in countries that offer well paid, non-transferable parental leave for fathers, short parental leave for mothers and generous family allowances. The effects, however, are strongly dependent on fathers' educational levels.

Cantillon et al. (2001) have also highlighted 'multi-speed labour market participation', with highly educated women and mothers approaching the employment rate of men, while women with low education levels lag seriously behind. Labour market participation is divergently influenced by the differential offer and price of care services, alternatives to labour income (e.g. social transfers), and the generally weak job opportunities for the poorly skilled (Cantillon et al., 2001)<sup>(22)</sup>. This means that adequately paid jobs are needed to offer an economic incentive for the low-skilled women in particular.

In 2014, mothers with high levels of education had an employment rate of 77.6% in the EU, while it was 60.8% for mothers

<sup>(22)</sup> On the other hand, Keck and Saracena (2013) note that there is no additional 'educational penalty' for mothers with low levels of education, rather the educational differences we witness in mothers' employment just reflect the general educational differences in employment. However, this does not mean that policy impacts should not be evaluated from the perspective of socio-economic differences; education may still strongly influence the outcomes of various policies.

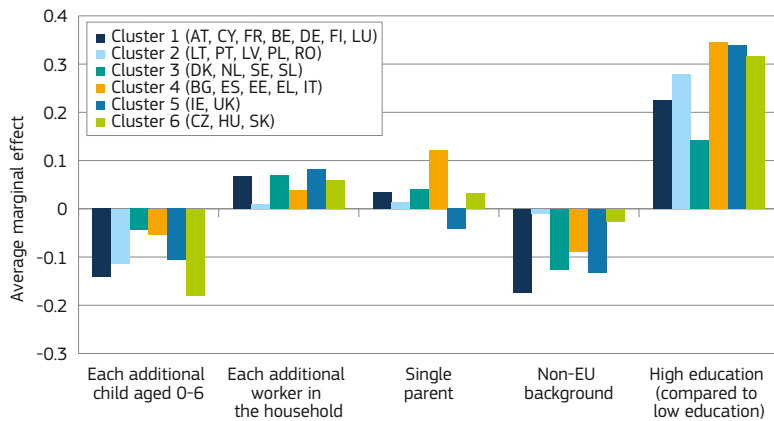
with medium levels of education, and only 36.3% for mothers with below lower secondary education. The gap between education groups has increased from 35.8 percentage points in 2005 to 41.3 in 2014. The gap is especially large in Croatia (60.8 ppt), Belgium (56.5 ppt), Malta (53.5 ppt) and France (51.0 ppt). Improving the labour market opportunities of poorly educated women is thus particularly important both in terms of employment outcomes and reducing household poverty.

Mothers' educational level is not the only factor influencing working status. For example, age, the number of children, and the household type partly determine a mother's labour force attachment. However, the predictive effect of these characteristics varies slightly from one country to another, while the overall effect is usually similar (Chart 12, see Annex 2 for details).

In general, older and better-educated<sup>(23)</sup> mothers have a higher probability of working than others, as do mothers who live in households with other working adults. Moreover, any additional small child in the household reduces the probability of working, while single parenthood increases it (with the exception of the Cluster of Ireland and the United Kingdom). Non-EU background is a strong determinant of not working even when all the other characteristics are controlled for.

<sup>(23)</sup> In Cluster 3, the marginal effect of higher education is lower than in other clusters. This result, which means that mothers' employment is less affected by differences in education, is in line with the finding by Gutiérrez-Domènech for Sweden (2005). Gutiérrez-Domènech concludes, and this would also apply to the result regarding the entire Cluster 3, that in Sweden generous public provision of childcare enables mothers with low qualifications and earnings potential to work after childbearing.

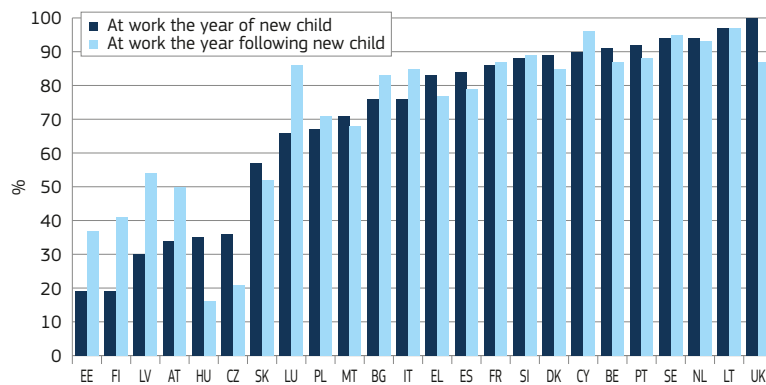
Chart 12: Personal characteristics and labour market attachment  
(results from regression based on EU-SILC 2006-2012)



Source: DG EMPL calculations based on EU-SILC 2006-2012 [udb 2006-2012].

Notes: Chart 12 presents the average marginal effects when all other personal characteristics are held constant. Only mothers aged 25-49 with children below the age of 6 are considered. See the full regression analysis model in Annex 2 Table A.10. All shown variables are statistically significant (at level  $P < 0.05$ ) with the exception of non-EU background in Clusters 2 and 6 and single parenthood in Cluster 2. No data for Croatia or Malta.

Chart 13: Mothers at work as a share of mothers who were working before the arrival of a new child (average 2007-2012)



Reading note: Longitudinal EU-SILC data with pooled data from 2007 to 2012 makes it possible to follow the same individuals and families over a period of 4 years and to look at the impact on employment of having small children<sup>(i)</sup>. It is important to use the longitudinal data to see the changes in employment and incomes caused by changes in family composition, which is closer to a causal explanation of the dynamics.

Source: DG EMPL calculations based on EU-SILC 2010, 2011 and 2012 longitudinal data [udb 2010-2012].

Notes: Reflecting the design of EU-SILC survey, maternity or parental leave is considered as work, home care allowance is not. Romania and Croatia are not shown due to the small number of observations. No data for Germany and Ireland.

(i) In the next part, the same data is used to look at the impact on poverty entry.

Having a child can translate into very high drops in the employment rates of mothers, such as in Estonia and Finland (of around 80 ppt), but also Latvia, Austria, Hungary and the Czech Republic (of around 65 to 70 ppt, see Chart 13). In the two latter countries, the attachment to the labour market further decreases 1 year later, while in the other countries it increases. On the reverse, in some Member States, the decline is much lower, in particular not more than 10 ppt (United Kingdom, Lithuania, the Netherlands, Sweden, Portugal, Belgium, Cyprus and Denmark).

In respect of mothers' employment decisions, Gornick et al. (1997) differentiate between public policies that i) strengthen mothers' labour force participation at the time of childbirth, ii) increase paternal involvement in childcare, iii) increase the supply or reduce the cost of non-parental childcare and iv) extend the time children are in public-funded schools. In addition, income transfer rules that may lead to benefit reductions due to earnings, policies that encourage part-time work, and marginal tax rates or tax treatment of spouses are likely to affect mothers' labour

force participation<sup>(24)</sup>. These family policies, or institutions, will be discussed below<sup>(25)</sup>.

### 3.2.2. Paid maternity leave strengthens link to labour market

Paid maternity and parental leave are important in ensuring parents' stronger links to the labour market after childbirth; they offer job protection as well as financial support during the break from work<sup>(26)</sup>. Boeckmann et al. (2014) find that well-paid parental leave, subsidised childcare services, and cultural support for maternal employment are associated with smaller gender gaps in employment rates and smaller gaps in working hours between mothers and childless women. On the other hand, extended leave, notably when unpaid, is associated with larger gaps. However, there is no clear consensus on the optimal length of leave arrangements as regards the gender employment gap, female wages and mothers' working patterns.

There is evidence that increases in participation in paid work diminish with length and benefit levels of the parental leave scheme (Akgunduz and Plantenga, 2013; Rønsen and Sundström, 2002). An OECD study (Thévenon and Solaz, 2013) shows that paid leave beyond 2 years keeps parents away from the labour market for longer and reduces their employability. In addition, long periods of leave can lead to stronger occupational segregation, lower future earnings, and unequal division of domestic work (Akgunduz and Plantenga, 2013; Rønsen and Sundström, 2002; Beblo and Wolf, 2002). A Swedish study shows that women with leave over 16 months were less likely to experience an upward career transition once back at work even after controlling for

<sup>(24)</sup> The impact of fiscal policies in the EU countries on second earners is studied in Rastrigina and Verashchagina (2015).

<sup>(25)</sup> In addition to having an impact on mothers' working patterns in the first place, institutions also affect the consequences of those patterns for earnings later in life. The findings by Stier et al. (2001) for 12 industrialised countries suggest that institutional arrangements mediate the costs connected to women's part-time and intermittent employment: weaker state support for mothers' employment is associated with higher wage penalties for employment discontinuity.

<sup>(26)</sup> As highlighted by Galtry and Callister (2005), parental leave is a complex policy area and includes much more than just the issue of mothers' employment. Possible other concerns include health protection of mothers, the development of the child, prenatal care and gender equality within families.



selectivity in leave durations (Evertsson and Duvander, 2011).

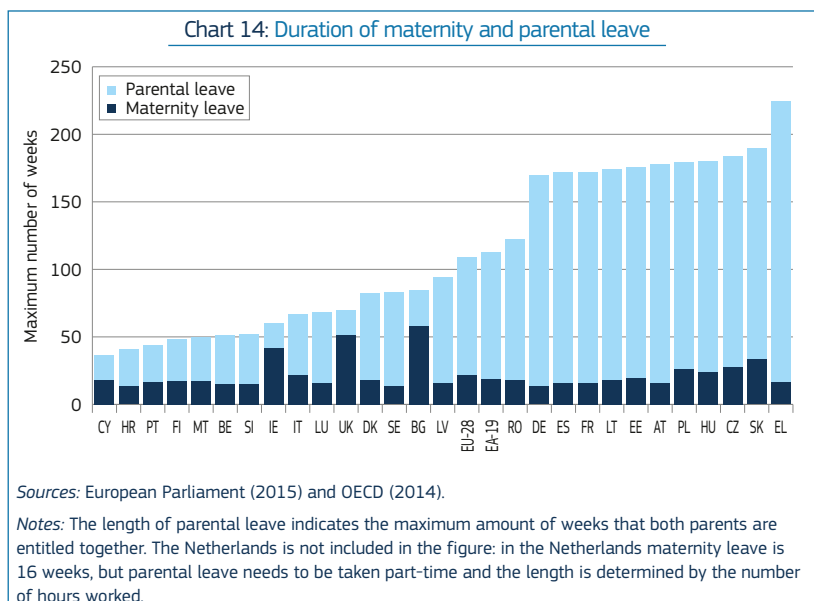
On the other hand, studying the 2004 French reform increasing the incentive of taking up a – relatively short – 6 months parental leave after maternity leave, Joseph et al. (2013) found that full-time leave did not have a discernible effect on the employment or wages of parents.

The average length of maternity leave in the EU is 23 weeks. Directive 92/85/EEC requires all Member States to provide a minimum of 14 weeks maternity leave at least at level of sick pay. Longer leave periods are more typical in Eastern European countries (27 weeks on average). According to a European Parliament study (2015), there seems to be a negative correlation between the duration and compensation of maternity leave: the longer the leave, the lower the benefit.

The average duration of parental leave is 86.9 weeks (Chart 14). Directive 2010/18/EU requires Member States to guarantee to all male and female workers a minimum of 4 months of parental leave, with at least one month on a non-transferable basis. Remuneration is left up to the Member States. In some countries, the duration of parental leave depends on the take-up of one parent<sup>(27)</sup>. In addition, some countries have attempted to promote gender equality through special entitlements for fathers or non-transferable leave periods for each parent. The variance in duration of parental leave is much bigger than for maternity leave. The shortest leave can be found in Cyprus (18 weeks) and the longest in Greece (2 years per parent in the public sector). In many countries parental leave is unpaid (Ireland, Greece, Spain, Cyprus, Malta, the Netherlands, United Kingdom) and in the rest the payment rate varies considerably<sup>(28)</sup>. An earnings-related scheme is likely to attract fathers more and therefore fosters gender equality (see Chart 14 for an overview of maternity and parental leave).

<sup>(27)</sup> For example in Croatia, Italy and Austria parental leave is extended if the father takes leave as well (in Croatia and Italy, a father needs to take leave of 3 months for the parents to be entitled to the extension, while in Austria there are various options, but the leave is shorter if it is not shared) (European Parliament, 2015).

<sup>(28)</sup> A more detailed description of the variation and developments in maternity, paternity and parental leave systems in the OECD countries can be found in Thévenon and Solaz (2013).



### 3.2.3. Part-time employment provides flexibility but can be involuntary

Part-time employment is an important feature of female participation in the labour market. A third of women work part-time compared to 1 man in 10. Participation in part-time work is key to understanding female labour market participation and related recent trends. Indeed, when employment rates are measured in full-time equivalent, they have increased at a much slower pace. This way of measurement shows that not only is the gender gap much higher, but the female employment rate basically stagnated between 2006 and 2012 (European Commission, 2010a: 6; European Commission, 2013b: 178).

While the higher share of part-time work among women also reflects the multiple roles that women have<sup>(29)</sup>, part-time work may not be a sufficient source of income and it can lead to weaker pension entitlement (Bettio et al., 2013), inferior training opportunities, as well as poorer career prospects (European Commission, 2010a: 9-11). Public policies may play a role when part-time work is a result of societal or institutional barriers to full-time

work and not a voluntary choice<sup>(30)</sup>. According to Eurostat, almost a third of part-time workers in the European Union is involuntarily in this arrangement (also Veliziotis et al., 2015). A total of 27.1% of women working part-time declare care responsibilities as the main reason for working part-time<sup>(31)</sup>.

Despite the problems associated with part-time work, this form of working can contribute to mothers' stronger participation in the labour market. Eurofound's Quality of Life study (2014) underlines that an overwhelming majority of mothers would be willing to work if they could better choose their working hours. More than half of the inactive mothers prefer to work part-time, while most mothers and almost half of the fathers in full-time jobs would like to work fewer hours. Single mothers, on the other hand, would prefer to increase their working hours. Our regression analysis also confirms that at the institutional level, women's part-time work is connected to a mother's higher probability of working (see Annex 2 for a full description of the model)<sup>(32)</sup>.

<sup>(30)</sup> For a more detailed discussion on the reasons for working less (gender roles, structural barriers, institutional constraints, care responsibilities, and tax-benefit systems) and its negative implications (lower hourly earnings, poverty risk, fewer training and career opportunities, skill mismatch, larger gender pension gaps, underutilisation of human capital) as well as positive implications (better work-life balance, higher life satisfaction, less stress, labour mobilisation, effective use of workforce), see European Commission (2013c).

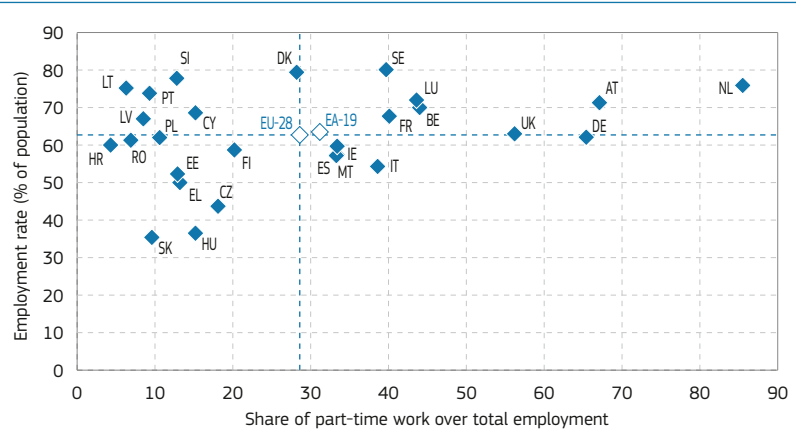
<sup>(31)</sup> Eurostat Labour Force Survey 2014.

<sup>(32)</sup> All clusters in the model together. Controlled for personal characteristics, overall employment rate, GDP per capita, GDP growth, unemployment rate and year.



However, the promotion of part-time work can also be detrimental to gender equality. Since the reconciliation of work and family is not an issue limited to women only, policies could include measures that increase flexibility of working and leave arrangements of both men and women, in spite of often strong cultural obstacles to shared or dual caring. There does not need to be a trade-off between high employment rates and fewer working hours (see Chart 15). The examples of Slovenia, Portugal and Lithuania as well as Latvia, Cyprus and to a lesser extent Denmark illustrate that combining a high employment rate and full-time work is possible.

Chart 15: Mothers' (aged 25-49 years) employment rate and part-time work, 2013<sup>(1)</sup>



Source: Labour Force Survey, Eurostat.

Note: The lines denote EU-28 average.

<sup>(1)</sup> 56% of Swedish women in part-time employment worked relatively long hours (30+ hours per week) and 14% shorter hours (under 19 hours per week); while in Germany the proportions were reversed: 17% in long part-time work and 45% in short (European Commission, 2010: 6).

### Box 2: Hungary, Slovakia and the Czech Republic share similar challenges in regards to mothers' employment

Charts 11 and 13 illustrate the weak position of mothers in the Hungarian, Slovakian and Czech labour market, although recent developments vary between countries (an improvement in the Czech Republic but a further decrease in Slovakia). In these countries, less than half of the mothers with young children are employed. In Hungary, the employment gap between mothers and other women aged 25-49 is 44 percentage points, the largest in the EU, followed closely by Slovakia and the Czech Republic.

While Hungary is close to achieving the Barcelona target of having 90% of children above 3 years of age in early childhood education or care, the enrolment rate of younger children is among the lowest in the EU, currently at 10%. However, childcare costs, which according to the OECD (2014) amount to 5.1% of the average wage, are significantly below the EU average (23.8%). On a more positive note, there have been continuous efforts in Hungary to improve childcare provision also for younger children and incentives for mothers to return to work faster have recently been strengthened. The impact of these efforts on mothers' employment and poverty needs to be monitored.

In the Czech Republic and Slovakia the use of childcare for children below 3 years of age, is even lower, and for older children participation in childcare is below the EU average (see Chart 16). In the three countries, maternity and parental leave periods are longer than the EU average, especially in Slovakia, and remuneration is below the EU average.

In the EU, the at-risk-of-poverty and social exclusion rate for children is the highest in Hungary after Bulgaria and Romania. It stands at 43.0% in 2013, considerably higher than for the total population (33.5%). This issue has been highlighted in the 2014 Country-Specific Recommendations, but there has been no visible improvement (European Commission, 2015b). As Hungary already spends more than the EU average on family benefits and the poverty reduction impact of such benefits is relatively high (see Chart 22), more efforts to improve the labour market opportunities of (low skilled and poor) mothers and to provide high-quality childcare services for disadvantaged children might work in the fight against poverty and its long-term consequences for children. The territorial disparities in the availability of childcare can also affect families in unequal way within the country.

While the employment rate for mothers rose from 36.2% in 2005 to 43.7% in 2013, the European Semester process recognises the lack of affordable childcare services and the limited use of flexible working-time arrangements as hindering mothers' labour market participation in the Czech Republic. Partly due to social norms in Czech society, many women continue benefiting from generous parental leave until the child is 4 years old. This could serve to mask the actual unemployment figures for women. Pertold-Gebicka and Husek (2015) stress that the lack of public childcare facilities pushes women away from the labour market: in 2013, kindergarten applications of 16% of children could not be met. In addition, the net cost of childcare, at 18% of the average parental wage, is relatively high (OECD, 2014). The Czech government has already promised to increase the capacity of public childcare facilities, but progress and its implications for mothers' employment need to be monitored in order to evaluate the impact of family policies on gender equality and employment (European Commission, 2015a).

In Slovakia, mothers' labour force participation further decreased between 2005 and 2013. This hinders progress in achieving the EU2020 employment target in this country. Furthermore, estimates show that increasing the female employment rate to the EU-15 level could boost Slovakia's GDP by 1.6 percentage points (European Commission, 2015c). The European Semester country report for Slovakia also mentions low take-up of flexible working arrangements as an obstacle to employment. Some actions have already been taken to increase pre-school education capacity, but more effort is needed to provide good quality care for the youngest children – an issue that has also been highlighted in the 2014 Country-Specific Recommendations (European Commission, 2015c).

### 3.2.4. Availability of childcare key to reconciling work and family

Women devote considerably more time than men to unpaid household work and these responsibilities contribute to fewer hours of paid work or inactivity. While public childcare arrangements play a fundamental role in this respect, policies affecting men's opportunities in participating in unpaid household work and taking up parental leave are also increasingly important.

#### *Barcelona targets still not reached in many countries*

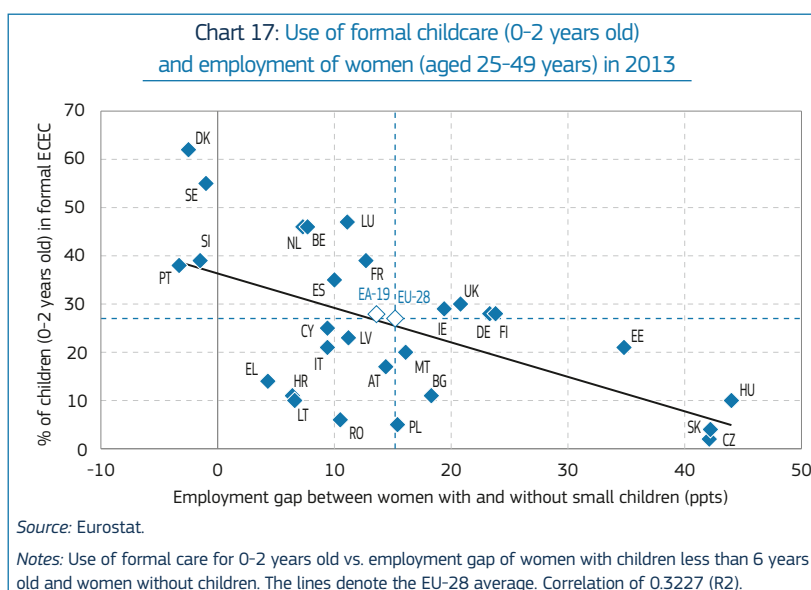
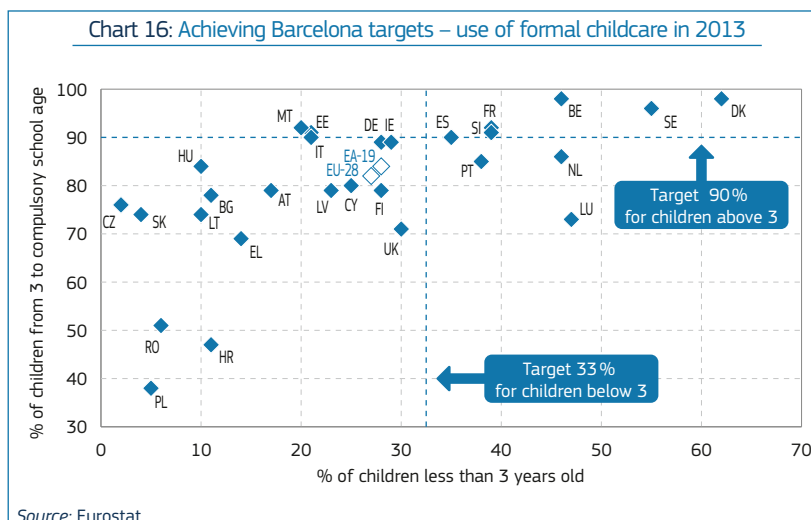
At the Barcelona Summit in 2002, the European Council set targets for providing childcare to at least 90% of children between 3 years old and the mandatory school age and at least 33% of children below 3 years of age. More than a decade later, there has been a lot – although to varying degrees – of progress, but still most of the countries are far below the Barcelona target level (Chart 16). For the younger age group, only France, Luxembourg, Portugal and Slovenia reached the 33% target, while Belgium, Denmark, Spain, the Netherlands, Sweden and the United Kingdom had already reached the target. For the older age group, Estonia, Malta (from a level of 58% in 2005), Slovenia and Sweden reached the 90% target, and Belgium, Denmark, Spain, France and Italy were already top performers<sup>(33)</sup>.

The availability of formal childcare is connected to mothers' employment opportunities (Hank and Kreyenfeld, 2002; Del Boca, 2015). Chart 17 illustrates the connection between ECEC participation of children aged below 3 and the size of the employment gap between mothers and other women. The highest participation rates for mothers (taking into account the overall level of female employment) are accompanied by high shares of children in formal childcare<sup>(34)</sup>. (Brilli, 2015).

The hours of attendance at childcare services vary enormously among Member States. In several countries the services are used part-time and do not cover a full working week. In the United Kingdom, the Netherlands and Ireland

<sup>(33)</sup> For a full review of achieving the Barcelona targets, see European Commission (2013a).

<sup>(34)</sup> The connection is obviously endogenous: the more women work, the more children are enrolled in services.



the services are essentially used on a part-time basis regardless of the age group. It should be noted that, in some cases, participation is well below 30 hours per week.

Chart 18 illustrates the connection between the use of childcare for very young children (aged under 3) or general spending on family benefits and mother's employment by educational level. It appears that more extensive use of childcare is connected to higher employment in all educational groups, when other personal characteristics and institutional factors are controlled for (see Annex 2 for full description of the regression model). From a policy perspective it is important to note that all educational groups benefit from childcare, while the marginal effect is slightly higher for the highest educational group. The opposite is true for total family spending (measured as spending per child and adjusted for GDP per capita) that is associated with

a modestly decreasing employment probability<sup>(35)</sup>.

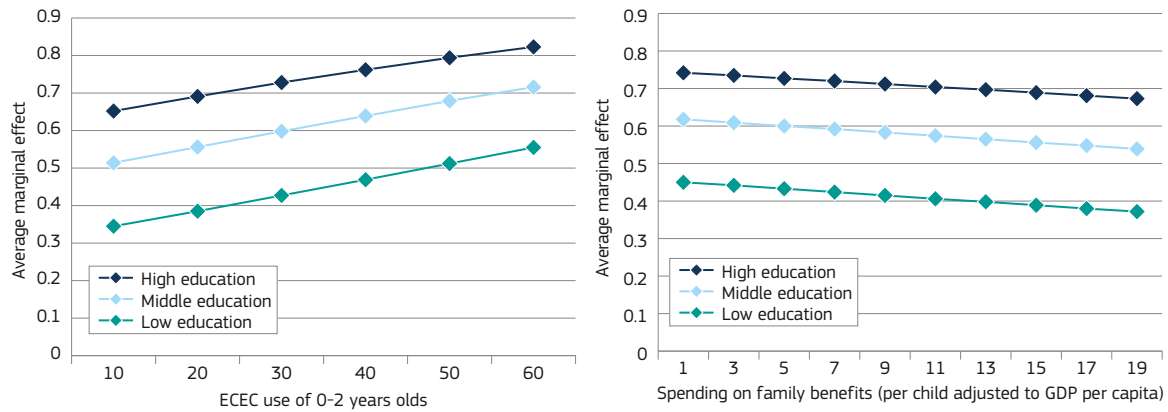
#### *The cost of childcare*

Formal childcare services for young children are a way for parents to enter and/or remain in the labour market only if they are financially accessible (for review of studies, see e.g. Del Boca and Vuri, 2005). However, 53% of mothers who declare that they do not work or that they work part-time for reasons linked to formal childcare services consider the costs to be an obstacle. This figure is higher than 70% in Ireland, the Netherlands, Romania and the United Kingdom (European Commission, 2013a: 12).

For example, in the United Kingdom, the net cost of childcare exceeds one third of parental net income compared to the

<sup>(35)</sup> Ferrarini (2006) has similar findings: childcare is positively correlated with female employment, while general family support did not have a relationship with it.

Chart 18: Impact of ECEC use (0-2 years old) and spending on family benefits and on mothers' work, regression analysis results



Source: DG EMPL calculations based on EU-SILC 2007-2012 [udb 2007-2012].

Notes: Chart presents the average marginal effects when all other personal and institutional characteristics are held constant, only mothers aged 25-49 with children below the age of 6 are considered. See the full regression analysis model in Annex 2. Results are statistically significant at the level of  $P < 0.001$ . Results for all countries together. No data for Croatia and Malta.

EU average of 11.2% (OECD, 2014)<sup>(36)</sup>. A recent study using microsimulation also shows that Ireland and the United Kingdom stand out as countries where secondary earners with children are especially penalised. In Germany, Slovakia and Luxembourg, the out-of-pocket childcare costs are also a considerable disincentive for women (Rastrigina and Verashchagina, 2015).

A study on the expansion of free entitlement to part-time early education in England showed that the expansion led to a rise in mothers' employment and especially those mothers who used early education because it was free were affected (Brewer et al., 2014). Empirical evidence from Italy also indicates that only by reducing the financial burden on families and expansion of childcare system could have a large impact on mothers' labour market participation (Del Boca and Vuri, 2005).

When childcare costs are taken into account, median earning mothers generally manage to increase their income by less than 40% by taking up a job. Moreover, a single mother needs to earn an above-average full-time wage

in order to achieve a 50% increase in family income (Richardson, 2012).

In addition to their impact on affordability of childcare, childcare subsidies also impact on redistribution. First, they serve as an employment-related income transfer to working parents. Hence, publicly provided or subsidised childcare may complement other redistribution programmes (Vaalavuo, 2013). Second, high-quality childcare can also ensure that children from lower socio-economic backgrounds have equal opportunities<sup>(37)</sup>.

#### *The social gradient in access to childcare*

Enabling parents to work is particularly important for children as poverty has a significant impact on well-being and may have negative long-term effects on educational achievement and future life chances<sup>(38)</sup>. In addition, good quality childcare has been proven to be beneficial for child development. Very early intervention has been estimated as a cost-effective instrument for breaking the poverty cycle, and use of childcare is associated with various positive child outcomes (Heckman and Masterov, 2007; Berlinski et al., 2009; EACEA, 2009; Engster and

Olofsdotter Stensöta, 2011). The social gradient in the use of childcare services is especially interesting from this point of view.

The European Commission's recommendation 'Investing in children: breaking the cycle of disadvantage' states that Member States should 'incentivise the participation of children from a disadvantaged background (especially those below the age of 3 years), regardless of their parents' labour market situation, whilst avoiding stigmatisation and segregation' (European Commission, 2013b). The recommendation also underlines that Member States should dismantle the barriers and disincentives deterring parents from working and address the lack of quality services.

Families in the first income quintile (the same is true for families with less educated parents) use childcare services less than those from higher income quintiles (or better educated) (see Chart 19). Slovenia, Sweden and Malta can be singled out as the best performers, having achieved a high participation rate and equality in use simultaneously. It is, however, very difficult to say to what extent inequality in the use of childcare is a cause or a consequence of other societal inequalities. On the one hand, there might be financial barriers to accessing childcare services, especially in countries where public involvement is limited but, on the other hand, it might also be that some parents decide to reduce working time in order to stay at home with a child, thus voluntarily choosing lower income and not using the services. Higher household work intensity is naturally associated with higher incomes and generally requires use of childcare.

<sup>(36)</sup> Policy concern and most academic research has tended to focus on young children and the role of childcare services for school-age children, while school schedules have received relatively little attention. The educational system takes over part of the care responsibility, but in most countries school hours are part-time and generally not compatible with a full-time working week. Women in countries with continuous school days tend to have higher activity rates (Gormick et al., 1997). Plantenga and Remery (2013) argue that in addition to offering a safe place where children can relax, out-of-school services may contribute to further social and educational development.

<sup>(37)</sup> Early childhood, education and care services are provided through a variety of mechanisms across European countries. The effects of these funding systems in terms of costs, quality and inclusiveness and the advantages and disadvantages of private and public systems along these dimensions are investigated by the FP7 research project CARE. [http://ecec-care.org/fileadmin/careproject/Publications/reports/D5\\_1\\_The\\_Socio-Economic\\_Dimension\\_of\\_ECEC\\_in\\_Europe.pdf](http://ecec-care.org/fileadmin/careproject/Publications/reports/D5_1_The_Socio-Economic_Dimension_of_ECEC_in_Europe.pdf).

<sup>(38)</sup> <http://old.indicators.nom-nos.dk/pxweb/Dialog/statfile1.asp>.

### Box 3: The negative impact of home care allowance on employment in Finland

Nordic countries usually Cluster together in questions of social and family policy: they all have low child poverty rates and high fertility rates, and use a considerable amount of government expenditure to support families. Nevertheless, there is a considerable difference between Finland and for example Sweden when it comes to mothers' labour market attachment. While Finland has achieved high levels of female labour force participation in general, it has, after Hungary, Slovakia, the Czech Republic and Estonia, the highest gap (24 percentage points) in employment between women with small children and women without children (Charts 11 and 13).

The individual right to childcare guarantees each child a place in formal childcare<sup>(1)</sup>, but still only 28% of children below 3 years of age are enrolled in Finland, compared with 55% in Sweden. This is largely due to the childcare allowance available for Finnish parents who take care of their small children at home<sup>(2)</sup>. The Finnish model of reconciliation is special in that it offers parents a choice between employment and parental care through reducing barriers to work and financial support for those who choose to stay home. The political support for homecare allowance is strong despite the fact that several Nordic studies have demonstrated the negative impact of cash-for-care schemes on employment (Rønsen and Sundström, 2002; Schøne, 2004; Rønsen, 2009).

The above figures on childcare use show that the choice of Finnish mothers is tilting towards staying at home with children. This is not without consequences for women's pension rights, career opportunities and the optimal use of human capital. Furthermore, it has implications for the gender wage gap, which in Finland is among the highest in Europe<sup>(3)</sup>. A large gender pay gap contributes further to mothers' decisions on whether to take up homecare allowance in the place of men. The large majority of the recipients are mothers with low incomes and low educational attainment (Ellingsater, 2012; Aassve and Lappegård, 2009), which can mean that these women have few opportunities in the labour market. Consequently, the use of the homecare allowance may further increase inequality between women of different socio-economic classes.

In order to promote mothers' return to work and gender equality, Finland could develop incentives for fathers to use the homecare allowance as well as opportunities to engage in part-time work. For example Sweden has succeeded in increasing fathers' use of parental leave. In 2013, 25.5% of paid parental leave days were used by men in comparison to 8.8% in Finland<sup>(4)</sup>. However, the attractiveness of labour market participation has to be improved for women with lower qualifications and fewer labour market opportunities.

Based on their tax-benefit model, the OECD (2015a) finds that providing cash benefits, such as the Finnish homecare allowance, which creates incentives to care for children at home, reduces the tax burden and increases access to other cash benefits, thus leaving some families better off in the short run. However, it also states: 'if cash payments increase homecare incentives for the poor this can result in a weaker labour market attachment and long-term poverty implications.' The study also points out that governments should focus on the long-term consequences, including benefit dependency and intergenerational inequality<sup>(5)</sup>, of such policies and make sure that in particular, low-income parents are better off by using public childcare services. In addition, in the case of higher-earning parents, the use of a care allowance and consequently the fewer hours worked reduce the taxes and social contributions collected. It is also likely to affect overall productivity due to skills associated with higher earnings.

(1) However, the new Finnish government has proposed to cut the subjective right to childcare when one of the parents is at home or unemployed.

(2) Parents of children under 3 years old can claim the Finnish homecare allowance if the child is not enrolled in municipal day care but is instead taken care of by one of the parents, another relative or a private service-provider. The basic allowance is not income-related, while there is an additional allowance for low-income families.

(3) OECD Employment Database 2014: <http://www.oecd.org/gender/data/genderwagegap.htm>.

(4) <http://old.indicators.nom-nos.dk/pxweb/Dialog/statfile1.asp>.

(5) The OECD (2015a) points out that incentivising mothers to stay out of the labour market for long periods of time due to childcare responsibilities at home reinforces intergenerational inequality: children whose mothers have paid work may do better in school given their relative social and economic advantages and higher family income (see also McGinn et al., 2015).

### 3.3. Supporting household incomes, fighting child poverty and breaking the intergenerational cycle of disadvantage

Effective family policies that support mothers' employment also support household incomes and these policies can be especially important for low-income families. Family policies are also crucial in supporting household incomes and fighting poverty and deprivation by providing cash support. Several forms of parental leave, child allowances, cash-for-care systems and tax credits for

families are available for this purpose. In some countries these cash transfers place more emphasis and incentives on encouraging women to work.

#### 3.3.1. Family policies support household incomes to varying degrees

Family benefits have varying importance for household incomes across the Member States. This reflects both the distribution of benefits across income quintiles within a country (Chart 20) as well as their level in relation to other incomes (Chart 21).

There is great variance between countries in the equality of distribution of family benefits. In Malta, Portugal and the United Kingdom, these cash transfers benefit the bottom income quintile especially, while the distribution is remarkably pro-rich in Spain and all the Baltic states.

Spain (and to a lesser extent Greece and Italy) stands out in that the share of family benefits of household disposable income is on average only 1% in comparison to around 10% in the EU-28 (2% and 3% in Greece and Italy). In addition, the importance of family benefits even for the poorest families remains equally low,



while in the EU-28 family benefits represent 20% of the total disposable income of the bottom income quintile. The case of Spain is especially striking because child poverty is among the highest in Europe.

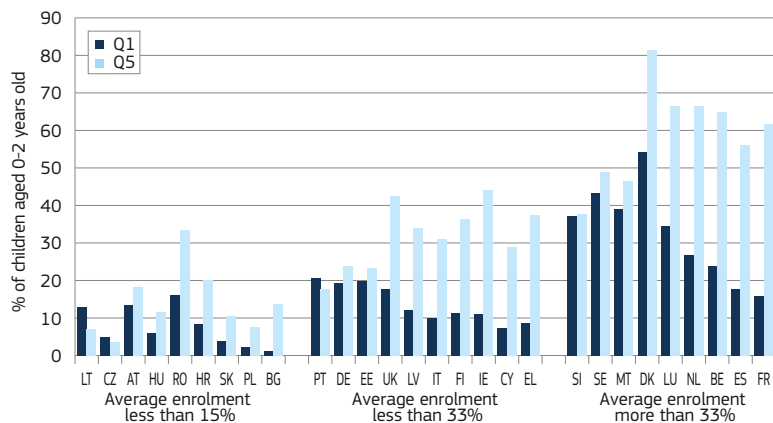
Family benefits form a considerable proportion of household income in the bottom part of the income distribution in many countries (see Tables A.6-A.9 in Annex 2 for all income quintiles and for different social transfers). For example, in Ireland 40% of household income in the bottom income quintile comes from family benefits, in Hungary 39%, and the United Kingdom 33%. Cuts in these benefits would hurt the families with tight budgets the most. In addition to family benefits, other social transfers make up a large share of family disposable income. On average social assistance represents 6%, housing allowances 3% and unemployment benefits 8% of the income in the lowest income quintile. In Ireland, the United Kingdom, Hungary and the Netherlands, all benefits together make up more than half of total household income. By contrast, in Greece, Italy, Cyprus and Poland, their share is less than a fifth. In Spain, quite unsurprisingly, unemployment benefits form a large component of family income.

### 3.3.2. Family benefits important in reducing poverty

The impact of family benefits on household incomes and poverty risk varies significantly from country to country. While Korpi and Palme (1998) argued that universal systems are better placed to fight poverty and inequality, more recent research has found that this 'paradox of redistribution' seems no longer to exist. In other words, targeting can actually also increase redistribution (Marx et al., 2013). However, universal systems, i.e. systems where the entire reference population is entitled to the benefit, usually have a stronger impact on poverty because these systems also tend to be associated with higher overall family spending than more selective systems that use, for example, means-testing as an eligibility condition (Cantillon et al., 2015) <sup>(29)</sup>.

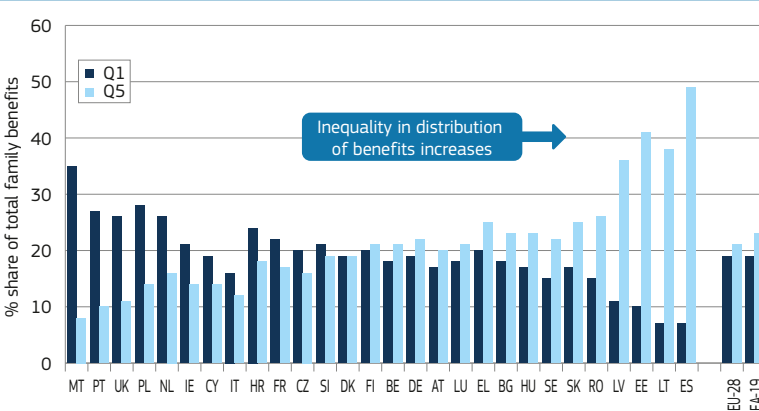
<sup>(29)</sup> For recent evidence on poverty, social policy and social innovation in Europe, see DG RTD funded research project ImProVE. The project has provided new social indicators, especially in the area of reference budgets and minimum income protection; insightful analyses of poverty and the Europe 2020 targets; research on employment and the welfare state; and contributed to a better understanding of the interaction between local projects of social innovation and the traditional welfare state. In its last phase, the project develops policy scenarios that foster insight into how poverty can be effectively reduced in EU Member States.

Chart 19: Percentage of children aged 0 to 2 in formal childcare per income quintile



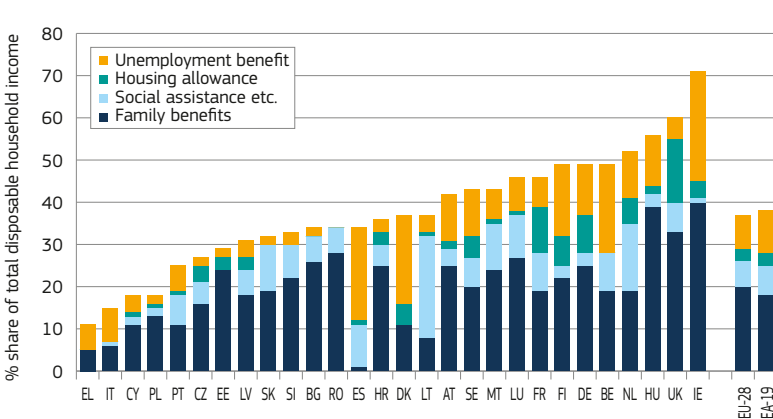
Source: DG EMPL calculations based on EU-SILC 2012 [udb 2012].  
 Note: Income quintiles based on children below 6 years old.

Chart 20: Distribution of family benefits across income quintiles (0-17 years old)



Source: DG EMPL calculations based on EU-SILC 2012 [udb 2012].  
 Notes: All family benefits (gross) per income quintile divided by the number of children in the quintile. Income quintiles based on children 0-17 years old only.

Chart 21: Selected social benefits as a share of total disposable household income of the lowest income quintile, 2012



Source: DG EMPL calculations based on EU-SILC 2012 [udb 2012].  
 Note: Quintiles based on children 0-17 years only.

The size of the poverty reduction effect of family benefits is strongly correlated with the volume of spending on family benefits as a share of GDP (Chart 22). This is, however, not the full story. Interestingly, the share spent on in-kind benefits is not connected to the magnitude of poverty reduction: it is the total spending that matters. While the correlation is clear,

some countries achieve the same level of poverty reduction with lower spending. This is especially evident, when comparing Denmark, the highest spender, and the Netherlands, among the least generous Member States, which have the same level of poverty reduction through family benefits. However, in the Netherlands the distribution of family benefits is pro-poor



## Box 4: Comparing the effectiveness and efficiency of family cash benefits and services

The OECD report (2015a) 'Comparing the effectiveness and efficiency of family cash benefits and services' offers information on the effectiveness of family spending. This is especially important now as the continued economic crisis has put pressure on cutting social spending in many countries, and governments are faced with the question of how scarce resources can be used in the most effective way to improve the lives of families.

The report first discusses **barriers to take-up of benefits**, which are likely to hamper the effective delivery of both cash and in-kind benefits. In order to tackle low take-up especially among disadvantaged families, the report recommends improvements in terms of facilitating enrolment in programmes, simplification of eligibility criteria, and provision of clearer information on the application and benefits.

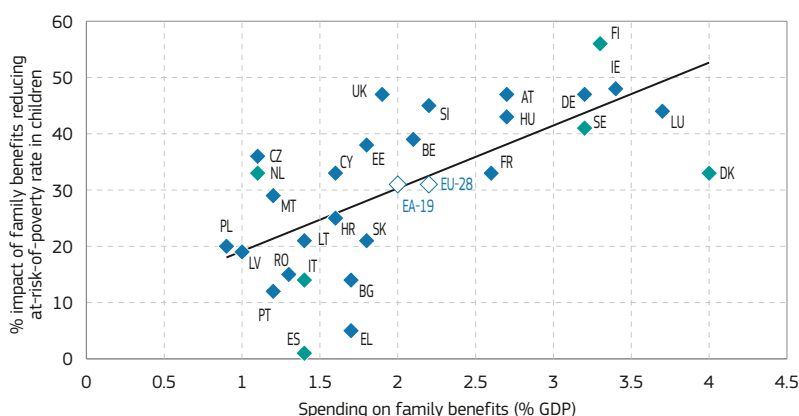
The report draws attention to **randomised controlled trials (RCT)** in order to offer detailed insights on what works and in which conditions, but it also illustrates how one should study and measure the impacts of new policy measures and reforms. The trials reviewed in the report show that the benefit conditions and complementary services to cash transfers are important for successful delivery of family benefits. RCTs present an effective tool for establishing the causal effect of policies. This cannot usually be done based on observational data that can only illustrate correlations between policies and outcomes. However, it is necessary that governments commit to studying the effectiveness of policies through RCTs when planning for new programmes.

The report's **macro-pooled time series analysis** complements the results presented in this section. The OECD analysis finds that employment and poverty outcomes are driven by the balance of how, when and how much money is spent on families with children. One of the main conclusions is that universal benefits are connected to lower child poverty, while targeted benefits are connected to lower female employment. However, it is also important to note that one-size-fits-all policies are hard to find, and effective policies need to be tailored to suit the overall institutional context as family policies interact with other policies. In addition, policies that are important in fostering female employment and reducing child poverty are not limited to family policies only, but naturally include labour market and education policies.

The report reviewed the effects of policy reforms during the economic crisis on the poverty risks of certain family types through an **OECD tax and benefit simulation model**. Their calculations show that the poverty risk of different family types increased in most OECD countries, while there were different impacts for low- and average-income families. For example in Denmark, Hungary and Italy, the increase was more marked in lower-income families, while average-income families were affected to a greater extent in Poland and the United Kingdom. Only in Slovenia, Spain and Sweden were there notable declines in poverty risks.

While some of the reforms have not translated into changes in poverty, the reduction in the maternity leave replacement rate in the Czech Republic and in childcare support in the United Kingdom are likely to have contributed to higher poverty risks. The changes in maternity leave eligibility rules in Greece, the Irish introduction of a free pre-school year, and the childcare voucher for low-income families in Luxembourg, on the other hand, have improved the living standards of families.

Chart 22: Poverty reduction impact of family benefits and public spending on families and children



Notes: Countries marked with green diamonds have above-average spending on in-kind benefits as a share of all family benefits. Correlation 0.4244 (R2).

and in Denmark it is much more equal (see Chart 20). To conclude, the design of the system affects the effectiveness of family benefits in reducing poverty risk (see also Box 4).

*Working parents are the best protection against child poverty*

Removing barriers for parents' employment is a desirable goal from the point of view of poverty reduction. The generalisation of dual earnership means that a double income in a family has become the norm, which increases the poverty risk for single earners' households. This also generally translates into very high poverty risk of those children living in households with very low work intensity (Chart 23)<sup>(40)</sup>. On average, the poverty risk for children living in very low work intensity households is 70.7%, compared with 14.8% of children living in households with higher work intensity.

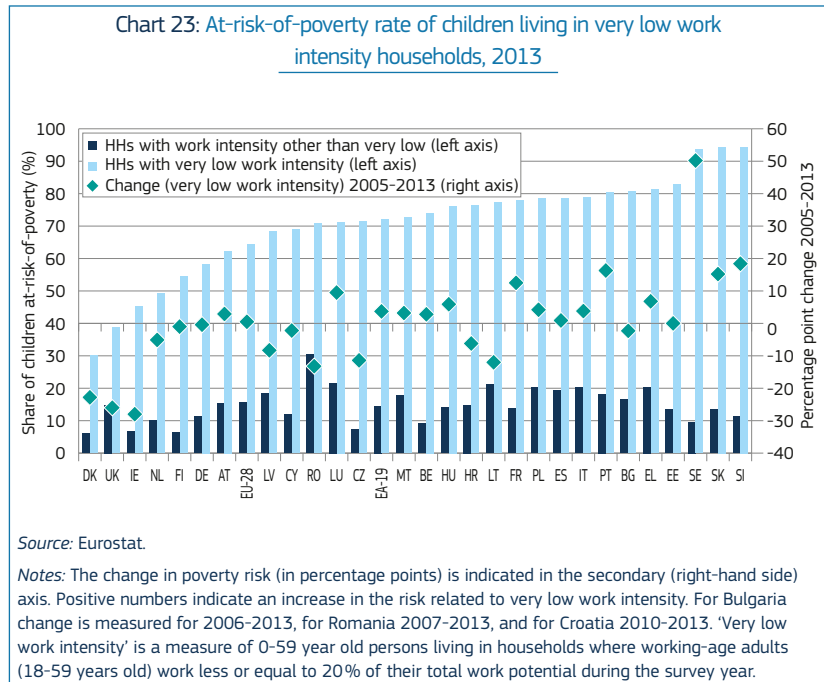
The impact of work intensity has grown during the past decade in many countries. The most striking change took place in Sweden: in 2005 children in very low work intensity families faced a poverty risk of 43.5%, while in 2012 this was 93.7%. This can be interpreted in two ways: either the population who end up in very low work intensity households has changed over time (so-called 'selection' bias) and belonging to such a household means nowadays even more complete marginalisation and perhaps multiple deprivations or, alternatively, the income protection of such families has weakened<sup>(41)</sup>. In some other countries, such as Ireland, the United Kingdom and Denmark, the poverty risk related to very low work intensity has decreased (see Chart 23).

Some key personal characteristics impact on mothers' poverty status (see Chart 24). Both the mother's own working status and the number of additional workers in the household appear to be the main determinants of poverty, together with the educational level of the mother<sup>(42)</sup>. On the reverse, single

<sup>(40)</sup> Less than 20% of total potential working time in a year is used for working by household members 18-59 years old (excluding students).

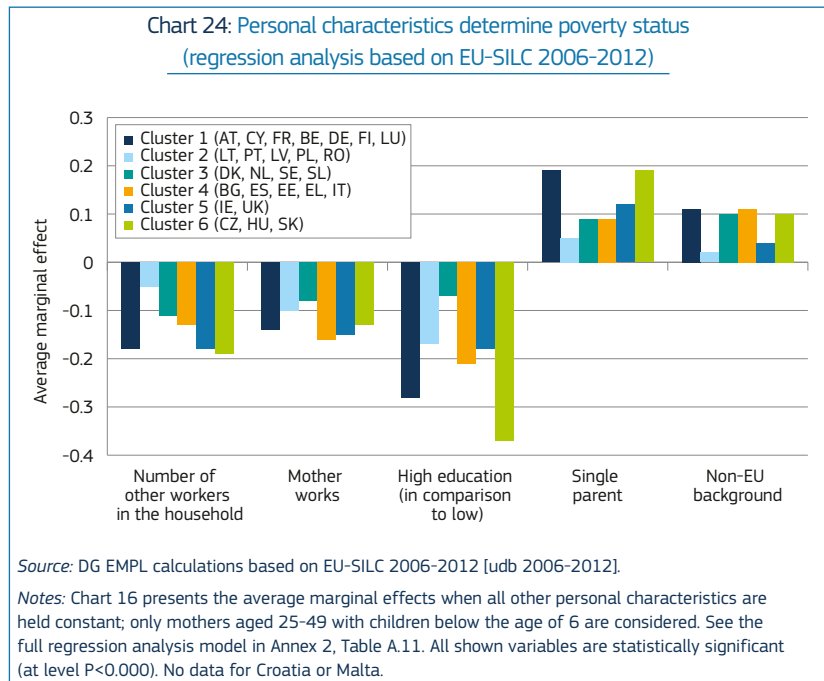
<sup>(41)</sup> A third option could be that the number of children living in very low work intensity households in Sweden is so small that the change over time is a result of sampling and the finding is an artefact.

<sup>(42)</sup> OECD (2015a) also finds that female labour market participation is consistently associated with lower child poverty risk – independent of variation in family spending.



Source: Eurostat.

Notes: The change in poverty risk (in percentage points) is indicated in the secondary (right-hand side) axis. Positive numbers indicate an increase in the risk related to very low work intensity. For Bulgaria change is measured for 2006-2013, for Romania 2007-2013, and for Croatia 2010-2013. 'Very low work intensity' is a measure of 0-59 year old persons living in households where working-age adults (18-59 years old) work less or equal to 20% of their total work potential during the survey year.



Source: DG EMPL calculations based on EU-SILC 2006-2012 [udb 2006-2012].

Notes: Chart 16 presents the average marginal effects when all other personal characteristics are held constant; only mothers aged 25-49 with children below the age of 6 are considered. See the full regression analysis model in Annex 2, Table A.11. All shown variables are statistically significant (at level P<0.000). No data for Croatia or Malta.

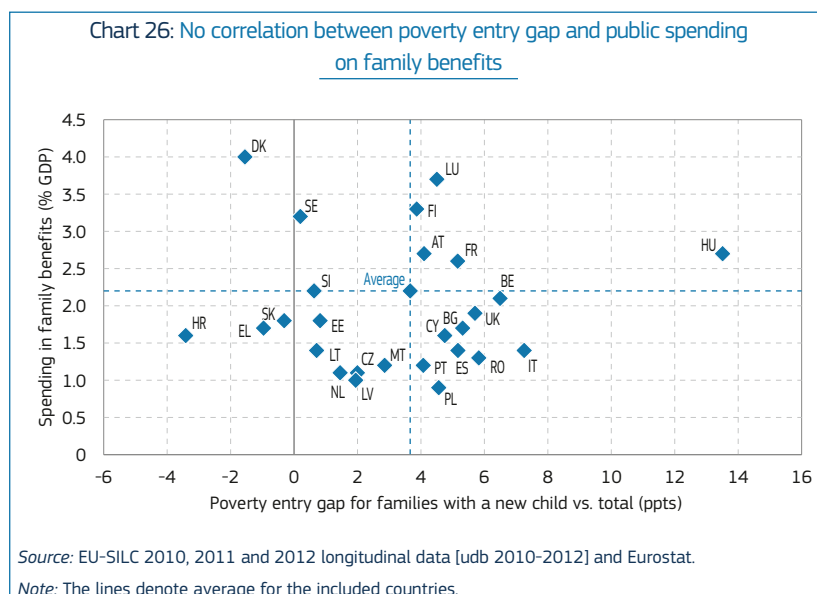
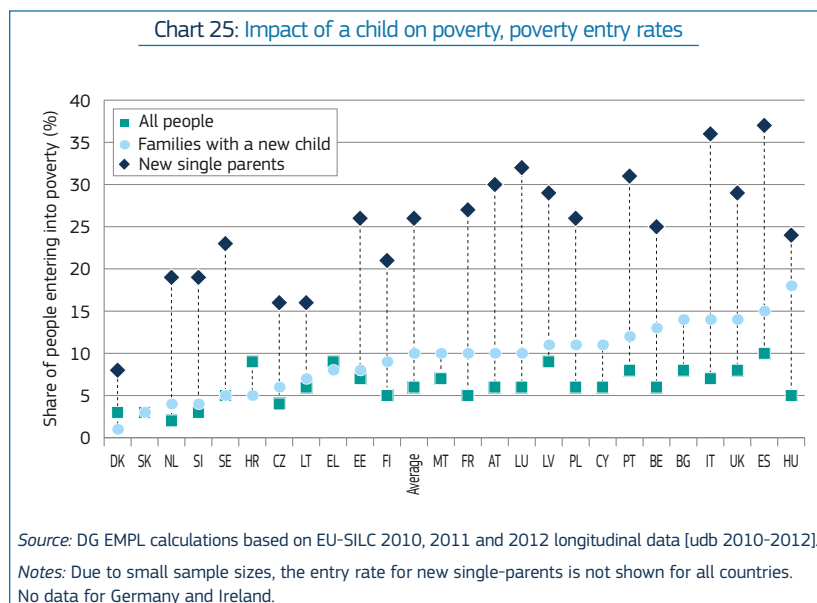
parenthood and non-EU background are associated with a higher poverty risk.

At the institutional level, some factors are connected to higher probability of poverty and in particular an unequal distribution of family benefits and a higher share of female part-time work. A larger share of family benefits in the poorest income quintile and wider participation in childcare, on the other hand, reduce the risk of poverty (see the full model in Annex 2, Table A.11)<sup>(43)</sup>.

<sup>(43)</sup> All clusters in the model together. Controlled for personal characteristics, overall AROPE (share of people at-risk-of-poverty or social exclusion), mothers' employment rate, gender pay gap, family spending, GDP per capita, GDP growth, unemployment rate, Gini coefficient and year.

*Families with a new child have a higher risk of entering poverty than overall population*

Having a new child in the household can impact on poverty entry. Entry rates into poverty can be analysed separately for families with a new child, those who became single parents, and the total population who were not poor the year before, but made a transition to poverty (see Chart 25, based on the same data as in Chart 13). The EU average for poverty transition is 9.6% for families with a new child, higher than the entry rate for the entire population, which stands at 6.0%. However, the highest entry probability is for new single parents, of whom 26.1% entered poverty.



Denmark, Slovakia, Slovenia and the Netherlands have the lowest entry rates for poverty for families with a new child, in some cases even lower than for the total population, while Hungary, Spain and the United Kingdom have the highest entry rates, and in Hungary the difference compared with the total population is especially large (18% compared to 5%).

The entry rate for poverty for families with a new child is correlated with the AROPE (at-risk-of-poverty or social exclusion) rate of children (correlation 0.39). However, it might be more interesting to look at the difference in entry risk between families who have a new child and the total population, together with public family spending. There is no correlation between the two (Chart 26). The countries where the gap is the largest, illustrating the high relative poverty risk associated with having a

child, such as Hungary, Italy and Belgium, also have very different levels of public spending on families as well as different employment rates for mothers (Chart 11).

### 3.4. Main findings

Outcomes for children are an essential factor affecting long-term economic and social developments, and investment in childhood is key to tackling the challenges associated with ageing societies in Europe, both in terms of their future impact on children when they grow older and for the direct impact on families, including the employment of parents and notably mothers.

Our analysis shows that wide provision and use of childcare services is associated with higher rates of mothers' participation in the labour market. In addition, part-time work also increases this likelihood when other things stay constant. However, general

spending on family benefits and the gender pay gap are negatively correlated with mothers' employment.

When focusing on mothers' poverty risk, beyond the expected positive impact of employment on protection against poverty, equal distribution of family benefits and their higher level are connected with a lower poverty risk. All other things being equal, women's part-time work is, however, associated with a higher poverty risk, which illustrates the importance of looking at both the employment and social outcomes simultaneously (as some policies may have some positive impacts on the one side, but not necessarily on the other). In general, a holistic approach to family policies, i.e. taking into account employment, social and child well-being objectives at the same time, appears to be necessary.

The one-breadwinner family model no longer appears sufficient to protect families against poverty. The higher the work intensity in the family, the lower the poverty risk. While other risk factors exist, the labour market situation of parents is a powerful determinant of the conditions in which children grow up and their opportunities in the long run. However, in combination with opening access to the labour market, availability of adequately paid jobs and flexible working time arrangements for both mothers and fathers also matter.

To this end, adequate levels of paid parental leave that maintain attachment to the labour market and ensure financial incentives work, with affordable high-quality childcare services, play a crucial role. However, reducing incentives for mothers to stay home for long periods would also need to be accompanied by work opportunities for mothers of different educational levels, notably for mothers with low skills and immigration backgrounds, who currently have significantly weaker labour market attachment. These are also the families that would benefit the most from good-quality early childhood education programmes.

On the other hand, while full-time work for mothers appears desirable for both individual families and society, it might be associated with a double burden on mothers. In this respect, more gender-balanced working hours would also contribute to better reconciliation of work and family life. Greater flexibility at workplaces would also contribute to addressing the heterogeneity of household situations.

## 4. SOCIAL PROTECTION PROMOTING LONGER WORKING LIVES

This section provides an analysis of key factors impacting the labour market participation of older workers. Indeed, promoting longer working lives is essential to ensure both the sustainability and adequacy of pension systems in a context where structural demographic ageing adds to cyclical deficits to put pressure on the sustainability of social protection systems and in particular of pension systems (see 2015 Ageing and Pension adequacy reports). Furthermore, as highlighted in the first section of this chapter, the share of pension expenditure tended to slightly increase during the crisis.

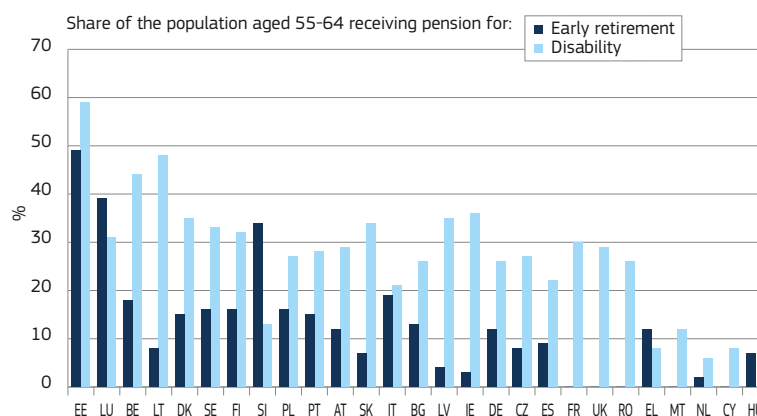
The section first focuses on the role of pension systems in setting adequate work incentives and in particular in restricting early retirement paths (4.1). It then reviews trends in the labour market situation of older workers, focusing in particular on transitions on the labour market (4.2). It then reviews obstacles for longer working lives on the basis of a Cluster analysis (4.3), before deriving estimates of the impact of key drivers of the employment rate of older workers (4.4).

### 4.1. Development of the adequacy and sustainability of pension systems

#### 4.1.1. Pension reforms have improved the long-term fiscal outlook

Reforms of pension systems over the past years and decades have aimed to manage public expenditure on pensions to safeguard their future sustainability and adequacy (see 2015 Ageing and Pension adequacy reports and also Määttä et al., 2014). The 2015 Ageing Report (ECFIN, 2015) puts forward a baseline scenario that despite a rise in the proportion of people aged 65 and over, average public pension expenditure for the EU-28 as a share of GDP would be no higher in 2060 than in 2013. This overall stable evolution of public pension spending over the next 4 decades is explained by substantial decreases in the coverage ratio, i.e. the share of pensioners in the old-age population (-2.4 ppt of GDP) and the benefit ratio i.e. the average relative level of pensions relative to earnings (-2.9 ppt

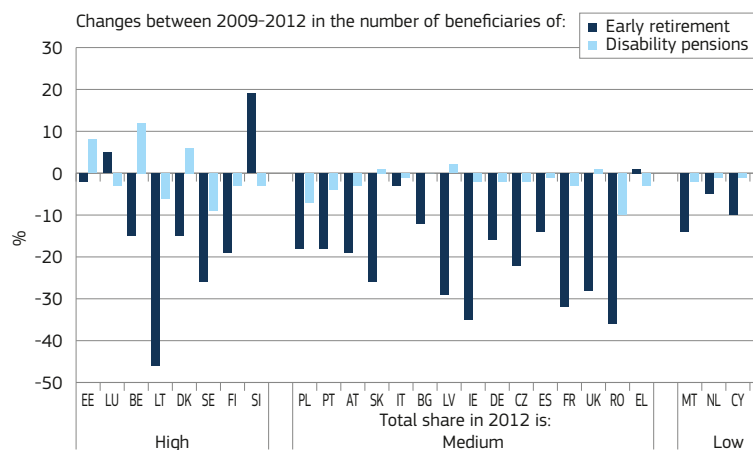
Chart 27: Share of beneficiaries per relevant population by type of pension (2012)



Sources: ESSPROS Pension beneficiaries module. DG EMPL calculations for the share of the population aged 55-64 receiving pension for early retirement or disability.

Notes: Early retirement schemes include anticipated old-age pensions and early retirement due to labour market reasons. Disability pensions include disability and early retirement pensions due to reduced capacity to work. The figures may include double counting as individuals may be beneficiaries of more than one pension.

Chart 28: Change in the share of beneficiaries per relevant population by type of pension, 2009-2012



Sources: ESSPROS Pension beneficiaries module, DG EMPL calculations for percentual changes between 2009 and 2012 in the number of beneficiaries of early retirement or disability pension.

Notes: Early retirement schemes include anticipated old-age pensions and early retirement due to labour market reasons. Disability pensions include disability and early retirement pensions due to reduced capacity to work. The figures may include double counting as individuals may be beneficiaries of more than one pension.

of GDP). The decrease in the coverage ratio is mainly driven by rising exit ages from the labour market, leading to more people around the age of 65 relying on work income, whereas the decrease in the benefit ratio is explained by the fact that most Member States have enacted reforms that are expected to reduce benefit levels from the public pension system in comparison to average wages.

Postponing pensionable ages in line with the increases in pensionable ages could, amongst other measures, mitigate the reduction in replacement rates in most Member States, as longer careers result in better individual pension entitlements. Yet this will depend on the extent to which future cohorts, and in particular women, will be able to achieve fuller careers and on whether older workers

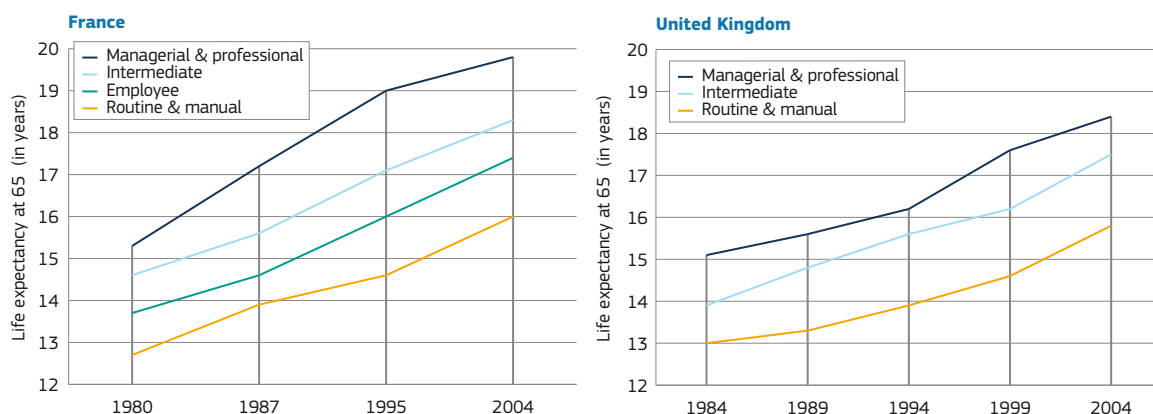
will have sufficiently good health, skills and labour market opportunities to work to higher ages and accrue more pension rights.

#### 4.1.2. An important role of limiting access to early retirement routes

Reforms implemented in the past two decades also include closing down early retirement schemes, tightening job search requirements for older workers, restricting disability benefits to those genuinely in need and increasing the pensionable age (see 2015 Ageing and Pension adequacy reports).

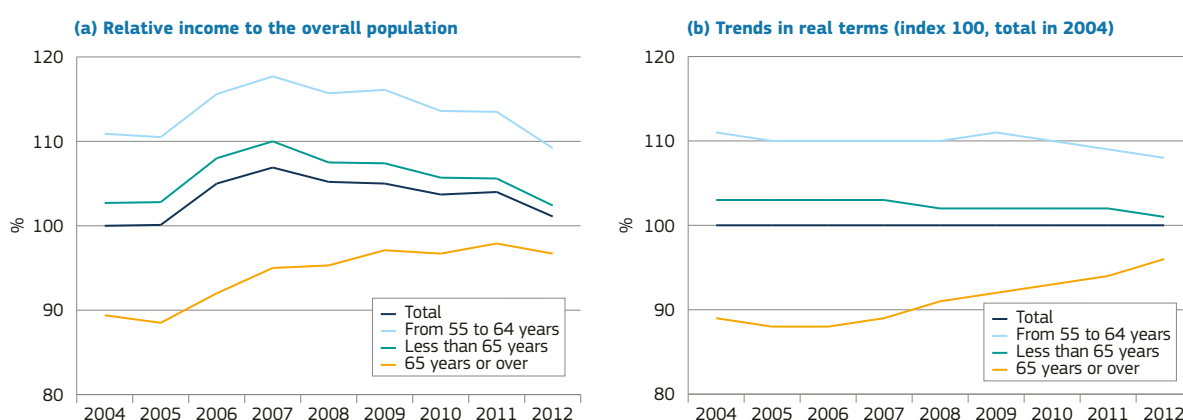
In 2012 in the EU-28, 43.1% of persons receiving an old-age pension took part in an early retirement scheme. This share is

Chart 29: Development of life expectancy at 65 by socio-economic status in France and the United Kingdom



Sources: Blanpain and Chardon, 2011; ONS 2011; and Society of Actuaries 2000, 2014 in OECD Pension Outlook.

Chart 30: Trends in the median income of older people (2004-2012)



Reading notes: (a) Relative median equivalised incomes of the various categories as compared to the overall population; (b) relative median income in real terms (deflated by HICP) as compared to the median income of the total population in 2004.

Sources: EUROSTAT EU-SILC and HICP, DG EMPL calculations.

particularly high in some Member States such as Italy (73.9%), Ireland (68.5%) and Spain (59.9%)<sup>(44)</sup>.

The coverage of early retirement and disability pension schemes varies widely across Member States, with some still making (in 2012) widespread use of early retirement and disability pensions, such as Estonia, Luxembourg, Belgium and Lithuania (Chart 27)<sup>(45)</sup>.

Between 2009 and 2012, the number of beneficiaries of these pensions generally declined and increased only in a few countries, most notably for disability pensions in Belgium and Estonia (Chart 28). Hungary considerably reduced the number of beneficiaries of disability pensions, while in most Member States, the number of beneficiaries of early retirement schemes significantly declined,

most significantly in Latvia, Lithuania, France, Ireland and Romania.

#### 4.1.3. A uniform increase in pensionable age can be regressive

Life expectancy does not necessarily increase uniformly across society: people in some occupations die systematically younger than in others and the socio-economic gaps in life expectancy can actually increase over time (Chart 29). In addition, the evolution of healthy life years is not always parallel with the increase in life expectancy. Therefore, setting a single pensionable age for all may be regressive (2014 OECD Pension Outlook).

#### 4.1.4. Relative income position of older people has generally improved in recent years

This section reviews trends in the income situation of people aged 55-64 and 65 or over (based on EU-SILC), in comparison to incomes of the overall population. The relative income position of older people

has generally improved in recent years in spite of the crisis (also see 2015 Ageing and Pension adequacy reports). On average across the EU-28, the median disposable income of those aged 65 or above stood at 96% of that of the total population in 2012, as compared to less than 90% in the mid-2000s (Chart 30a). Over the same period, the relative position of people aged 55-64 slightly weakened.

This increase in the relative income of older people actually reflects a continuation of the growth of older people's median incomes during the crisis (except in 2012) in a context of a continuous decline in the median income of people aged under 65, including those aged 55-64 since 2008 (Chart 30b).

While these trends are linked to the shift in the structure of social protection expenditure (see Section 2), it can also be noted that in some Member States, incomes of older people can also support younger members in the same household. In particular, in some Member States

<sup>(44)</sup> Source: 2012 LFS ad-hoc module transition.

<sup>(45)</sup> Luxembourg and Lithuania also have a relatively large share of 65 year-olds receiving a survivor's pension, while in Estonia, for instance, the share is small.



(e.g. Slovenia, Lithuania, Luxembourg), income from pensions received by older household members is particularly important in supporting the incomes of the working-age jobless poor receiving less than 10% of their income from social benefits (see ESDE 2012).

## 4.2. Development of the labour market situation of older people

In 2014, the employment rate of older workers (aged 55–64) was 51.8% in the EU-28, just above the Barcelona target of 50%. However, this masks large differences across Member States, with rates as low as 34% in Greece and as high as 74% in Sweden. This section reviews trends in the activity and employment rates of older workers in the crisis before focusing on the specific aspects of older workers' transitions on the labour market.

### 4.2.1. Activity rate and employment rates of older persons continued increasing during the crisis

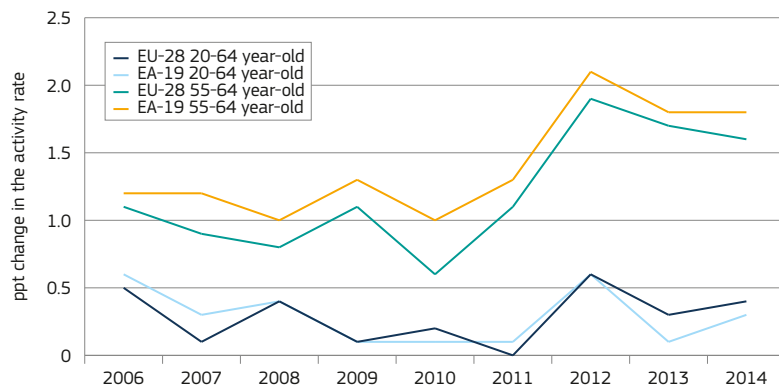
The activity rate of older people (aged 55–64) has been growing to a greater extent than for the overall working-age population, especially during the second phase of the economic crisis, when several pension reforms (increasing the pensionable age, the age for early retirement, length of contribution, etc.) were implemented (Chart 31).

Between 2005 and 2014, the activity rate of older people increased in all Member States but one (Greece), and most significantly in Poland, Slovakia, Austria, Italy, Germany, the Netherlands and Bulgaria (Chart 32). The reduced use of early retirement schemes and disability pensions contributed to this trend, although other factors (including structural reasons) played a role. Indeed, the Member States which experienced the largest drop in the share of beneficiaries of early retirement pensions did not always experience the largest increase in the activity rate of older people and vice-versa.

#### Employment rates also improved

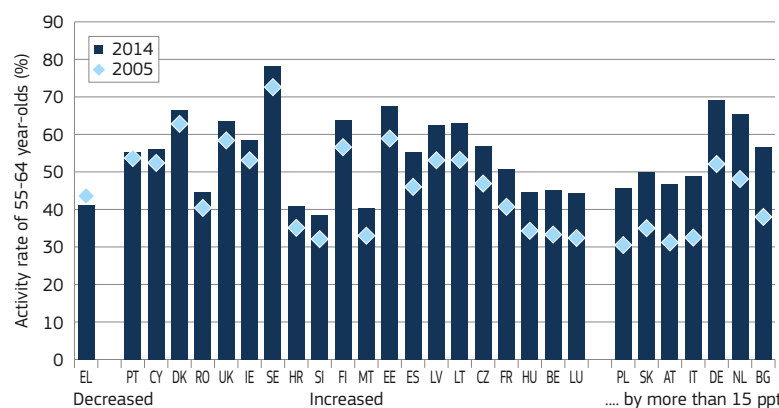
During the crisis, while the overall employment rate dropped both in the EU-28 and EA-19, the employment rate of older workers kept growing although

Chart 31: Trend of the activity rate (ppt) of older workers (55–64) and core active-age population (20–64) in the EU-28 and EA-19 (2006–2014)



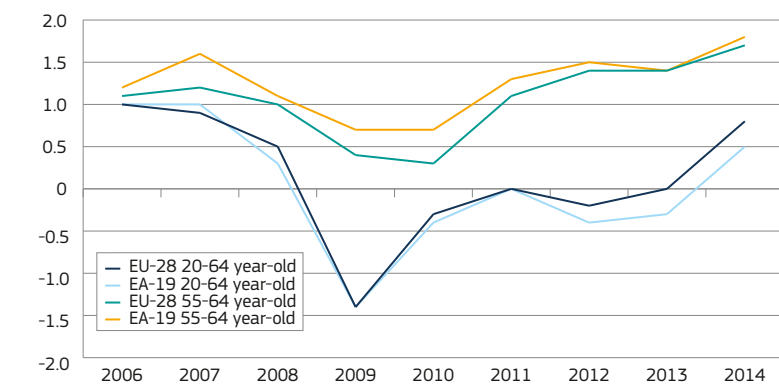
Source: LFS [lfsa\_argan].

Chart 32: Trends in activity rates of 55–64 in Europe (2005–2014)



Source: LFS [lfsa\_argan].

Chart 33: Change in the employment rate (ppt) of older workers (55–64), EU-28 (2006–2014)



Source: Eurostat [lfsa\_argan].

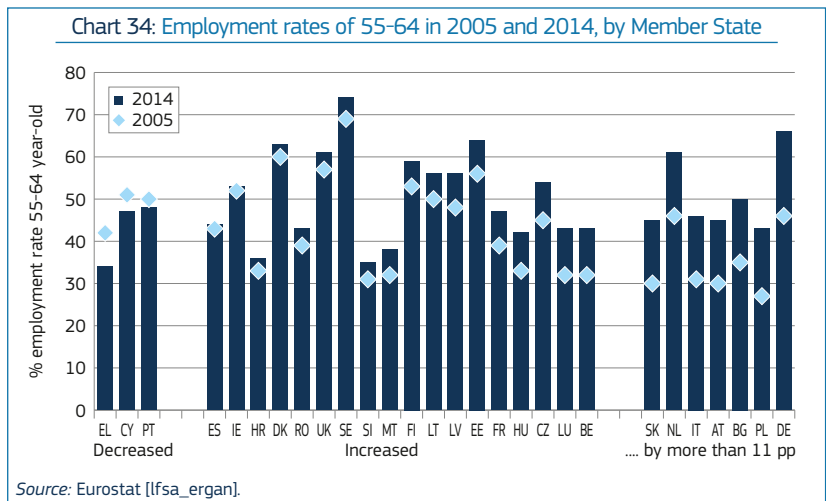
at a moderate pace. Since 2012 the employment rate of older workers has been growing at a faster pace than before the crisis, while the overall employment rate only resumed growing significantly in 2014 (Chart 33).

The employment rate of older workers has generally increased in the past decade, with a few exceptions (Greece, Cyprus and Portugal), and considerably in Germany, Poland, Bulgaria, Austria,

Italy, the Netherlands and Slovenia (Chart 34).

### 4.2.2. Long-term unemployment is still more common amongst older people

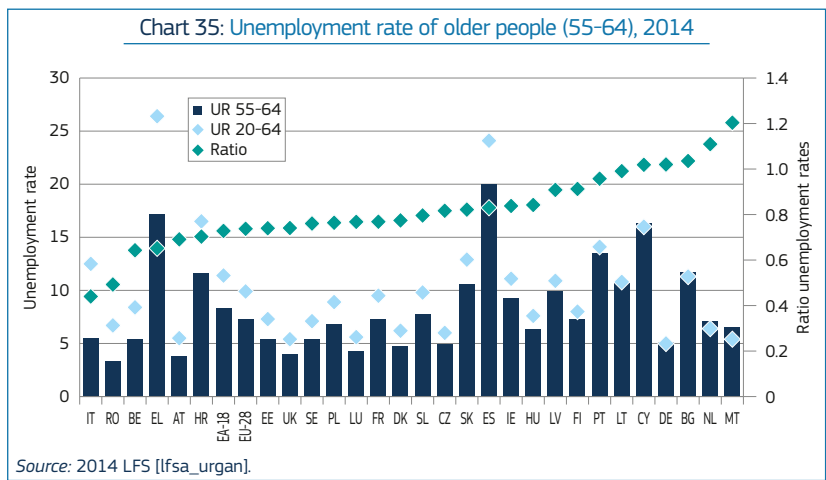
In most Member States, the unemployment rate of older people is lower than for the population aged 20–64, especially in Italy, Romania, Belgium, Greece, Austria and Croatia, while in



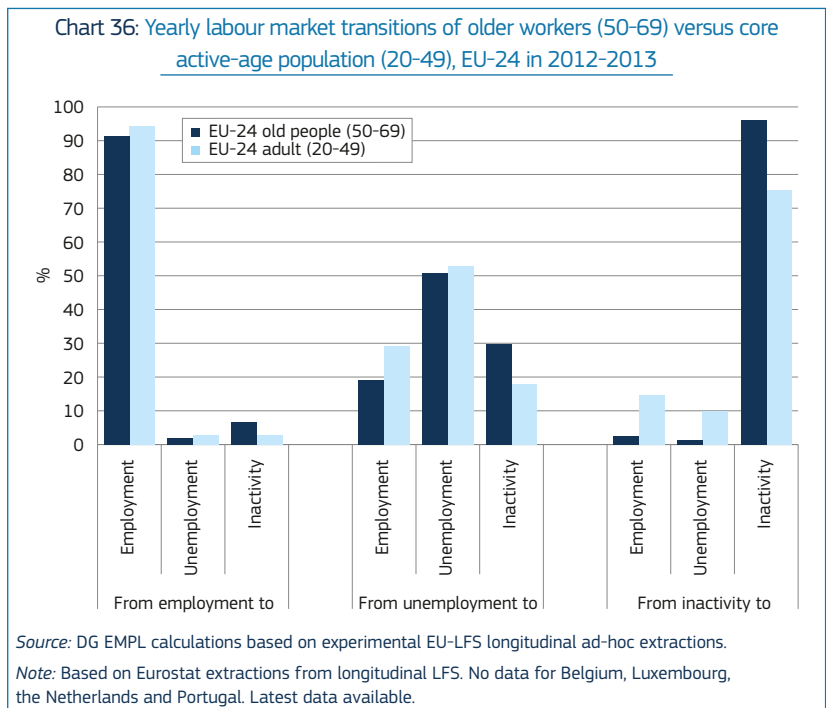
others (Cyprus, Germany, Bulgaria, the Netherlands and Malta) unemployment particularly affects older people slightly more than the 20-64 age group (Chart 35). A distinguishing feature of unemployment among older people is the duration of their unemployment. Indeed, the share of long-term unemployment is higher among older people than among younger age groups (see Chapter II.2).

**4.2.3. Labour market transitions are less dynamic for older people**

The transition rate of older people (aged 50-69) from employment to employment is slightly lower (by around 3 percentage points) than for younger age groups (20-49), reflecting higher transitions to inactivity (by around 4 ppt), while transitions to unemployment are slightly lower (by around 1 ppt, see Chart 36).



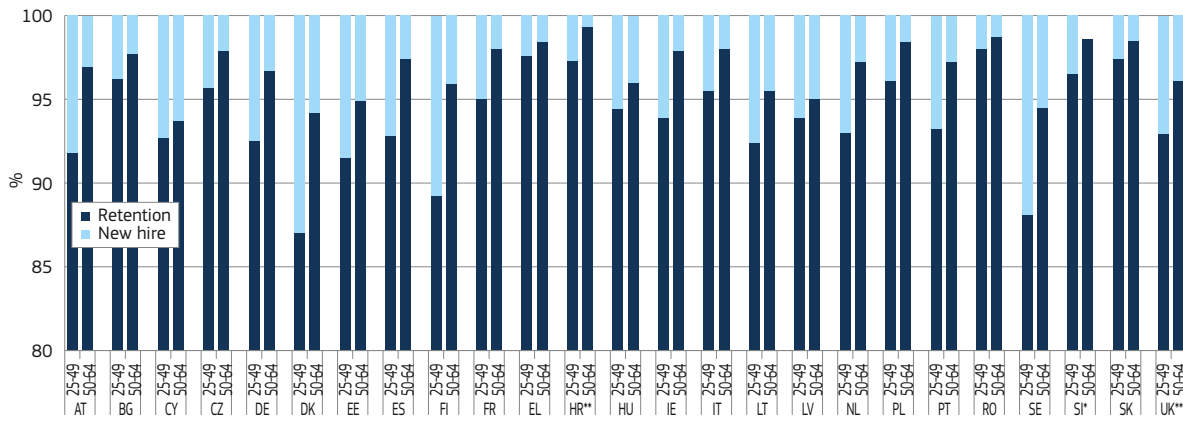
Once older people become unemployed or inactive, it is more difficult for them to get back to employment. Once unemployed, they are more likely to become or remain inactive (by around 12 ppt, see Chart 36) and less likely to return to employment (by around 10 ppt). Furthermore, older people remain unsurprisingly much more frequently in inactivity than others once they have entered into it.



*A less active rotation within employment for older workers...*

A key factor determining longer working lives for older people is dynamism of the labour market. This can be captured by the share of workers who remain on the same job or who change job over 1 year. The share of employed older workers who stay in the same job is higher than that of younger workers (Chart 37).

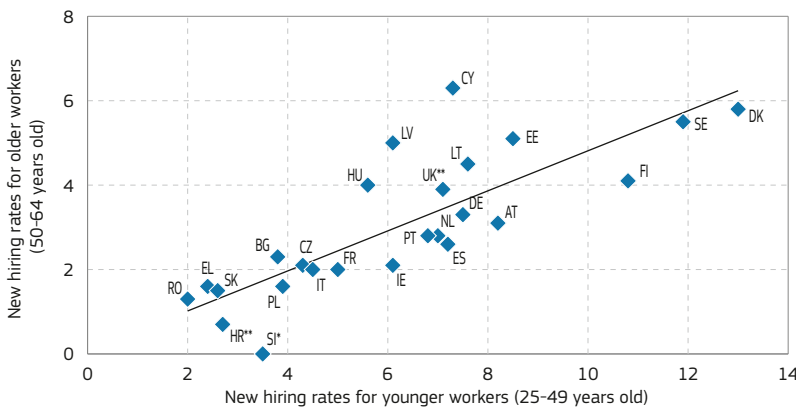
Chart 37: Transitions of older workers (50-64) within employment by Member State, 2013-2014



Source: DG EMPL calculations based on experimental EU-LFS longitudinal ad-hoc extractions.

Note: No data for Belgium, Luxembourg and Malta and the United Kingdom. Latest data available. \* Data for new hires have a limited reliability in Slovenia and Croatia (for the age group 50-64 years old). In addition, France has breaks in the series. \*\* Due to the limited size of the longitudinal sample in 2013-2014 data for UK refers to 2010-2011 and for Croatia to 2012-2013.

Chart 38: New hiring rates for older workers (50-64) and younger ones (25-49)



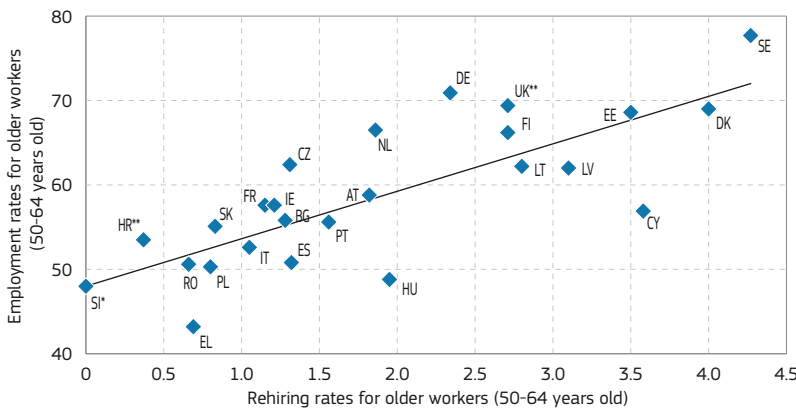
Source: DG EMPL calculations based on experimental EU-LFS longitudinal ad-hoc extractions.

Note: No data for Belgium, Luxembourg, and Malta. Latest data available. \* Data for new hires have a limited reliability in Slovenia and Croatia (for the age group 50-64 years old). In addition, France has breaks in the series. \*\* Due to the limited size of the longitudinal sample in 2013-2014 data for UK refers to 2010-2011 and for Croatia to 2012-2013.

Conversely, the share of older workers who are working in a new job is relatively low and lower than for younger people. The share of people working in 2 consecutive years and currently working in a new job ranges from 1% to 6% for older people and from 2% to 13% for younger workers (see Chart 38).

In some Member States (e.g. Sweden, Denmark) new hiring rates of older workers are relatively high compared to other European countries though they remain low compared to younger workers. Comparatively high unemployment and low transition rates for older workers in countries such as Greece, Romania or Slovakia stress the need to develop labour markets for older workers in order to promote longer working lives effectively.

Chart 39: Rehiring rates in employment for 50-64 year olds and employment rate of 50-64 year olds

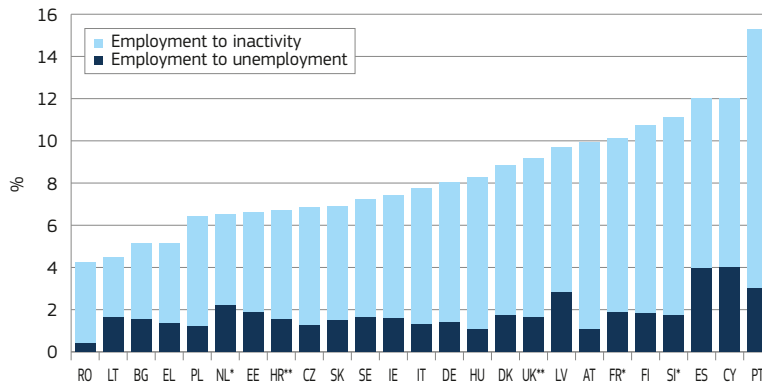


Source: DG EMPL calculations based on experimental EU-LFS longitudinal ad-hoc extractions.

Notes: No data for Belgium, Luxembourg, and Malta. Latest data available. \* Data for new hires have a limited reliability in Slovenia and Croatia (for the age group 50-64 years old). In addition, France has breaks in the series. \*\* Due to the limited size of the longitudinal sample in 2013-2014 data for UK refers to 2010-2011 and for Croatia to 2012-2013. Rehiring rates expressed as a share of the total number of people in the age bracket 50-64.

Actually when also taking into account the employment rate for older workers (see Chart 39), there appears to be a strong link between the rehiring rate (expressed as a share of the population aged 50-64) and the overall employment rate of 50-64 year old people, with Member States experiencing rates lower than 1% reaching employment rates of 50% for the 50-64 population while those with rates above 3% acknowledging levels around 70% or above (with the exception of Cyprus).

Chart 40: Transitions of older people (50-69) from employment by Member State, 2013-2014



Source: DG EMPL calculations based on experimental EU-LFS longitudinal ad-hoc extractions.

Notes: No data for Belgium, Luxembourg, and Malta. Latest data available. Member States sorted by ascending levels of transitions out of employment. \*Data have a limited reliability for Slovenia. In addition, data have breaks in the series for France, the Netherlands and UK. \*\* Due to the limited size of the longitudinal sample in 2013-2014 data for UK refers to 2010-2011 and for Croatia to 2012-2013.

... and a lower probability of finding a new job when becoming unemployed

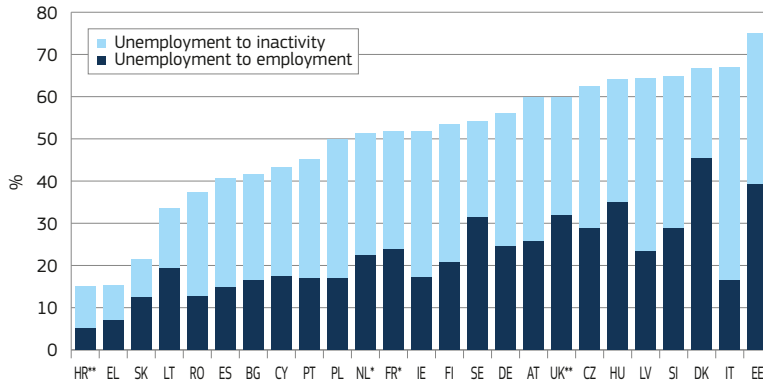
Another key factor determining longer working lives for older people is the probability of finding a new job if they lose their previous job. Member States differ significantly in the levels of transitions out of employment of 50-69 (see Chart 40), with high flows towards inactivity in some Member States (in particular Portugal) or unemployment (in particular Portugal, Spain, Cyprus, Latvia and the Netherlands).

Once unemployed, older workers are more likely to become inactive, especially in Greece, Slovakia and Romania (Chart 41) and less likely to return to employment. In some Member States, older people have a relatively high risk of becoming unemployed (Spain and Cyprus), while in others, unemployed people often move into inactivity (especially in Italy and Latvia) (Chart 41).

In this context, Member States also differ greatly in the dynamism of labour markets for older unemployed people, with Greece having the lowest transition from unemployment back to employment (less than 7%) and Denmark the highest (above 40%).

Member States also differ in the extent to which ageing affects this probability for older people, with Italy having the smallest difference between old age groups. Member States with lower transition rates from unemployment to employment tend to have a more homogenous

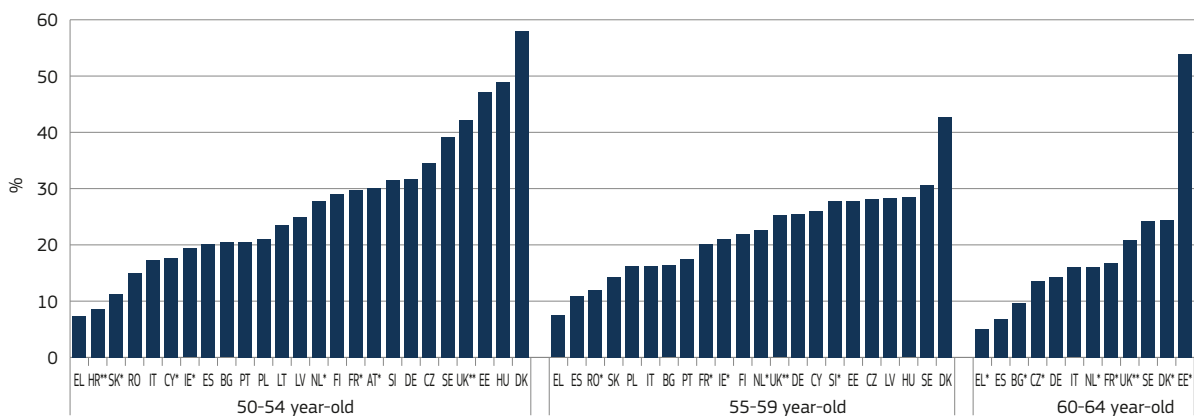
Chart 41: Transitions of older people (50-69) from unemployment by Member State, 2013-2014



Source: DG EMPL calculations based on experimental EU-LFS longitudinal ad-hoc extractions.

Notes: No data for Belgium, Luxembourg and Malta. Latest data available. Member States sorted by ascending levels of transitions out of employment. \*Data have breaks in the series for France, the Netherlands, Croatia and UK. \*\* Due to the limited size of the longitudinal sample in 2013-2014 data for UK refers to 2010-2011 and for Croatia to 2012-2013.

Chart 42: Transition rates from unemployment to employment for older people by age group, 2013

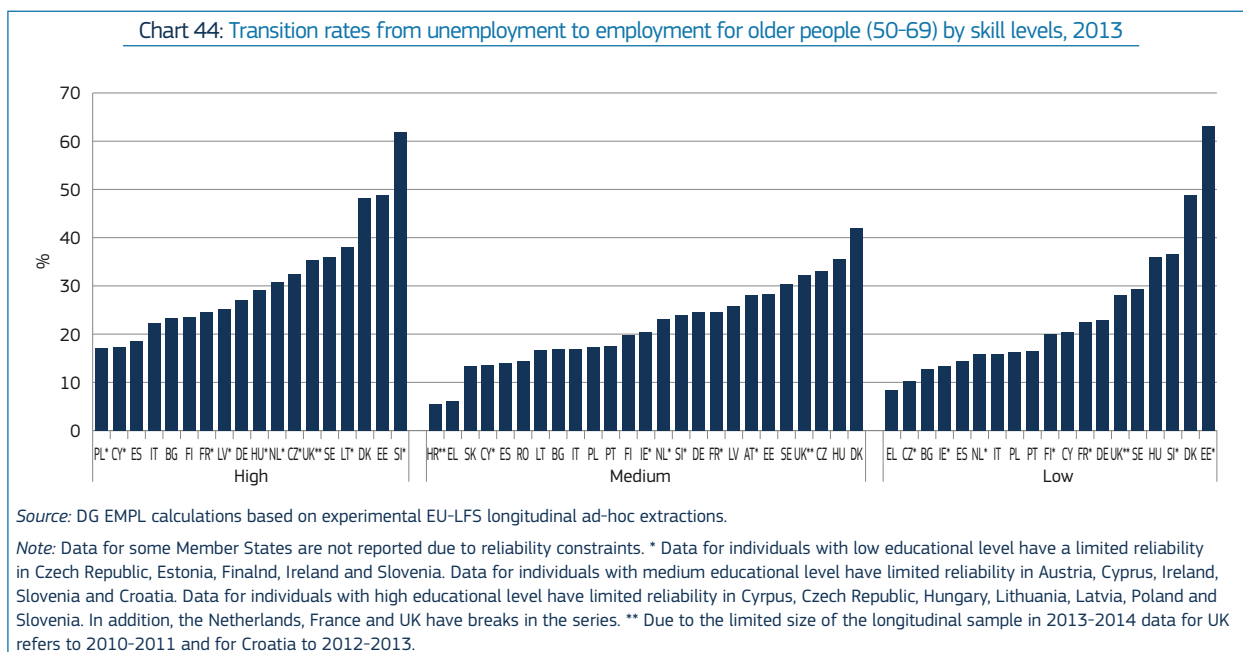
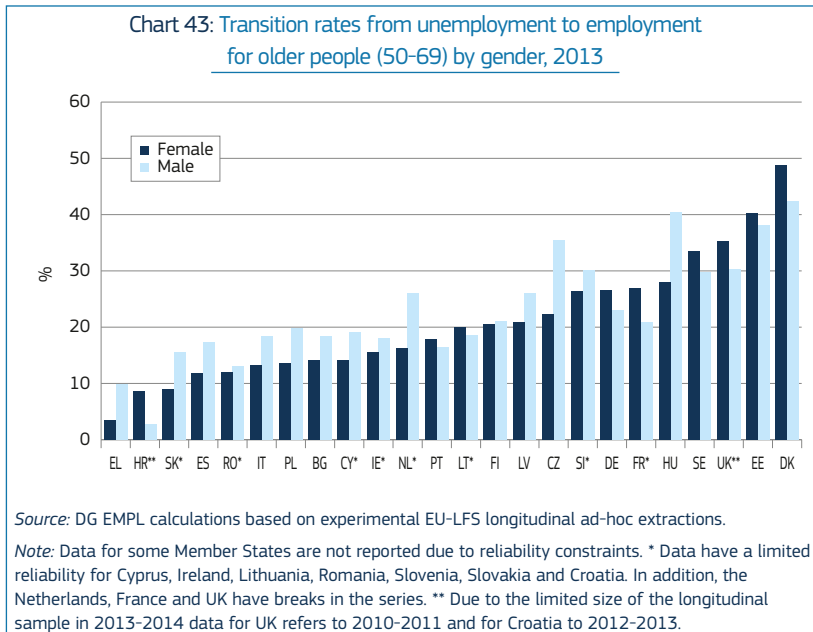


Source: DG EMPL calculations based on experimental EU-LFS longitudinal ad-hoc extractions.

Note: Data for some Member States are not reported due to reliability constraints. \* Data in the age group 50-54 years have a limited reliability for Croatia, Slovakia, Cyprus, Ireland and Austria. Data in the age group 55-59 years old have a limited reliability for Romania, Ireland and Slovenia. Data in the age group 60-64 have a limited reliability for Greece, Bulgaria, Czech Republic, UK, Denmark and Estonia. In addition, the Netherlands, France and UK have breaks in the series. \*\* Due to the limited size of the longitudinal sample in 2013-2014 data for UK refers to 2010-2011 and for Croatia to 2012-2013.

distribution among different older age groups (Chart 42).

In most Member States (for which we have reliable data) the transition rates from unemployment to employment for females are lower than for males, although in a number of Member States (especially in Denmark and France) they are higher (Chart 43). Individuals with a higher level of education have a higher probability of finding a job if unemployed than those with lower education levels, in particular in countries like Bulgaria, Estonia and the Netherlands, while in other countries (e.g. Denmark and France) the level of education is less important (Chart 44).



### 4.3. Where, why and how older people work – a mapping of Member States

#### 4.3.1. Some Member States have better labour market outcomes for older people, while there may be a trade-off with social outcomes

A comparison of different countries' experiences can be useful in identifying which characteristics are associated with better outcomes (Valia-Catanda et al., 2014). In this section, Member States are grouped on the basis of a Cluster analysis based on three main dimensions, before reviewing the different main characteristics according to the results of the

Cluster analysis. The three main dimensions considered are the following<sup>(46)</sup>:

- the ageing pressure on social protection spending as measured by the old age dependency ratio and by social expenditure on old age and survivors as a share of total expenditure;
- Europe 2020 and MIP broadly-relevant labour market outcomes that are specific for older people (such as activity, employment and unemployment ratio<sup>(47)</sup>);

- Europe 2020 broadly-relevant social outcomes for older people (risk of poverty or social exclusion, inequality<sup>(48)</sup>) and the adequacy of pensions as measured by the ratio between the median income of retired people over 65 and employed people over 18.

The Cluster analysis results in five different groups (Chart 45), characterised as follows:

- Cluster 1 (Germany, Sweden, Finland, the Netherlands, Denmark, United Kingdom) with good employment and social outcomes and a moderate relative income of older people;

<sup>(46)</sup> For details of the methodology of the Cluster analysis, which is common with the former section, see ESDE 2011 (p. 238).

<sup>(47)</sup> We use the unemployment ratio between the population aged 55-64 and 20-64 to avoid cyclical effects on unemployment affecting the analysis of the structural characteristics of the old age population.

<sup>(48)</sup> Inequality is measured by the income quintile share ratio S80/S20.

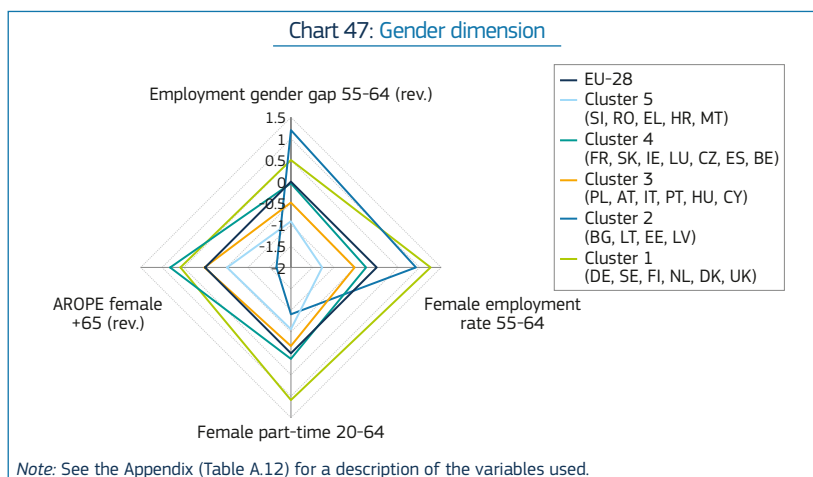
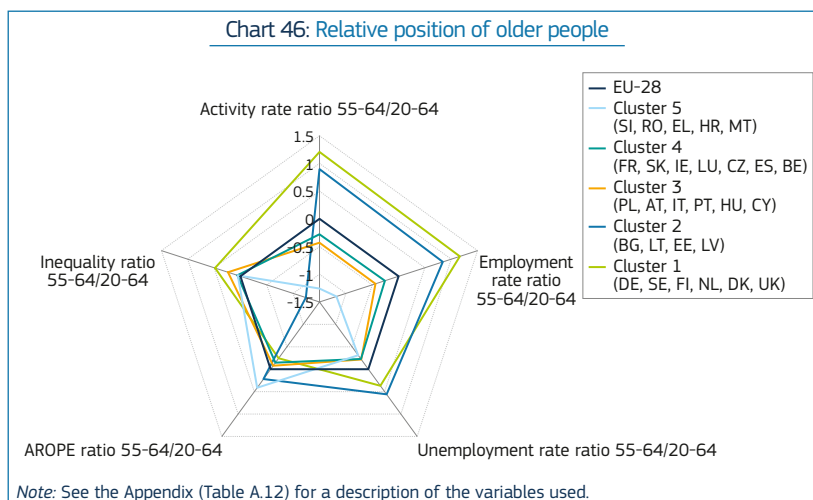
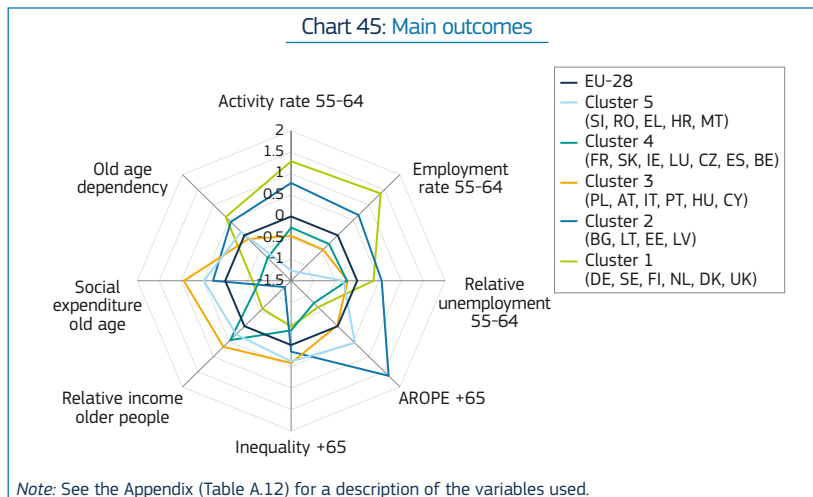


- Cluster 2 (Bulgaria, Lithuania, Estonia, Latvia) with good employment and very low social outcomes;
- Cluster 3 (Poland, Austria, Italy, Portugal, Hungary, Cyprus) with intermediate employment and social outcomes, good relative income of older people and social expenditure skewed towards pensions;
- Cluster 4 (France, Slovakia, Ireland, Luxembourg, Czech Republic, Spain, Belgium) with intermediate employment and very good social outcomes in a context of no particular ageing pressure;
- Cluster 5 (Slovenia, Romania, Greece, Croatia, Malta) with low employment and social outcomes.

### 4.3.2. Good performance does not always reflect a better position of older people

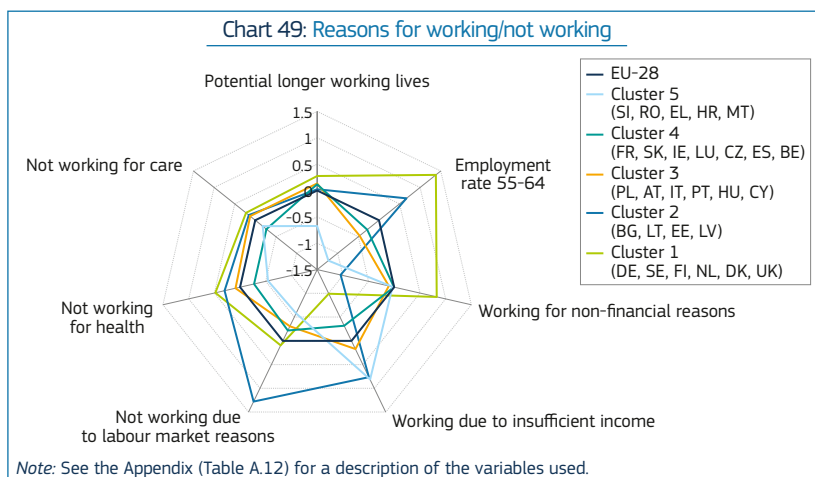
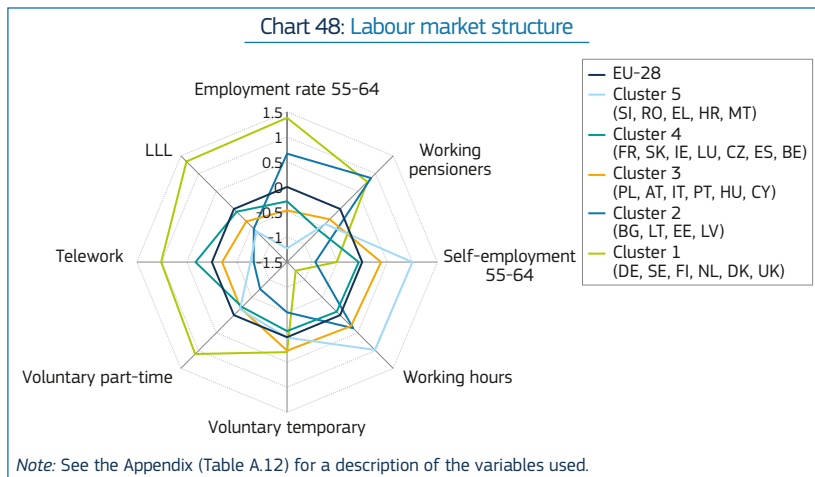
Good performance of some Member States in terms of elderly outcomes does not always reflect a relatively positive position for older people, but rather an overall good performance for the population as a whole. For instance, the unemployment rate and AROPE of older people is higher than for the overall working-age population in Germany and the Netherlands, which have relatively good employment and social outcomes for elderly people, compared to other EU countries (including a relatively low unemployment rate). On the other hand, in some of the countries with intermediate/low employment and social outcomes for the elderly, the elderly are relatively better off when compared with younger age groups (in particular in Italy, Romania and Slovakia) (Chart 46 and Appendix). To summarise, the relative position of older workers with respect to younger age groups is:

- Good for employment outcomes, but not always good for social outcomes and unemployment in Cluster 1;
- Good for employment outcomes and inequality, but not always good for unemployment and poverty and social exclusion in Cluster 2;
- Intermediate for employment outcomes and in some cases considerably



- better social and unemployment outcomes in Cluster 3;
- Intermediate for employment outcomes and in some cases considerably better social and unemployment outcomes in Cluster 4;
- Low for employment outcomes, with often a better situation in terms of unemployment in Cluster 5.

A gender perspective of outcomes for older people shows that the performance of clusters is as for the main outcomes with minor changes only. In particular, social outcomes for older women are not as good as overall in Cluster 1 (especially in Sweden and Finland), while in terms of the employment gender gap for older people, Cluster 2 performs the best (Chart 47).



### 4.3.3. Older people like to work longer if they work less, more flexibly and continue to be trained

In terms of labour market structure (Chart 48):

- Cluster 1 (Germany, Sweden, Finland, the Netherlands, Denmark, United Kingdom) is characterised by a very large share of working pensioners, very high participation in lifelong learning (LLL), very large share of telework and voluntary part-time work, very short working hours and a low share of self-employment;
- Cluster 2 (Bulgaria, Lithuania, Estonia, Latvia) is characterised by a very large share of working pensioners, low participation in LLL, low share of telework, voluntary part-time, intermediate working hours and a very low share of self-employment;
- Cluster 3 (Poland, Austria, Italy, Portugal, Hungary, Cyprus) is characterised by a low share of working pensioners, low participation in LLL,

low share of telework, voluntary part-time, high temporary and involuntary temporary contracts, intermediate working hours and a high share of self-employment;

- Cluster 4 (France, Slovakia, Ireland, Luxembourg, Czech Republic, Spain, Belgium) is characterised by a low share of working pensioners, low participation in LLL, low share of voluntary part-time, but in most cases a large share of telework;
- Cluster 5 (Slovenia, Romania, Greece, Croatia, Malta) is characterised by a low share of working pensioners, low participation in LLL, low share of telework, voluntary part-time, long working hours and a high share of self-employment.

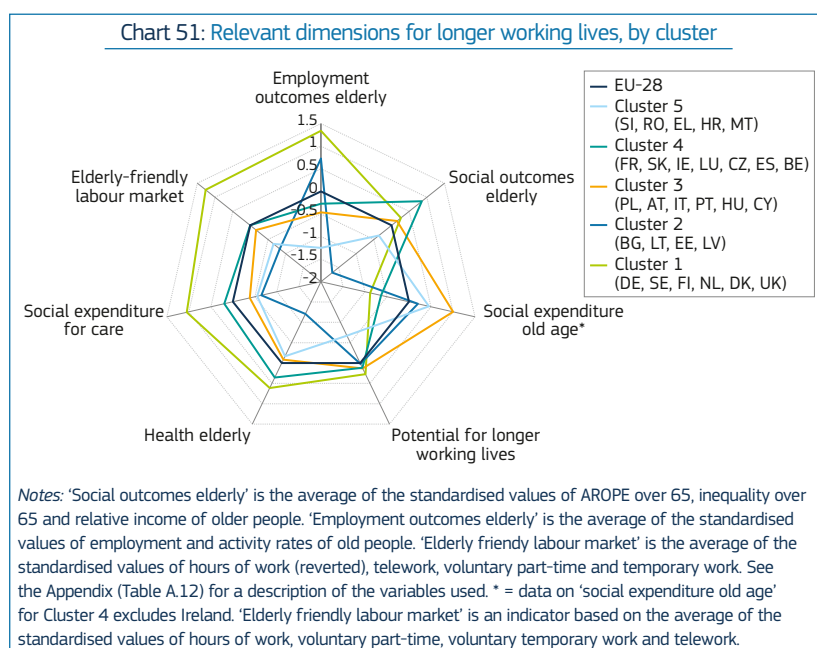
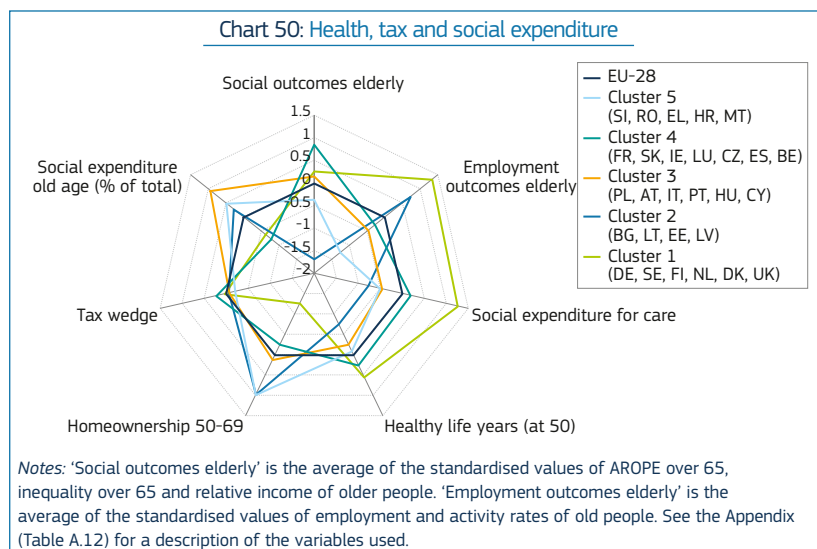
### 4.3.4. Working for non-financial reasons increases the potential for longer working lives

Chart 49 shows the position of each Cluster in terms of the share of older people who would have liked to work

longer (potential for longer working lives), the reasons for having stopped working (health, labour market) and the reasons for continuing working while receiving an old-age pensions for those working, split into financial and non-financial reasons (Appendix). The potential for longer working lives is considerable in Portugal, Spain, Estonia, Denmark and the United Kingdom (above 40% of people receiving old-age pensions).

The main reason for leaving work is reaching eligibility for a pension in most Member States, especially in Bulgaria, the Czech Republic, Malta and Slovenia (above 80%), while not working for lack of care services is relatively important in the United Kingdom, Cyprus, Ireland, Romania (above 7%). However, countries differ considerably in the other reasons for working or not working while receiving an old-age pension:

- Cluster 1 (Germany, Sweden, Finland, the Netherlands, Denmark, United Kingdom) has a large share of pensioners working for non-financial reasons, considerable importance of health for quitting work (due to the selection of non-working older people in these Member States, which is lower than in others);
- Cluster 2 (Bulgaria, Lithuania, Estonia, Latvia) has a large share of pensioners working for financial reasons and not working because they could not find a job and for health reasons;
- Cluster 3 (Poland, Austria, Italy, Portugal, Hungary, Cyprus) has a relatively low share of older people not working because they could not find a job;
- Cluster 4 (France, Slovakia, Ireland, Luxembourg, Czech Republic, Spain, Belgium) has a relatively low share of older people working for financial reasons and not working for health reasons;
- Cluster 5 (Slovenia, Romania, Greece, Croatia, Malta) has a large share of pensioners working for financial reasons (due to the selection of the fewer pensioners working), while health, labour market and service care do not seem to be important reasons for not working as the main reasons remain having reached pensionable age.



### 4.3.6. A summary of relevant dimensions for longer working lives

Chart 51 summarises the various dimensions discussed above and the performance of clusters in terms of employment and social outcomes:

- Cluster 1 (Germany, Sweden, Finland, the Netherlands, Denmark, United Kingdom) associates good employment and social outcomes with older person-friendly labour markets, good health and high expenditure on care services;
- Cluster 2 (Bulgaria, Lithuania, Estonia, Latvia) has good employment outcomes, despite a non-favourable labour market for older people, poor health and low expenditure on care, with very poor social outcomes;
- Cluster 3 (Poland, Austria, Italy, Portugal, Hungary, Cyprus) has intermediate employment outcomes with below average labour market, care services and health conditions, while high social expenditure on pensions is associated with better than average social outcomes;
- Cluster 4 (France, Slovakia, Ireland, Luxembourg, Czech Republic, Spain, Belgium) has very good social outcomes, with below-average expenditure on pensions;

### 4.3.5. Good health and a balanced social expenditure

Other dimensions represent important factors for explaining longer working lives (see DRIVERS, 2015), such as health, wealth, social expenditure and taxation (more details in the Appendix). Indeed, older people may not continue working because they have to take care of relatives, they are in bad health or have fewer financial incentives because of high levels of their own wealth, the good relative income of older people or a high tax wedge. Chart 50 shows that:

- Cluster 1 (Germany, Sweden, Finland, the Netherlands, Denmark, United Kingdom) is characterised by high expenditure on care services (child and long-term care), good health and low outright homeownership;

- Cluster 2 (Bulgaria, Lithuania, Estonia, Latvia) is characterised by high weight of pensions in total social expenditure, poor health and low expenditure on care services;
- Cluster 3 (Poland, Austria, Italy, Portugal, Hungary, Cyprus) is characterised by poor health, low expenditure on care services and high expenditure on pensions;
- Cluster 4 (France, Slovakia, Ireland, Luxembourg, Czech Republic, Spain, Belgium) is characterised by high expenditure on care services and low expenditure on pensions;
- Cluster 5 (Slovenia, Romania, Greece, Croatia, Malta) is characterised by low expenditure on care services, high expenditure for pensions and high outright homeownership.

- Cluster 5 (Slovenia, Romania, Greece, Croatia, Malta) has insufficient social outcomes, despite high expenditure on pensions, and an unfavourable labour market with poor expenditure on care associated with poor employment outcomes, worsened by a lack of potential for longer working lives.

Chart 51 shows two models of successful longer working lives, as represented by Cluster 1 and 2. Although Cluster 2 has worse social outcomes than Cluster 5, the similarity of some dimensions suggests some room for improvement in terms of employment outcomes in Cluster 5. The next section (regression) will present the importance of different factors in explaining employment and social outcomes for older people and help to explain why, for example, Malta does not perform as well as Latvia in terms of employment outcomes.

#### 4.4. Socio-demographic and policy factors and longer working lives

This section reviews in a consistent manner various factors, including institutional

characteristics, which are linked to longer working lives (see Appendix). As underlined by the analysis of the transition rates of older people on labour markets, on the one hand workers wish to retire early and on the other hand employers

may be reluctant to hire older workers (see also Vodopivec and Dolenc, 2008). New hires of older people are relatively scarce and the main reason for leaving a job is often the fact that pensionable age has been reached.

Table 6: Regression coefficients of socio-demographic and institutional factors on the employment rate of older people (50-69)

	Women	Men	Women	Men	Women	Men
<b>Year</b>	0.345**	0.009	0.370**	0.03	0.199	-0.042
<b>Population growth</b>	-0.399	-0.658	-0.255	-1.479**	-2.838**	-1.965**
<b>Reference age 50-54</b>						
<b>Age 55-59</b>	-14.983**	-11.413**	-14.691**	-11.281**	-15.161**	-11.262**
<b>Age 60-64</b>	-43.146**	-40.702**	-42.703**	-40.934**	-43.722**	-40.696**
<b>Age 65-69</b>	-58.653**	-62.778**	-59.356**	-63.238**	-59.359**	-62.650**
<b>Reference education: low</b>						
<b>Education: medium</b>	10.125**	7.904**	10.542**	8.230**	10.308**	7.987**
<b>Education: high</b>	24.984**	20.491**	24.965**	20.701**	24.710**	20.687**
<b>Healthy life years</b>	-0.351**	0.293**	-0.675**	0.460**		
<b>Working hours</b>	-0.499**	-0.486**	-0.425**	-0.299*		
<b>Self-employment</b>	-0.410**	0.190**	-0.053	0.220**		
<b>LLL</b>			0.671**	0.444**		
<b>Relative income older people</b>	-0.319**	-0.209**	-0.245**	-0.200**	-0.321**	-0.141**
<b>Family expenditure cash</b>	-0.505**	-0.311**			-0.131	-0.611**
<b>Family expenditure in-kind</b>	0.216**	0.170**			-0.004	0.017
<b>Tax wedge</b>	-0.095*	-0.270**	-0.071	-0.284**	-0.250**	-0.461**
<b>Homeownership</b>					-0.175**	-0.125**
<b>R2 (adjusted)</b>	0.807	0.869	0.827	0.876	0.804	0.867
<b>Number of observations</b>	2169	2307	2372	2477	1902	1998

Notes: Other controls included in the regressions are the employment rate of 25-49 year-olds, the unemployment rate of 50-64 year-olds and GDP growth. \* for statistical significance at 5% level, \*\* at 1% level. The regressions are based on combinations of age group, gender, education level for each Member State and year from 2004 to 2012. See Appendix for a description of the variables used.

##### 4.4.1. Demographic factors and education levels are the most important driver of longer working lives

Structural changes in the workforce, notably age, gender, sector of employment and educational achievement, have contributed considerably to explaining the increase in the employment rate of older workers over the past decade. Some of these structural changes bring lasting and sustainable increases in the employment rate across all age groups and gender (for instance, the service sector accounts for most of the recent job opportunities for older workers). In addition, the past progress in educational attainment has meanwhile reached the 50+ cohorts and results in higher

activity and employment rates among older people.

Other changes influencing the past progress in older workers' employment rates have only been transitional. Notably, cohorts passing through the 55-64 year-old age bracket shift its composition by increasing (decreasing) the share of younger (older) cohorts within the bracket, thus influencing its overall employment rate to some extent. This cohort effect has been helping some EU countries since the start of this decade, whereas others have been facing a demographic head-wind. For instance, in Germany, a quarter of the shift in the employment rate of workers aged between 50 and 69 years since 2002 has been due to a cohort effect (Chart 52,

demographic component curve), while France would have doubled its increase without the cohort effect.

For the EU as a whole, this demographic cohort effect in the recent past was negative, but only very modestly (Chart 52, demographic component curve). On the contrary, the positive impact of educational progress on the employment rate of people aged between 50 and 69 was much stronger, accounting for about half of the increase in the EU's employment rate since 2002. In France and other EU countries this education effect dominates the observed gains in older people's employment.

Furthermore, this positive effect will continue in the coming years as past

Chart 52: Educational component in employment (50-69 year-olds)

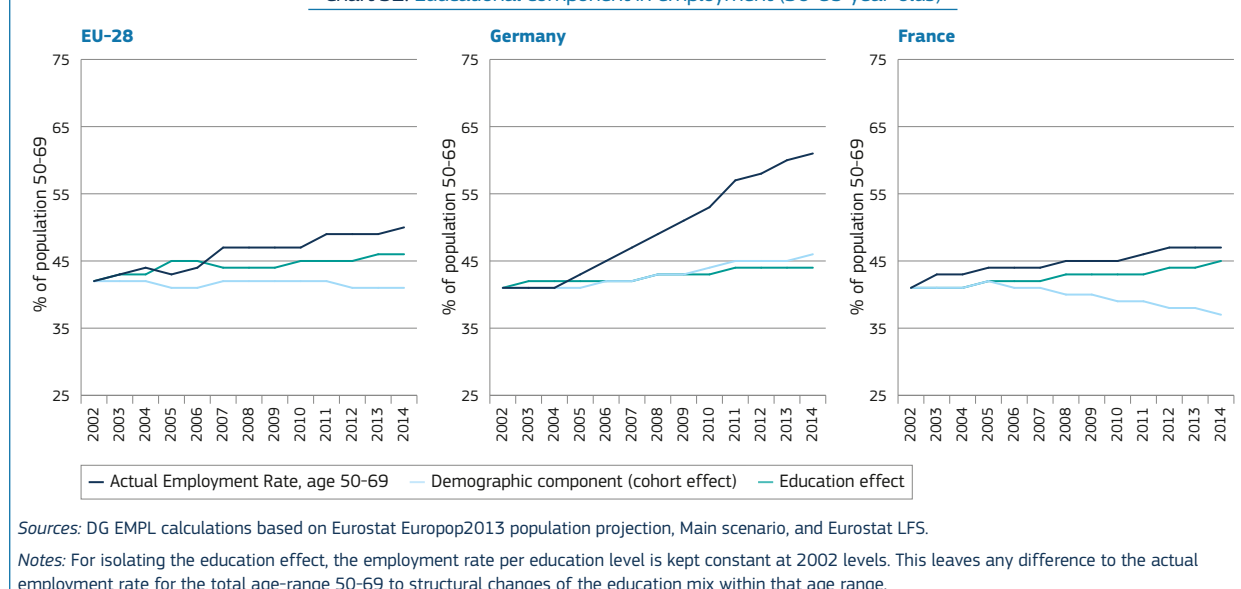
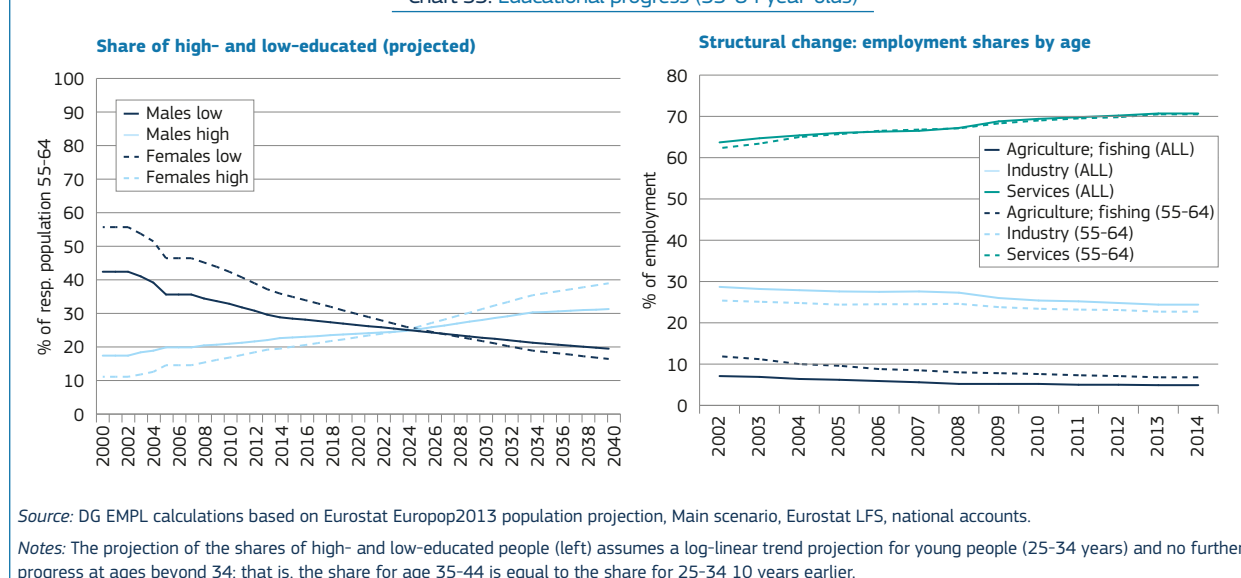


Chart 53: Educational progress (55-64 year-olds)



decades' educational progress among young people gradually impacts the older cohorts. It also has a strong gender component (as women's educational gains were stronger than those of their male peers).

Unlike the temporary cohort effect, educational progress reflects long-lasting structural change. The EU has seen a strong shift of employment away from the primary sector, mainly towards services. It can be expected that services will continue to be a job-creating engine for older workers and that labour demand for higher qualifications will increasingly meet a better-qualified labour supply, including at an older age (Chart 53).

Assuming the shares of high- and low-educated older people develop as currently projected, this would imply that the EU-wide education effect could generate

additional active population of some 3 million people aged between 55 and 64 between now and 2040, an increase of 8% compared to today's employment levels of the same age group, or around 5 ppt of the employment rate.

#### 4.4.2. Shorter working hours and lifelong learning

The option to work part-time, for a reduced number of hours or from home, together with other factors, can favour longer working lives. While older people have a preference for working shorter hours, non-standard working hours are common in some Member States (such as those in the countries in Cluster 1, see above) but not in others.

The analysis confirms the importance of older person-friendly labour markets for longer working lives, including shorter

working hours and a larger participation in lifelong learning, as successfully shown by the Member States in Cluster 1 (see above). The employability of older workers is improved by participation in lifelong learning<sup>(49)</sup>, and this appears to be especially significant for women.

Self-employment can represent an opportunity to work longer but it can also be associated with more demanding working conditions. Indeed, self-employed often acknowledge relatively weaker social security coverage<sup>(50)</sup>

<sup>(49)</sup> Due to the high correlation between LLL and family expenditure (almost 80%) the analysis includes alternative specifications excluding one of the two variables.

<sup>(50)</sup> For a review of the social protection of the self-employed across European Member States please look at the 'Social Protection of the self-employed', Situation on 1 January 2014, MISSOC, European Commission, Directorate General for Employment, Social Affairs and Inclusion.



compared to employees. If social protection schemes were more inclusive for self-employed so as to provide them with voluntary and low-threshold arrangements along the five key functions of the social protection (pensions, healthcare and disability, unemployment, family, social exclusion and housing), this would allow older self-employed to better cope with a potential related falls in income.

The analysis shows a different impact of self-employment by gender: it is positively linked to the participation of men and negatively linked to the participation of women. However, controlling for the index of employment protection legislation (EPL) the coefficient for self-employment turns negative (regression not shown). On the other hand, a more rigid EPL is associated with longer working lives, while the permanence in employment of older people is often explained by retention in the same job, rather than by new hires (see above on transitions). This result can be interpreted on the one hand as a predominance of retention for longer working lives and on the other hand as an opportunity for older people to work as self-employed in the absence of strong employment legislation which would favour retention in the same job.

Other factors have not been reflected on in this analysis, such as the attitude of employers towards older workers. Employers can be reluctant to hire older workers, for instance as they could be perceived as being less suitable for training, and more resistant to change and to learning new technologies, although they can also be perceived as more reliable and having a better work ethic. Removing institutional obstacles and preventing age discrimination through initiatives such as information campaigns and the promotion of guidelines about the employment of older workers also appear to be useful for stimulating longer working lives (Vodopivec and Dolenc, 2008).

#### 4.4.3. Expenditure for care and better health often contributes to longer working lives, while other factors can reduce them

An important incentive to work longer corresponds to the monetary benefit of staying active, which mainly depends on three factors: the levels of pensions, wages and taxation. The opportunity cost of working longer is measured in

this analysis by the ratio of the income of retired people over 65 and the income of employed people over 18 (defined as relative income of older people in the regressions). This ratio is negatively linked with the employment rate of older workers (which can relate to both a relatively high income of retired people and a relatively low income of working-age individuals).

Outright homeownership<sup>(51)</sup> (a good proxy for wealth of households) is negatively associated with the labour market participation of older people, reflecting the fact that the economic incentives for working longer may then be weaker (with the exception of countries in Cluster 2 and, to a lesser extent, in Cluster 5).

The analysis confirms the positive link of employment with expenditure for in-kind family benefits<sup>(52)</sup>, especially for older women. In-kind family benefits primarily include child daycare. Older people often take care of their grandchildren. Care of grandchildren is very common among older people in the Nordic countries. However, regular childcare is also more common among older people in Southern European countries. In countries such as Sweden, Denmark and France grandparents complement publicly-provided childcare, while in countries such as Italy, Greece and Spain grandparents substitute insufficient childcare (Hank and Buber, 2009). The interaction between a welfare system providing adequate childcare and labour markets that are favourable to older people (e.g. in terms of time arrangements) boosts the employment of both mothers and grandparents.

In addition, the analysis highlights the negative association between employment and family in cash expenditure, particularly for older women. However, due to endogeneity problems, a causal relationship between employment and in cash expenditure cannot be established as this is likely mediated by other non-observable variables (such as relative income of the household).

Furthermore, as regards health conditions, healthy life years at the age of

50 (averaged over the past 3 years) is positively associated with employment for men and negatively for women. For women, feedback effects from work to health cannot be excluded. Poor health may result in a departure from the labour market, while working conditions may impact on health status (Barnay and Debrand, 2006). While retirement makes people happier (Fonseca et al., 2014), health suffers from measurement problems. In this analysis, health is measured by an indicator mixing life expectancy (objective measure) and self-perceived health (subjective measure). Previous research finds that better health status increases the probability of employment of older people. However, research findings on the relationship between health and employment also show the existence of endogeneity problems related to the health indicator, which complicates the study of this relationship (Pinzon Fonseca, 2011). In addition, health does not explain cross-country differences in Europe in the employment rate of older people, which is better explained by differences in labour market and retirement mechanisms (Borsch-Supan et al. 2009; Barnay and Debrand, 2006).

#### 4.4.4. Reducing the tax wedge for older workers can be more efficient and inclusive than other tax incentives

The tax wedge is negatively associated with the employment rate of older people, especially for men, highlighting the fact that fiscal incentives can prove useful for longer working lives. Such incentives can take the form of income tax exemptions for working pensioners or cuts in (employee or employer) social security contributions for older workers and can be effective in increasing employment and long-term growth.

Simulations show that cutting social security contributions could importantly boost longer working lives in some countries. In Italy, for instance, the effect could be considerable due to the high tax wedge and the large share of potential beneficiaries (old people). Other fiscal incentives are used to promote the employment of young and low-skilled people. Targeted cuts in social security contributions for older workers can prove more efficient in the long run than if targeted at other groups, as they do not affect the decision of investments in education and, consequently,

<sup>(51)</sup> Due to the high correlation between outright homeownership and usual hours of work (above 80% for women), the regressions include only one of the two variables in each specification.

<sup>(52)</sup> Expenditure for long-term care could not be included in the analysis due to data limitation problems.

productivity, investment and long-term growth (ESDE, 2011).

However, Member States often use fiscal incentives for older people in the form of fiscal support to build up private pension entitlements. Some Member States offer significant tax incentives for old age private pensions, with the aim of supporting the future adequacy of pensions. Belgium, for instance, has 0.14% of GDP foregone revenues for tax reductions on 3<sup>rd</sup> pillar pension savings, Germany 0.05% of GDP for incentives for old age pensions and Sweden 0.4% of GDP for reliefs on the return on pension savings (Mourre, 2014). These incentives are often regressive due to the distribution of the tax base (savings) and particularly when given in forms of tax deductions. The use of these foregone tax revenues could be used instead to cut social security contributions for older workers and result in an increase in employment, productivity and growth.

#### 4.5. Main findings

##### *Active ageing remains a challenge in most Member States*

Increasing the employment rate of older persons, especially of women, is of crucial importance for the achievement of the EU2020 employment target and for the sustainability of pension expenditure. In 2014, the employment and social outcomes of ageing remain a challenge in most Member States and, more importantly, in Slovenia, Romania, Greece, Croatia and Malta.

This analysis shows the importance of a comprehensive assessment of the situation of older people. For instance, Bulgaria, Lithuania, Estonia and Latvia have relatively good employment rates of older workers, but very poor social outcomes. In these countries, older people continue working mostly because they lack adequate income, which is not a desirable model of longer working lives. A successful model of longer and more inclusive working lives is present in countries such as Denmark, Finland, Germany, Netherlands, Sweden and the United Kingdom, which combine well-functioning labour markets and an adequate and balanced social expenditure. In these countries older people continue working for non-financial reasons in older person-friendly labour markets (e.g. with reduced working hours and from

home) and continue to be offered training by their employers. The high potential of even longer working lives in these countries underlines the success of this model. However, these countries are not always exempted from other problems, such as the difficulties of older unemployed people in finding a new job or the adequacy of their income once retired.

##### *Achieving longer working lives rests on a combination of a more educated workforce...*

A more educated workforce largely explains the improvements in the employment rate of older workers in the past decade. Highly educated older people continue to have a stronger attachment to the labour market. The increasing educational level of younger generations looks promising for the employment rate of future older persons, together with the fact that they will be fully affected by previous pension reforms.

##### *... pension reforms that contribute to explaining the persistence of the labour market improvements of older people during the crisis...*

The improvement in the labour market attachment of older workers continued during the recession almost everywhere in Europe. Reforms implemented in the past decades (such as the tightening of early retirement schemes, longer contributory periods, increase in the pensionable age, etc.) contribute to explaining this trend. Pensionable age plays a crucial role in the decision to continue working. While a uniform increase in the pensionable age may not match the life expectancy gradient for different occupations, strengthening incentives to work beyond pensionable age can be a fruitful route.

##### *... and further fiscal and labour market incentives*

Other types of social expenditure can support longer working lives, such as the provision of childcare and long-term care, while limiting tax expenditures for pension savings to cover a reduction in the tax wedge for older workers can also prove efficient and inclusive. Supporting older person-friendly labour markets, with flexible time and organisational arrangements also strengthens incentives for older people to work longer. Employers also play a role in creating more favourable labour markets for

older people and the offer of continued training for older workers stimulates longer participation in the labour market.

## 5. CONCLUSION AND MAIN FINDINGS

The deterioration of the economic and labour market conditions since 2009 has put pressure on household incomes, as well as heavy financial strain on European welfare systems. As a result, increased attention is being paid to the potential for improvements in the efficiency as well as the effectiveness of social protection systems over the life-cycle.

This chapter reviews developments of social expenditure across the EU and assesses to what extent expenditure trends during the period 2010-2012 were focused on areas of greatest need. It then focuses on family policies and policies that promote the employment of older workers.

A gradual shift occurred in the structure of social protection expenditure over the period 2001-2012, in particular from unemployment and family expenditure towards pension and health expenditure (and to a lesser extent social exclusion and housing). This shift in the orientation of social protection expenditure has intensified in the most recent years for which data is available (2011 and 2012) when, in a context of high unemployment levels, average unemployment expenditure per unemployed person declined significantly (as well as to a lesser extent average family expenditure per child), while pension and health expenditure were relatively less affected. This shift coincided with the weakening of the stabilisation impact of social protection expenditure especially in 2012. Social protection expenditure grew strongly in the initial phase of the crisis, contributing significantly to the stabilisation of household incomes, before declining in 2011-2012, with a pro-cyclical impact, particularly in 2012. Expenditure growth then resumed in 2013 and more significantly in 2014.

Expenditure trends reflected both the changes in the numbers of potential beneficiaries (in particular the increase in unemployment), but also changes in average expenditure, significantly impacted by the design of indexation mechanisms. The effectiveness of

social protection systems' stabilisation function could be strengthened through smoothing indexation mechanisms over the cycle (this could be applied to most benefits, but in particular to pensions). Furthermore, average expenditure levels for the active-age population, in particular average unemployment expenditure per unemployed (as well as average family expenditure per child), should become less prone to decline over the cycle, for instance by making the duration of unemployment benefits more sensitive to the cycle. Smoothing indexation of benefits over the economic cycle could for instance be achieved by averaging inflation over several years. This would keep the target of price indexation of benefits unaffected over the economic cycle and could leave fiscal room for other benefits to fully play their stabilisation role.

Expenditure increases were not always channelled to areas of higher needs (and vice versa) in 2011 and 2012 when expenditure declined in real terms. Some countries with relatively high spending and low or average performance in given areas have actually experienced a relatively dynamic expenditure growth not reflecting actual needs, such as Cyprus and to a lesser extent Greece and Austria in pensions. Conversely, other Member States with relatively low levels of expenditure and low or average performance saw large declines in real levels of their expenditure, Bulgaria, Estonia, Latvia and Ireland in pensions, Spain, Latvia, Poland and Portugal in family, and Croatia and Italy in social exclusion and housing. Similar unwarranted declines in unemployment expenditure have occurred in nearly half of the Member States (Bulgaria, Croatia, Lithuania, Latvia, Greece, Spain, Hungary, Italy, Poland, Slovakia and Romania).

The analysis of family policies highlights the importance of a holistic approach across the different policy objectives including promotion of mothers'

employment, family income support and investment in child well-being. The results presented show that a wide provision and use of childcare services as well as availability of part-time work are positively associated with higher rates of mothers' participation in the labour market, while gender pay gap and general spending on family benefits are associated negatively. Furthermore, while working provides protection against poverty, higher and more equally distributed family benefits are also connected with lower poverty rates, which underlines the importance of the redistributive impact of benefits as well as their general level.

While other risk factors exist, the labour market situation of parents is a powerful determinant of the conditions, in which children grow up and thus their opportunities in the long run. The higher the work intensity in the family, the lower the risk of poverty. In contrast to its impact on maternal employment, female part-time work is associated with a higher poverty risk all other things being equal. This points to the need for combining flexible working conditions, which support mothers' labour market participation, with adequate income support.

All in all, adequate levels of paid parental leave, which maintain attachment to the labour market and financial incentives to work, together with affordable high-quality childcare services, play a crucial role in supporting mothers' employment. Reducing incentives to stay at home for long periods also needs to be accompanied by work opportunities for mothers of different educational levels, notably for mothers with low skills and immigration backgrounds. On the other hand, while full-time work for mothers appears desirable for both individual families and society, it might be associated with a double burden on mothers. In this respect, more gender-balanced working hours would also contribute to better reconciliation of work and family life. Greater flexibility at workplaces

would also contribute to addressing the heterogeneity of household situations.

The analysis of social protection policies promoting longer working lives shows that the improvement in the labour market attachment of older workers continued during the recession almost everywhere in Europe. It stresses the importance of a comprehensive assessment of the situation of older people, as various Member States face different types of challenges.

The gradual ageing of more educated workforce cohorts largely explains the improvements in the employment rate of older workers in the past decade. Highly educated older people continue to have a stronger attachment to the labour market. Hence, the increasing educational attainment of younger generations looks promising for the employment rate of future older persons.

Pension reforms implemented in the past decades (such as the tightening of early retirement schemes, longer contributory periods, the increase in the statutory retirement age, etc.) also contribute to explaining the positive trend. The pensionable age plays a crucial role in the decision to continue working. While a uniform increase in the statutory retirement age may not match the life expectancy differences across socio-economic groups, strengthening incentives to work beyond retirement age can be a fruitful route.

Other types of social expenditure, such as the provision of childcare and long-term care, can prove efficient and inclusive in supporting longer working lives, while limiting tax expenditures linked to pension savings. Finally, flexible time and organisational arrangements, together with availability of continued training for older workers also strengthen incentives for older people to work longer and contribute to labour markets that are friendly to longer careers.

## ANNEX 1: A STYLISED FRAMEWORK TO REVIEW THE EFFECTIVENESS AND EFFICIENCY OF SOCIAL PROTECTION SYSTEMS

The Social Protection Committee and the European Commission services have identified a set of key indicators to reflect in a stylised way the effectiveness and efficiency of social protection systems along five key functions: pensions (corresponding to old-age and survivors' expenditure), sickness and disability, unemployment, family and housing, and others.

The indicators below have been identified in this context and are used in this chapter. Following the approach developed in the review, for each of these dimensions, a score is derived for each Member State that measures the distance to the EU average as a share of the standard deviation: a score of 0 corresponds to a value of the indicator identical to the EU average and a score of +1 (-1) to a value above (below) the average of 1 standard deviation.

### *In the field of pensions*

#### Expenditure

- Gross old-age and survivors' expenditure (source ESSPROS) per population aged 65+, relative to GDP per capita.

#### Income replacement

- Median relative income of people aged 65+ (source SILC): ratio between the median equalised disposable income of persons aged 65+ and the median equalised disposable income of persons aged between 0 and 64.
- Aggregate replacement ratio (source SILC): ratio of the median individual gross pensions (including all types of pensions) of people aged 65-74 and the median individual gross earnings of people aged 50-59 (excluding other social benefits).

#### Poverty protection

- At-risk-of-poverty rate among the population 65+, by gender (source SILC): share of the population 65+ living at-risk-of-poverty (at 60%

of median equalised disposable income threshold).

For the purpose of the analysis in this chapter, values for both men and women have been considered separately.

Longer and less interrupted working lives

- Employment rate for the population aged 55-64 (source LFS): Indication of the overall labour market integration of older workers.
- Average duration of working lives (DWL, by gender (source LFS): DWL measures the number of years a person aged 15 is expected to be active in the labour market throughout his/her life.

### *In the field of healthcare and disability*

Since the framework does not cover this dimension, the chapter focuses on gross sickness and disability expenditure (source ESSPROS) as a share of GDP.

### *In the field of family expenditure*

#### Expenditure

- Gross expenditure in cash (source ESSPROS): per population aged under 18 against GDP per capita.
- Gross expenditure in kind (ESSPROS): per population aged under 18 against GDP per capita.

Adequate income of households with children

- Relative income (SILC): relative equalised disposable income of households with children compared to that of all households.

#### Preventing child poverty

- Child poverty (SILC): at-risk-of-poverty rate of the population aged 0-17 (at 60% of median equalised disposable income threshold).
- Severe material deprivation (SILC): population aged 0-17 living in severe material deprivation.
- Poverty reduction by social transfers (source SILC): reduction in the share

of children at-risk-of-poverty due to social transfers.

Child development / parents' labour market participation

- Childcare 0-3 (total) (SILC): share of children aged 0-3 in childcare (full-time and part-time).
- Childcare 3-mandatory school age (total) (SILC): share of children between age 3 and mandatory school age in childcare (full-time and part-time).

Parents' labour market participation

- Rate of women aged 20-49 with youngest child below 6 years of age.
- Involuntary part-time women (aged 20-49), (LFS): Involuntary part-time employment as percentage of total part-time employment.

### *In the field of unemployment benefits*

#### Expenditure

- Gross expenditure (source ESSPROS): per unemployed person compared to GDP per capita for the population of active age.
- Expenditure on ALMP as a % of GDP (source LMP database).

#### Income replacement

- Coverage (source LFS): share of unemployed people (all lengths of unemployment spell) receiving unemployment benefits (both registered and not registered at public employment office) as a share of all unemployed people according to the ILO definition (both registered and not registered at public employment office).
- Net replacement rate (source OECD): net replacement rate in the initial period (2 months) of unemployment (case taken: single person, no children, average wage).
- Net replacement rate (source OECD): net replacement rate after 12 months of unemployment (case taken: single person, no children, average wage).



- Poverty rate of unemployed person (source SILC): share of unemployed living at-risk-of-poverty (at 60% of median equivalised disposable income threshold).

#### Reintegration into the labour market

- Unemployment rate (source LFS): according to the ILO definition.
- Long-term unemployed rate (source LFS): share of long-term (more than 1 year) unemployed (according to the ILO definition) in the total number of active persons in the labour market.
- Share of unemployed people participating in lifelong learning (source LFS).
- Unemployment trap (source OECD): average effective tax rate for a transition into full-time work for persons in unemployment insurance (case taken: 100% of average wage, single person).

### *In the field of social exclusion and housing*

#### Expenditure

- Gross expenditure on social exclusion (source ESSPROS) as a share of GDP per capita.
- Gross expenditure on housing as a share of GDP per capita (ESSPROS).

#### Preventing poverty and social exclusion

- Poverty rate (SILC): share of total population living at-risk-of-poverty (at 60% of the median equivalised disposable income threshold).
- Severe material deprivation (SILC): share of population living in severe material deprivation (population aged 0-59).
- Jobless households (SILC): share of population living in very low work intensity households (population aged 0-59).

- Poverty reduction (SILC): relative reduction in the share of population living at-risk-of-poverty (as % due to social transfers (excluding pensions).

#### (Re-)integration into the labour market

- Inactivity trap (OECD): average effective tax rate for a transition into full-time work for persons without entitlement to unemployment insurance but entitled to social assistance if applicable (case taken: 67% of average wage, single person).

#### Access to decent housing

- Housing cost overburden of the poor (SILC): share of population at-risk-of-poverty living in a household where the total housing costs (net of housing allowances) represent more than 40% of the total disposable household income (net of housing allowances).
- Overcrowding rate of poor people (source SILC): the percentage of the population at-risk-of-poverty living in an overcrowded household.



## ANNEX 2: FAMILY POLICIES

### *Objectives of family policies*

#### **Gender equality, equality among women, and income inequality**

Equality between men and women is one of the European Union's founding principles<sup>(53)</sup>. Promoting gender equality is firmly connected to equal opportunities in the labour market. Because of the greater impact of family and caring responsibilities on women, the state needs to intervene to level the playing field.

Human capital theory proposes that the gender wage gap and occupational sex segregation are due to the periodic separation of women from work (Burchell et al., 2014). Interruptions in employment may result in skill depreciation that will lead to reduction in productivity and consequently lower wages. Policies that encourage mothers to stay home longer may reduce women's chances of gaining access to better-paid and more attractive jobs. Therefore, policies that actively offer incentives to mothers to retire from the labour market for long periods of time should be carefully studied and eventually dismantled.

Specific attention should be paid to the unequal use of cash-for-care systems by women from different socio-economic backgrounds; these policies may reinforce inequalities *among* women as women with lower socio-economic status are more likely to be trapped at home. However, rather than abruptly cut such programmes, the change should be accompanied by modifications in the labour market that would offer women with lower qualifications flexible job opportunities and inexpensive care services. In this same vein, Mandel (2012) highlights the advantages and disadvantages of social policies for different groups of women and concludes that there is a need to explore differentiated approaches to reconciling work and family, rather than addressing universal work-family tensions.

<sup>(53)</sup> With the entry into force of the Treaty of Amsterdam in 1999, the promotion of gender equality became one of the essential tasks of the European Community (Article 2 EC). This was reinforced in the Treaty of Lisbon in 2009. Equality between men and women is also an integral part of the Charter of Fundamental Rights of the European Union.

The OECD (2015b) analysis shows that higher female labour market participation also influences income distribution. A greater number of women in paid full-time employment lowers overall income inequality, and the recent increases in the female employment rate has contributed to lowering the Gini coefficient by 2.5 or more percentage points in Belgium, the Netherlands and Spain for example. However, due to assortative mating<sup>(54)</sup>, i.e. the tendency of partners coming from similar socio-economic backgrounds to marry each other, and higher participation levels by high-skilled women, a rise in female employment could also increase income inequality. Therefore, policies that support paid work of lower-earning women in particular are needed.

#### **Fertility – a traditional key concern of family policies**

Fertility has traditionally been at the heart of family policies. The persistence of below-replacement fertility rates has been a concern in many European countries since the mid-1960s when fertility started declining. This phenomenon, together with increases in longevity, has been associated with the rising old-age dependency ratio, which describes the ratio between those of working-age and people over 65 years of age. The impact of fertility rates on economic growth through old-age dependency has put pressure on developing institutions that support families with children.

Vos (2009) writes that although population reproduction is fundamentally a micro-level decision, it is influenced by institutional factors. While women's increasing educational attainment, rising labour force participation and more ambitious career aspirations are often believed to have been drivers of declining fertility rate in the past, there is new evidence of a considerable shift in this regard. The relationship between female employment or education and fertility has been found to be positive in several studies (Oppenheimer, 1994; De Wit and Ravanera, 1998; Hoem, 2000; Ahn and Mira, 2002) and it appears that the Member States which currently have the highest birth rates are those which have created good conditions for mothers to

<sup>(54)</sup> Data from the United States shows that assortative mating has increased since the 1960s and this affects income inequality significantly. If matching between partners was random, the Gini coefficient would fall from the 2005 level of 43 to 34 according to Greenwood et al. (2014).

pursue professional careers and which perform well in terms of female employment (European Commission, 2013).

#### *Table A.1. Country-specific recommendations regarding female employment and the reduction of poverty and social exclusion made by the European Commission to the Member States in the context of the European Semester 2015 and 2014*

**Austria** (2015): Strengthen measures to increase the labour market participation of older workers and women, including by improving the provision of childcare and long-term care services.

(2014): Reinforce measures to improve labour market prospects of people with a migrant background, women and older workers. This includes further improving child- and long-term care services. Improve educational outcomes in particular of young people with a migrant background, by enhancing early childhood education.

**Bulgaria** (2015): Increase the participation in education of disadvantaged children, in particular Roma, by improving access to good-quality early schooling.

(2014): In order to alleviate poverty, further improve the accessibility and effectiveness of social services and transfers for children and older people. Step up efforts to improve access to quality, inclusive pre-school and school education of disadvantaged children, in particular Roma.

**Czech Republic** (2015): Further improve the availability of affordable childcare.

(2014): Increase considerably the availability of affordable and quality childcare facilities and services, with a focus on children of up to 3 years old. Increase the inclusiveness of education, notably by promoting the participation of socially disadvantaged and Roma children in particular in early childhood education.

**Estonia** (2015): Ensure high-quality social and childcare services at local level.

(2014): Increase the efficiency and cost-effectiveness of family policy while improving the availability and accessibility of childcare.

**Germany** (2014): Address regional shortages in the availability of full-time childcare

facilities and all-day schools while improving their overall educational quality.

**Hungary** (2014): In order to alleviate poverty, implement streamlined and integrated policy measures to reduce poverty significantly, particularly among children and Roma.

**Ireland** (2015): Take steps to increase the work intensity of households and to address the poverty risk of children by tapering the withdrawal of benefits and supplementary payments upon return to employment and through better access to affordable full-time childcare.

(2014): Tackle low work intensity of households and address the poverty risk of children through tapered withdrawal of benefits and supplementary payments upon return to employment. Facilitate female labour market participation by improving access to more affordable and full-time childcare, particularly for low-income families.

**Italy** (2014): Improve the effectiveness of family support schemes and quality services favouring low-income households with children.

**Malta** (2014): Further improve the labour market participation of women, notably those wishing to re-enter the labour market by promoting flexible working arrangements.

**Poland** (2014): Continue efforts to increase female labour market participation, in particular by taking further steps to increase the availability of affordable quality childcare and pre-school education and ensuring stable funding.

**Romania** (2015): Increase the provision and quality of early childhood education and care, in particular for Roma.

(2014): Ensure better access to early childhood education and care. In order to alleviate poverty, increase the efficiency and effectiveness of social transfers, particularly for children.

**Slovakia** (2015): Improve the incentives for women to remain in or return to employment by improving the provision of childcare facilities. Increase the participation of Roma children in mainstream education and in high-quality early childhood education.

(2014): Improve incentives for women's employment, by enhancing the provision of childcare facilities, in particular for

children below 3 years of age. Adopt systemic measures to improve access to high quality and inclusive pre-school and school education for marginalised communities, including Roma.

**Spain** (2014): Improve the targeting of family support schemes and quality services favouring low-income households with children, to ensure the progressivity and effectiveness of social transfers.

**United Kingdom** (2015): Further improve the availability of affordable, high-quality, full-time childcare.

(2014): Continue efforts to reduce child poverty in low-income households, by ensuring that the Universal Credit and other welfare reforms deliver adequate benefits with clear work incentives and support services. Improve the availability of affordable quality childcare.

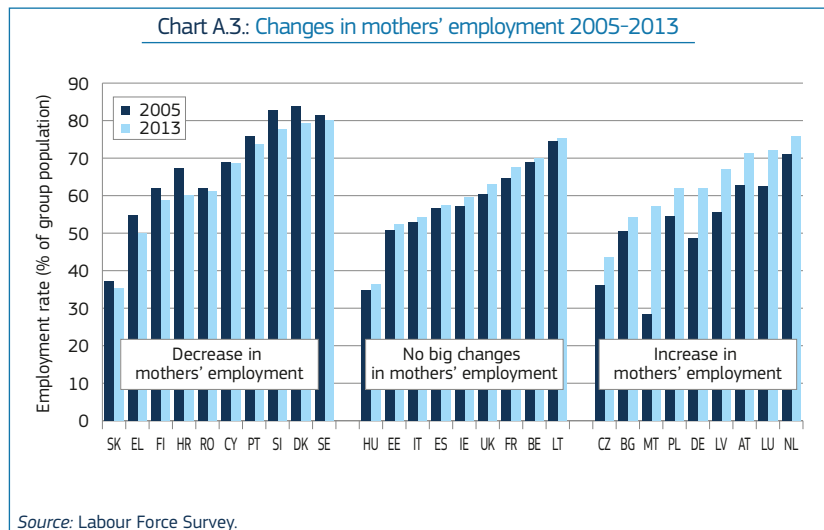
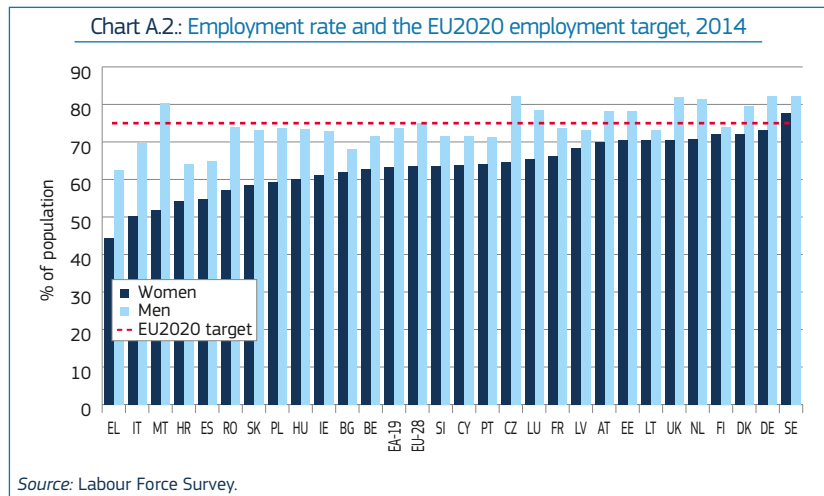
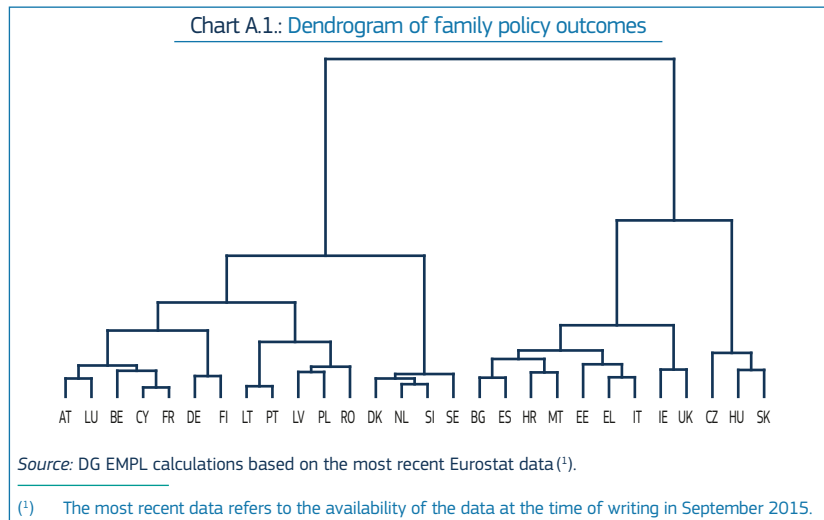


Table A.2.: Family benefits and fertility rate, country clusters

	ECEC use above 3 (%)	ECEC use 0-2 (%)	Spending on family benefits (% GDP)	Share of in-kind benefits (of family benefits)	Social expenditure (% of GDP)	Distribution of family benefits (Q5/Q1)	Distribution of ECEC (0-2) use (Q5/Q1)	Fertility rate
AT	79	17	2.7	0.26	30.2	1.19	1.37	1.44
CY	80	25	1.6	0.13	23.1	0.70	3.98	1.39
FR	92	39	2.6	0.35	34.2	0.79	3.91	2.01
BE	98	46	2.1	0.14	30.8	1.16	2.72	1.79
LU	73	47	3.7	0.22	23.3	1.20	1.92	1.57
DE	89	28	3.2	0.34	29.5	1.16	1.23	1.38
FI	79	28	3.3	0.52	31.2	1.03	3.24	1.80
LT	74	10	1.4	0.29	16.5	5.32	0.55	1.60
PT	85	38	1.2	0.33	26.9	0.40	0.86	1.28
LV	79	23	1.0	0.20	14.0	3.15	2.82	1.44
PL	38	5	0.9	0.22	18.1	0.50	3.41	1.30
RO	51	6	1.3	0.31	15.6	1.77	2.08	1.53
SE	96	55	3.2	0.53	30.5	1.40	1.13	1.91
NL	86	46	1.1	0.36	33.3	0.60	2.48	1.72
DK	98	62	4.0	0.60	34.6	1.02	1.50	1.73
SI	91	39	2.2	0.27	25.4	0.92	1.01	1.58
BG	78	11	1.7	0.35	17.4	1.29	10.50	1.50
ES	90	35	1.4	0.64	25.9	6.89	3.15	1.32
EL	69	14	1.7	0.24	31.2	1.25	4.31	1.34
HR	47	11	1.6	0.06	21.2	0.76	2.41	1.51
EE	91	21	1.8	0.06	15.4	4.13	1.17	1.56
MT	92	20	1.2	0.17	19.4	0.23	1.19	1.43
IT	90	21	1.4	0.43	30.3	0.76	3.07	1.43
IE	89	29	3.4	0.18	32.5	0.64	3.98	2.01
UK	71	30	1.9	0.37	28.8	0.43	2.41	1.92
CZ	76	2	1.1	0.09	20.8	0.81	0.71	1.45
HU	84	10	2.7	0.22	21.8	1.33	1.99	1.34
SK	74	4	1.8	0.11	18.4	1.46	2.70	1.34
EU-28	80	26	2.0	0.28	25.0	1.51	2.56	1.56
EA-19	84	28	2.0	0.27	25.9	1.74	2.40	1.55

Sources: Eurostat (most recent data) and DG EMPL calculations based on EU-SILC 2012 [udb 2012]<sup>(1)</sup>.

<sup>(1)</sup> The most recent data refers to the availability of the data at the time of writing in September 2015.

Table A.3: Employment rates and gaps, country clusters

	Employment rate of mothers with children below 6 years old	Employment rate of women without children	Employment rate of fathers of children below 6 years old	Employment gap of parents (fathers/mothers)	Employment gap of women (childless women/mothers)	Gender gap in employment (ppt)
AT	71.3	85.7	93.3	1.31	1.20	8.2
CY	68.6	78.0	85.9	1.25	1.14	7.7
FR	67.7	80.4	87.9	1.30	1.19	7.4
BE	70.0	77.3	88.3	1.26	1.10	8.7
LU	72.0	83.1	92.6	1.29	1.15	12.9
DE	62.1	85.4	92.3	1.49	1.38	9.2
FI	58.7	82.5	90.9	1.55	1.41	1.9
LT	75.2	81.8	88.5	1.18	1.09	2.5
PT	73.8	70.5	85.3	1.16	0.96	7.1
LV	67.0	78.2	88.8	1.33	1.17	4.6
PL	62.0	77.4	90.6	1.46	1.25	14.2
RO	61.3	71.8	82.8	1.35	1.17	16.7
SE	80.1	79.1	93.2	1.16	0.99	4.6
NL	75.9	83.6	92.1	1.21	1.10	10.7
DK	79.4	76.9	92.2	1.16	0.97	7.3
SI	77.8	76.3	93.3	1.20	0.98	8.0
BG	54.3	72.6	78.6	1.45	1.34	6.1
ES	57.4	67.4	74.8	1.30	1.17	10.2
EL	50.0	54.3	81.9	1.64	1.09	18.3
HR	60.0	66.4	80.4	1.34	1.11	10.0
EE	52.3	87.1	91.8	1.76	1.67	7.7
MT	57.2	73.3	96.5	1.69	1.28	28.4
IT	54.3	63.7	87.2	1.61	1.17	19.4
IE	59.7	79.1	81.3	1.36	1.32	11.8
UK	63.0	83.8	91.2	1.45	1.33	11.3
CZ	43.7	85.8	94.2	2.16	1.96	17.5
HU	36.5	80.5	85.9	2.35	2.21	13.3
SK	35.4	77.6	87.4	2.47	2.19	14.6
<b>EU-28</b>	<b>62.4</b>	<b>77.1</b>	<b>88.2</b>	<b>1.47</b>	<b>1.29</b>	<b>10.7</b>
<b>EA-19</b>	<b>63.5</b>	<b>77.1</b>	<b>88.4</b>	<b>1.44</b>	<b>1.25</b>	<b>10.5</b>

Source: Eurostat (most recent data) <sup>(1)</sup>.<sup>(1)</sup> The most recent data refers to the availability of the data at the time of writing in September 2015.

Table A.4: Working arrangements, country clusters

	Mothers' part-time work	Gender pay gap	Share of mother's earnings of total gross household income	Duration of maternity and parental leave (weeks)	Remuneration of maternity leave
AT	46.9	23.0	13.1	178	100
CY	17.2	15.8	28.0	36	72
FR	30.8	15.2	28.5	47	98.4
BE	41.4	9.8	27.6	51	72.7
LU	35.7	8.6	24.9	172	100
DE	47.0	21.6	18.3	170	100
FI	20.2	18.7	21.3	104	80.7
LT	11.1	13.3	20.5	63	100
PT	14.8	13.0	33.7	44.1	100
LV	9.6	14.4	25.9	68	80
PL	11.1	6.4	22.4	179	100
RO	11.1	9.1	17.9	122	85
SE	38.3	15.2	27.8	83	80
NL	76.8	16.0	26.6	:	100
DK	35.7	16.4	33.1	82	51.5
SI	14.9	3.2	29.8	52	100
BG	3.1	13.5	18.3	85	90
ES	25.6	19.3	25.6	172	100
EL	13.2	15.0	19.7	225	100
HR	7.8	7.4	19.6	170	100
EE	12.8	29.9	21.1	176	100
MT	29.3	5.1	16.1	96	100
IT	32.2	7.3	21.4	40	80
IE	35.0	14.4	22.3	198	26.1
UK	42.5	19.7	17.0	70	22.5
CZ	10.4	22.1	13.3	184	70
HU	8.7	18.4	13.8	51	70
SK	6.9	19.8	16.9	190	65
<b>EU-28</b>	<b>24.6</b>	<b>14.7</b>	<b>22.3</b>	<b>115</b>	<b>84</b>
<b>EA-19</b>	<b>27.4</b>	<b>14.9</b>	<b>23.2</b>	<b>110</b>	<b>88</b>

Sources: Eurostat (most recent data), DG EMPL calculations based on EU-SILC 2012 [udb 2012], and European Parliament (2014)<sup>(1)</sup>.

<sup>(1)</sup> The most recent data refers to the availability of the data at the time of writing in September 2015.



Table A.5.: Poverty and inequality, country clusters

	AROEPE total population	Share of family benefits of family disposable income	Income inequality among families	AROP children	Children living in households of very low work intensity	Relative income of families (median family income / total median income)	Relative severe material deprivation of children (child SMD/adult SMD)
AT	18.8	14.3	24.7	18.6	6.3	0.93	1.68
CY	27.8	6.4	26.9	15.5	5.1	0.99	1.21
FR	18.1	9.2	28.4	18.0	6.5	0.96	1.25
BE	20.8	10.9	24.9	17.2	13.2	1.02	1.10
LU	19.0	15.5	27.9	23.9	3.7	0.87	1.50
DE	20.3	13.4	25.6	14.7	6.7	1.01	1.06
FI	16.0	11.9	23.0	9.3	5.9	1.02	0.69
LT	30.8	8.2	31.5	26.9	9.2	1.00	1.19
PT	27.5	3.8	33.2	24.4	8.4	0.95	1.35
LV	35.1	8.5	36.7	23.4	10.2	1.02	1.07
PL	25.8	4.7	31.2	23.2	4.5	0.94	0.99
RO	40.4	10.4	34.7	32.1	5.3	0.89	1.25
SE	16.4	11.3	21.5	15.4	5.7	1.00	1.46
NL	15.9	6.9	24.0	12.6	6.7	0.98	0.88
DK	18.9	6.0	23.1	8.5	5.7	1.07	1.03
SI	20.4	11.7	22.1	14.7	3.4	1.01	0.88
BG	48.0	8.2	34.0	28.4	17.2	0.98	1.09
ES	27.3	0.9	35.1	27.5	12.3	0.90	1.46
EL	35.7	1.9	35.3	28.8	7.5	0.86	1.18
HR	29.9	9.2	29.0	21.8	15.9	0.98	0.92
EE	23.5	15.1	32.2	18.1	7.0	1.07	0.91
MT	24.0	8.2	25.1	24.0	10.4	0.95	1.31
IT	28.4	3.2	30.8	24.8	7.1	0.93	1.12
IE	29.5	20.2	27.6	16.0	24.0	0.97	1.56
UK	24.8	14.7	31.5	18.9	15.4	0.90	1.68
CZ	14.6	7.8	25.5	11.3	6.6	0.98	1.14
HU	33.5	19.8	28.5	23.2	15.5	0.93	1.40
SK	19.8	8.4	25.7	20.3	6.2	0.97	1.35
<b>EU-28</b>	<b>24.5</b>	<b>9.7</b>	<b>28.6</b>	<b>20.2</b>	<b>9.1</b>	<b>1.0</b>	<b>1.2</b>
<b>EA-19</b>	<b>24.1</b>	<b>9.4</b>	<b>28.5</b>	<b>19.9</b>	<b>8.4</b>	<b>1.0</b>	<b>1.2</b>

Sources: Eurostat (most recent data) and DG EMPL calculations based on EU-SILC 2012 [udb 2012]<sup>(1)</sup>.

<sup>(1)</sup> The most recent data refers to the availability of the data at the time of writing in September 2015.

Table A.6.: Share of family benefits (gross) of total disposable household income, 2012

	Q1	Q2	Q3	Q4	Q5	All
AT	24.8%	18.2%	14.3%	10.4%	6.8%	14.3%
BE	19.0%	13.9%	8.9%	8.0%	5.5%	10.9%
BG	25.6%	8.6%	5.8%	4.0%	3.0%	8.2%
CY	10.6%	9.8%	6.4%	3.6%	2.0%	6.4%
CZ	15.6%	8.5%	6.8%	6.2%	2.8%	7.8%
DE	24.6%	15.1%	11.6%	9.1%	7.1%	13.4%
DK	10.8%	7.7%	5.5%	4.2%	2.9%	6.0%
EE	24.3%	14.4%	10.0%	12.5%	14.4%	15.1%
EL	5.4%	1.4%	1.4%	0.7%	0.7%	1.9%
ES	1.5%	0.6%	0.5%	1.0%	1.0%	0.9%
FI	21.8%	15.9%	10.9%	7.5%	6.1%	11.9%
FR	19.0%	10.8%	7.7%	6.6%	3.5%	9.2%
HR	25.4%	9.5%	6.7%	4.3%	2.8%	9.2%
HU	38.6%	23.1%	17.7%	14.2%	11.0%	19.8%
IE	40.2%	28.4%	18.8%	10.8%	5.1%	20.2%
IT	5.9%	5.3%	2.9%	1.8%	0.8%	3.2%
LT	8.0%	8.4%	7.1%	9.5%	8.0%	8.2%
LU	27.0%	22.2%	14.0%	10.2%	7.6%	15.5%
LV	17.7%	8.7%	7.0%	4.9%	5.6%	8.5%
MT	24.3%	11.4%	3.8%	3.1%	1.2%	8.2%
NL	19.2%	7.5%	4.5%	3.3%	2.1%	6.9%
PL	13.4%	6.0%	3.3%	2.0%	1.1%	4.7%
PT	11.0%	4.3%	2.7%	1.3%	0.7%	3.8%
RO	28.3%	11.4%	8.1%	5.3%	3.9%	10.4%
SE	19.8%	13.5%	10.7%	8.0%	6.2%	11.3%
SI	22.1%	12.9%	8.9%	9.0%	6.2%	11.7%
SK	18.6%	9.1%	6.6%	5.7%	4.7%	8.4%
UK	33.2%	22.3%	12.3%	6.7%	2.9%	14.7%
Average	19.8%	11.7%	8.0%	6.2%	4.5%	9.7%

Source: DG EMPL calculations based on EU-SILC 2012 [udb 2012].

Table A.7.: Share of social assistance etc. (gross) of total disposable household income, 2012

	Q1	Q2	Q3	Q4	Q5	All
AT	4.1%	0.5%	0.7%	0.2%	0.0%	1.0%
BE	9.2%	1.7%	0.0%	0.0%	0.0%	2.1%
BG	5.6%	0.4%	0.0%	0.0%	0.0%	0.9%
CY	2.1%	0.2%	0.0%	0.1%	0.0%	0.5%
CZ	4.7%	0.0%	0.0%	0.0%	0.0%	0.9%
DE	3.4%	0.9%	0.1%	0.1%	0.0%	0.9%
DK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
EE	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
EL	0.5%	0.0%	0.3%	0.0%	0.0%	0.2%
ES	10.3%	2.4%	1.2%	0.5%	0.4%	2.7%
FI	3.3%	1.1%	0.3%	0.2%	0.0%	0.9%
FR	8.8%	1.6%	0.4%	0.4%	0.3%	2.1%
HR	4.5%	0.4%	0.2%	0.2%	0.0%	1.0%
HU	3.1%	1.0%	0.7%	0.2%	0.1%	0.9%
IE	0.6%	0.4%	0.3%	0.1%	0.0%	0.3%
IT	1.3%	0.2%	0.0%	0.0%	0.1%	0.3%
LT	24.1%	7.5%	2.4%	1.1%	0.2%	6.7%
LU	9.9%	3.8%	0.4%	0.1%	0.0%	2.6%
LV	6.2%	1.5%	0.4%	0.1%	0.3%	1.5%
MT	10.8%	5.2%	1.9%	0.8%	0.1%	3.5%
NL	16.3%	5.2%	0.2%	0.3%	0.0%	4.0%
PL	1.8%	0.2%	0.1%	0.0%	0.0%	0.4%
PT	7.1%	0.5%	0.5%	0.0%	0.1%	1.5%
RO	5.7%	2.0%	0.5%	0.1%	0.0%	1.5%
SE	6.8%	0.5%	0.0%	0.0%	0.0%	1.3%
SI	7.6%	0.7%	0.2%	0.0%	0.0%	1.7%
SK	10.7%	0.5%	0.1%	0.1%	0.0%	1.8%
UK	7.1%	6.5%	3.7%	1.4%	0.1%	3.6%
<b>Average</b>	<b>6.3%</b>	<b>1.6%</b>	<b>0.5%</b>	<b>0.2%</b>	<b>0.1%</b>	<b>1.6%</b>

Source: DG EMPL calculations based on EU-SILC 2012 [udb 2012].

Table A.8.: Share of housing allowance (gross) of total disposable household income, 2012

	Q1	Q2	Q3	Q4	Q5	All
AT	1.9%	0.7%	0.3%	0.1%	0.0%	0.5%
BE	0.2%	0.2%	0.0%	0.0%	0.0%	0.1%
BG	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
CY	1.0%	0.9%	0.3%	0.2%	2.1%	0.9%
CZ	4.2%	0.7%	0.1%	0.0%	0.0%	0.9%
DE	8.5%	2.1%	0.3%	0.1%	0.0%	2.2%
DK	4.7%	1.1%	0.3%	0.0%	0.1%	1.1%
EE	3.3%	0.3%	0.3%	0.0%	0.0%	0.7%
EL	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%
ES	0.7%	0.2%	0.1%	0.1%	0.1%	0.2%
FI	6.6%	1.7%	0.3%	0.1%	0.1%	1.5%
FR	11.1%	4.5%	1.2%	0.4%	0.1%	3.2%
HR	2.8%	0.1%	0.0%	0.0%	0.0%	0.5%
HU	2.0%	0.8%	0.2%	0.1%	0.1%	0.5%
IE	4.1%	3.9%	2.8%	1.2%	0.1%	2.3%
IT	0.4%	0.1%	0.1%	0.0%	0.0%	0.1%
LT	0.6%	0.4%	0.1%	0.0%	0.0%	0.2%
LU	1.1%	1.2%	0.8%	0.9%	0.4%	0.8%
LV	2.7%	0.7%	0.3%	0.2%	0.0%	0.7%
MT	1.3%	0.5%	0.2%	0.1%	0.0%	0.4%
NL	5.6%	1.2%	0.3%	0.1%	0.0%	1.3%
PL	1.0%	0.3%	0.2%	0.0%	0.0%	0.3%
PT	1.2%	0.5%	0.5%	0.2%	0.1%	0.5%
RO	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SE	5.2%	0.6%	0.0%	0.0%	0.0%	1.1%
SI	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
SK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
UK	14.8%	9.0%	5.1%	1.7%	0.2%	5.8%
<b>Average</b>	<b>3.0%</b>	<b>1.1%</b>	<b>0.5%</b>	<b>0.2%</b>	<b>0.1%</b>	<b>0.9%</b>

Source: DG EMPL calculations based on EU-SILC 2012 [udb 2012].

Table A.9.: Share of unemployment benefits (gross) of total disposable household income, 2012

	Q1	Q2	Q3	Q4	Q5	All
AT	10.5%	4.6%	2.9%	1.4%	0.8%	3.7%
BE	20.9%	5.4%	2.8%	1.3%	2.0%	6.4%
BG	2.0%	1.2%	2.0%	0.9%	0.9%	1.4%
CY	3.7%	2.1%	1.5%	1.0%	1.8%	2.0%
CZ	1.6%	0.7%	0.3%	0.3%	0.1%	0.6%
DE	12.5%	2.9%	1.2%	0.7%	0.9%	3.6%
DK	20.5%	9.4%	2.8%	1.5%	1.5%	6.7%
EE	1.8%	0.6%	0.9%	0.6%	0.2%	0.8%
EL	6.4%	3.5%	3.7%	1.5%	0.6%	3.1%
ES	22.3%	11.4%	7.4%	5.1%	1.8%	9.1%
FI	17.0%	5.4%	3.4%	2.2%	1.0%	5.3%
FR	7.3%	5.7%	3.5%	2.4%	1.4%	3.9%
HR	2.6%	0.5%	1.0%	0.4%	0.4%	1.0%
HU	11.9%	4.4%	1.7%	0.4%	0.5%	3.3%
IE	25.9%	19.2%	8.9%	6.5%	2.3%	12.3%
IT	8.5%	5.3%	4.0%	3.3%	3.6%	4.8%
LT	3.5%	1.7%	1.5%	0.7%	0.2%	1.5%
LU	7.7%	2.5%	2.3%	1.2%	0.3%	2.6%
LV	4.2%	1.7%	1.0%	1.1%	0.7%	1.7%
MT	6.6%	1.5%	0.3%	0.4%	0.2%	1.7%
NL	10.7%	3.9%	1.4%	1.4%	0.9%	3.4%
PL	1.7%	1.3%	0.8%	0.3%	0.2%	0.8%
PT	6.4%	5.3%	4.6%	2.1%	1.1%	3.8%
RO	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%
SE	10.9%	2.8%	1.4%	0.6%	0.2%	3.0%
SI	3.2%	1.8%	1.4%	0.7%	0.3%	1.5%
SK	2.3%	0.9%	0.6%	0.6%	0.3%	0.9%
UK	4.6%	1.3%	0.7%	0.0%	0.0%	1.2%
<b>Average</b>	<b>8.5%</b>	<b>3.8%</b>	<b>2.3%</b>	<b>1.4%</b>	<b>0.9%</b>	<b>3.2%</b>

Source: DG EMPL calculations based on EU-SILC 2012 [udb 2012].

### Regression analysis: family policies

The data used in the regression analysis is EU-SILC micro-data from 2007-2012 (for personal characteristics 2006-2012). We combine individual-level data with country-level information (see also variables included in Table A.10). Institutional factors are based on data from Eurostat. Country-level variables, such as GDP per capita and unemployment rate, are used as control variables. This kind of micro-macro research design allows us to study both the impact of personal characteristics as well as country-level factors, i.e. the

impact of policies on mothers' employment and poverty.

The results shown in the family policy part of the chapter are based on the *Heckman selection model*<sup>(55)</sup>. Because women do not become mothers randomly, the model first determines if motherhood is observed (or whether employment/poverty status of the mother is observed) and only afterwards estimates the coefficients for independent variables explaining the mother's working and poverty status. The first equation, i.e. the selection of motherhood, is based on a woman

having a partner, her age, educational level, income quintile, fertility rate in the country and existing children.

The results that we are most interested in are based on the probit model, as our dependent variables are binary (working or not working and poor or not poor). The complete results from the econometric analysis are illustrated in the tables below, while the evidence presented in the chapter has illustrated key results based on marginal effects of these models. Only mothers aged between 25 and 49 and with at least one child below the age of 6 are considered in the analyses.

<sup>(55)</sup> For more information on the Heckman selection model, see Heckman (1974) and for the use in Stata: <http://www.stata.com/manuals13/rheckman.pdf>.



Table A.10.: Probit model results (marginal effects): mother works

	MODEL 1	MODEL 2	MODEL 3	MODEL 4
<b>Age</b>	0.009***	0.007***	0.007***	0.007***
<b>Number of children 0-6</b>	-0.110***	-0.111***	-0.111***	-0.109***
<b>Number of children 7-17</b>	-0.040***	-0.035***	-0.035***	-0.035***
<b>Number of other workers in the household</b>	0.038***	0.044***	0.044***	0.044***
<b>Education (ref. low)</b>				
<b>Middle</b>	0.153***	0.167***	0.168***	0.167***
<b>High</b>	0.308***	0.298***	0.299***	0.298***
<b>Single parent</b>	0.024**	0.004	0.004	0.010
<b>Non-EU background</b>	-0.113***	-0.136***	-0.136***	-0.141***
<b>Degree of urbanism (ref. densely populated area)</b>				
<b>Intermediate area</b>	0.011***	0.010**	0.011**	0.009**
<b>Thinly populated area</b>	-0.012***	-0.005	-0.005	-0.009**
<b>Use of ECEC 0-2</b>		0.004***	0.004***	0.002***
<b>Use of ECEC above 3</b>		-0.001***	-0.001***	0.001***
<b>Gender pay gap</b>		-0.007***	-0.007***	0.000
<b>Family benefit spending (adj. for GDP per capita and demography)</b>		-0.005***	-0.004***	-0.009***
<b>Share of mothers working part-time</b>		0.001	0.001***	-0.001***
<b>Employment rate 20-64</b>		0.008***	0.008***	0.000
<b>GDP per capita</b>		0.000	0.000	0.000***
<b>GDP growth</b>		0.002***	0.004***	0.002**
<b>Unemployment rate</b>		0.001	0.002***	0.000
<b>YEAR</b>				
<b>2008</b>			0.020***	0.026***
<b>2009</b>			0.029***	0.029***
<b>2010</b>			0.006	0.021***
<b>2011</b>			-0.011	0.006
<b>2012</b>			-0.002	0.010
<b>CLUSTER</b>				
<b>2</b>				-0.001
<b>3</b>				0.119***
<b>4</b>				-0.116***
<b>5</b>				-0.094***
<b>6</b>				-0.169***

Source: DG EMPL calculations based on EU-SILC 2007-2012 [udb 2007-2012].

Note: \*\*\* P-value<0.000, \*\* P-value<0.005, \* P-value<0.05.

Table A.11.: Probit model results (marginal effects): mother is poor

	MODEL 1	MODEL 2	MODEL 3	MODEL 4
<b>Age</b>	0.010***	0.013***	0.013***	0.013***
<b>Number of children 0-6</b>	-0.021***	-0.021***	-0.021***	-0.021***
<b>Number of children 7-17</b>	0.007***	0.002	0.002	0.002
<b>Number of other workers in the household</b>	-0.125***	-0.128***	-0.128***	-0.128***
<b>Mother works</b>	-0.160***	-0.157***	-0.157***	-0.158***
<b>Education (ref. low)</b>				
<b>Middle</b>	-0.185***	-0.171***	-0.171***	-0.170***
<b>High</b>	-0.320***	-0.310***	-0.310***	-0.308***
<b>Single parent</b>	0.197***	0.229***	0.229***	0.231***
<b>Non-EU background</b>	0.106***	0.123***	0.123***	0.122***
<b>Degree of urbanism (ref. densely populated area)</b>				
<b>Intermediate area</b>	-0.019***	-0.010**	-0.010**	-0.010**
<b>Thinly populated area</b>	0.044***	0.036***	0.036***	0.035***
<b>Distribution of family benefits (Q5/Q1)</b>		0.012***	0.012***	0.009***
<b>Share of family benefits of disposable income (Q1)</b>		-0.002***	-0.002***	0.000
<b>AROE, all</b>		0.003***	0.003***	0.004***
<b>Mothers' employment rate</b>		-0.001***	-0.001***	-0.002**
<b>Part-time work, women</b>		0.001*	0.001**	0.001***
<b>Gender pay gap</b>		-0.001*	0.000	0.000
<b>Family benefit spending (adj. for GDP per capita and demography)</b>		0.000	0.000	-0.004***
<b>GDP per capita</b>		0.000*	0.000**	0.000***
<b>GDP growth</b>		0.001***	0.003***	0.002***
<b>Gini coefficient</b>		0.003***	0.004***	0.006***
<b>Unemployment rate</b>		0.002***	0.001*	0.002***
<b>Use of ECEC 0-2</b>		0.000	0.000	0.000
<b>Use of ECEC above 3</b>		-0.002***	-0.002***	-0.002***
<b>YEAR (ref. 2007)</b>				
<b>2008</b>			0.025***	0.028***
<b>2009</b>			0.035***	0.035***
<b>2010</b>			0.022***	0.024***
<b>2011</b>			0.026***	0.026***
<b>2012</b>			0.025***	0.025***
<b>Cluster (ref. Cluster 1)</b>				
<b>2</b>				-0.011
<b>3</b>				0.014
<b>4</b>				0.003
<b>5</b>				-0.077***
<b>6</b>				-0.004

Source: DG EMPL calculations based on EU-SILC 2007-2012 [udb 2007-2012].

Note: \*\*\* P-value<0.000, \*\* P-value<0.005, \* P-value<0.05.

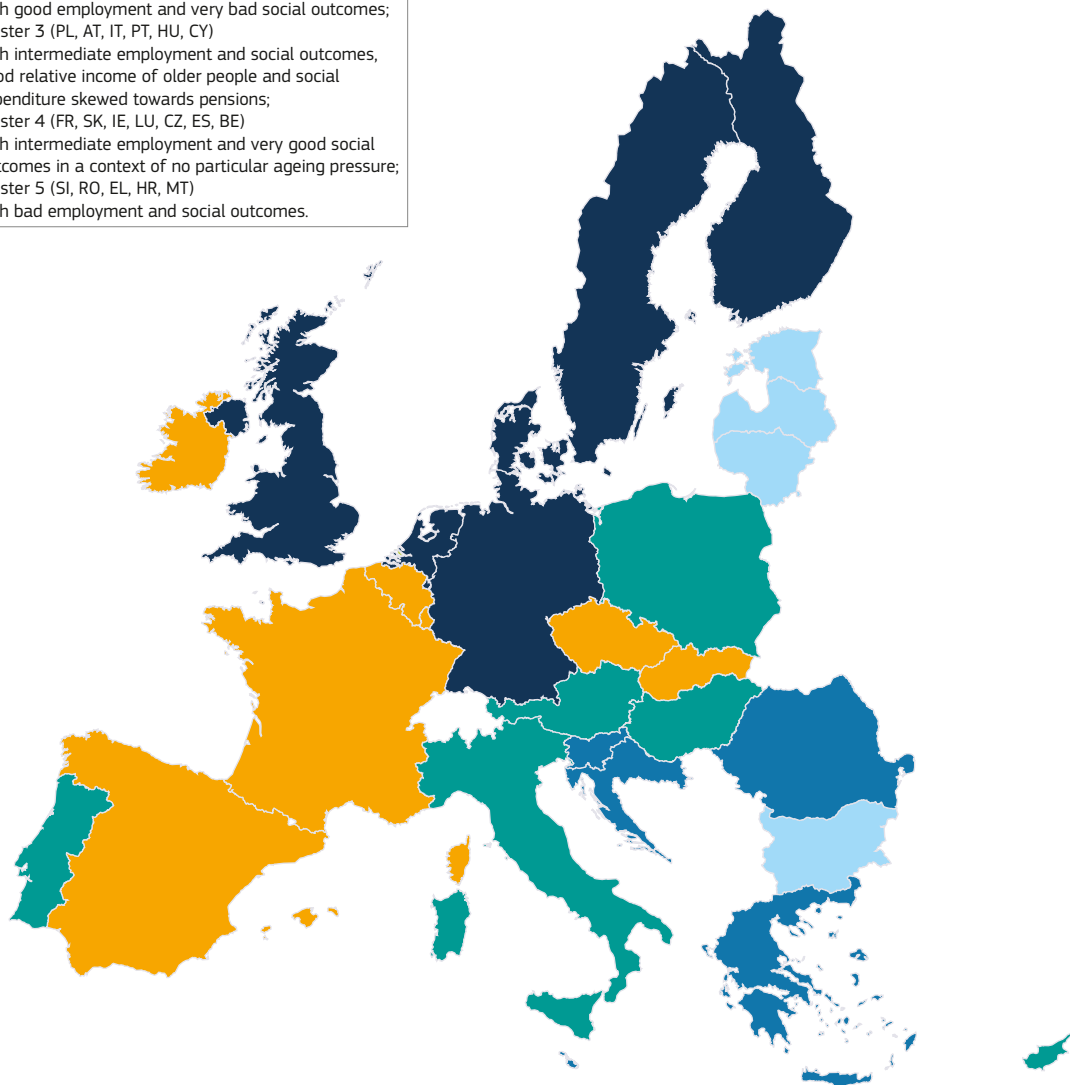
## ANNEX 3: LONGER WORKING LIVES

Table A.12: Indicators included in the analysis

INDICATOR	DESCRIPTION	USED IN		DATA SOURCE
		Cluster	Regression	
<b>Inequality +65</b>	S80/S20 over 65	✓		EU-SILC
<b>Potential for longer working lives</b>	Inactive people who would have liked to stay longer in employment	✓		2012 LFS ad-hoc module on transitions from work to retirement
<b>Population growth</b>	Population growth in the previous 5 years		✓	Eurostat
<b>Working hours</b>	Number of hours of work per week usually worked 55-64	✓	✓	LFS
<b>Voluntary part-time</b>	Share of employed working voluntarily part-time		✓	LFS
<b>Telework</b>	Share of employed usually or sometimes working from home (only usually in regressions)	✓	✓	LFS
<b>Self-employment</b>	Share of self-employed		✓	LFS
<b>LLL</b>	Participation in lifelong learning 50-74 year-old		✓	LFS
<b>Healthy life years</b>	Healthy life years at 50 (average over the last 3 years in regressions)	✓	✓	Eurostat
<b>Expenditure old age</b>	Expenditure for old age and survivors as% of total social expenditure	✓		ESSPROS
<b>Relative income older people</b>	Ratio of income of retired over 65 to income of employed over 18	✓	✓	EU-SILC
<b>Family expenditure cash</b>	Ratio of family expenditure in cash per person aged 0-18 to GDP per capita		✓	ESSPROS, own elaboration
<b>Family expenditure in-kind</b>	Ratio of family expenditure in cash per child in pre-school age to GDP per capita		✓	ESSPROS, own elaboration
<b>Tax wedge</b>	Tax wedge of single at 100% of average wage			OECD-ECFIN tax database
<b>Homeownership</b>	Share of outright homeowners among 50-69 year-old		✓	EU-SILC, own elaboration

Chart A.4: Cluster of Member States for older people outcomes

- Cluster 1 (DE, SE, FI, NL, DK, UK)  
with good employment and social outcomes  
and a moderate relative income of older people;
- Cluster 2 (BG, LT, EE, LV)  
with good employment and very bad social outcomes;
- Cluster 3 (PL, AT, IT, PT, HU, CY)  
with intermediate employment and social outcomes,  
good relative income of older people and social  
expenditure skewed towards pensions;
- Cluster 4 (FR, SK, IE, LU, CZ, ES, BE)  
with intermediate employment and very good social  
outcomes in a context of no particular ageing pressure;
- Cluster 5 (SI, RO, EL, HR, MT)  
with bad employment and social outcomes.



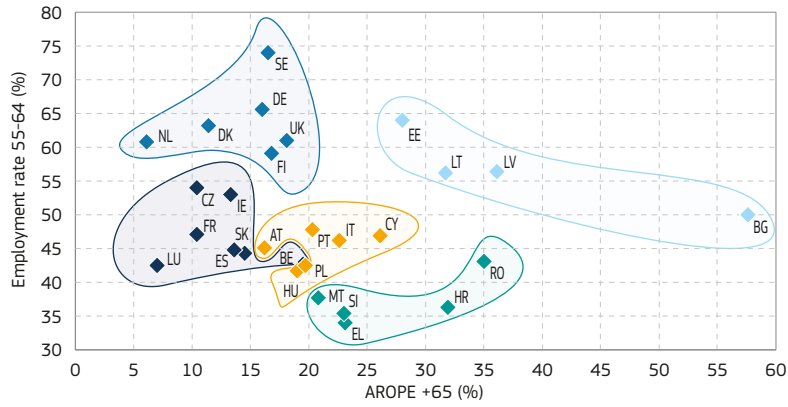
Source: DG EMPL Cluster analysis based on most recent Eurostat data.

Charts A.5 and A.6 plot the employment rate of older workers versus two social outcomes considered in the Cluster analysis: AROPE for over-65 year-olds and relative income of pensioners, as measured by the ratio of income of retired people over 65 to income of employed people over 18. The figures show that

Member States in Cluster 1 (Germany, Sweden, Finland, the Netherlands, Denmark, United Kingdom) perform well in terms of both employment and poverty or social exclusion, but not so well when considering the relative income of older people. Member States in Cluster 3 (Poland, Austria, Italy, Portugal, Hungary,

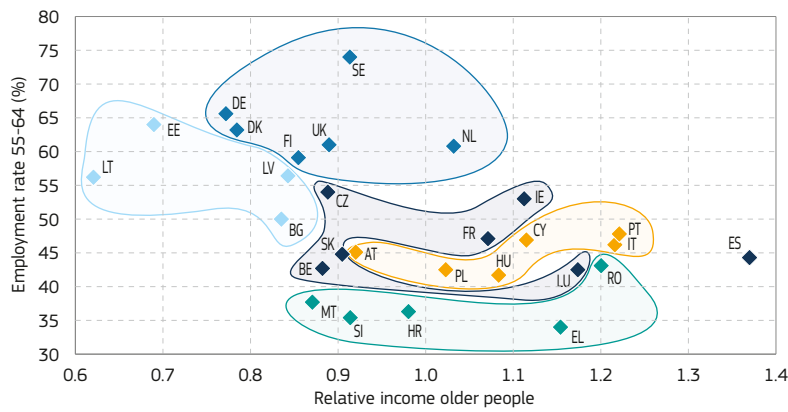
Cyprus) and Cluster 5 (Slovenia, Romania, Greece, Croatia, Malta) improve their position in terms of social outcomes when considering the relative income of older people, while Member States in Cluster 2 (Bulgaria, Lithuania, Estonia, Latvia) remain the worst performers in terms of social outcomes.

Chart A.5: Employment and social outcomes of older people in 2012, clusters of countries



Sources: LFS (lfsa\_ergan) and EU-SILC. See Table A.12 for definitions.

Chart A.6: Employment and social outcomes of older people in 2012, clusters of countries



Sources: LFS (lfsa\_ergan) and EU-SILC. See Table A.12 for definitions.



Table A.13: Main outcomes

Cluster	Country	Activity rate 55-64	Employment rate 55-64	Unemployment rate 55-64	Ratio unemployment rate 55-64/20-64	AROE +65	Inequality (S80/S20) +65	Pension adequacy	Social expenditure old age (in % total)	Old age dependency
1	Denmark	66.40	63.20	4.80	0.77	11.40	3.20	0.78	41.62	0.28
1	Finland	63.80	59.10	7.30	0.91	16.80	3.30	0.85	39.74	0.30
1	Germany	69.10	65.60	5.10	1.02	16.00	3.80	0.77	38.64	0.32
1	Netherlands	65.40	60.80	7.10	1.11	6.10	3.20	1.03	37.54	0.26
1	Sweden	78.20	74.00	5.40	0.76	16.50	3.40	0.91	41.97	0.31
1	United Kingdom	63.60	61.00	4.00	0.74	18.10	3.80	0.89	44.44	0.27
2	Bulgaria	56.60	50.00	11.70	1.04	57.60	4.60	0.84	48.85	0.29
2	Estonia	67.70	64.00	5.40	0.74	28.00	3.10	0.69	44.16	0.28
2	Latvia	62.60	56.40	9.90	0.91	36.10	3.90	0.84	55.00	0.29
2	Lithuania	63.00	56.20	10.70	0.99	31.70	3.90	0.62	44.24	0.28
3	Austria	46.90	45.10	3.80	0.69	16.20	4.10	0.92	49.34	0.27
3	Cyprus	56.00	46.90	16.30	1.02	26.10	4.80	1.11	51.08	0.20
3	Hungary	44.60	41.70	6.40	0.84	19.00	2.80	1.08	51.38	0.26
3	Italy	48.90	46.20	5.50	0.44	22.60	4.40	1.22	59.08	0.33
3	Poland	45.60	42.50	6.80	0.76	19.70	3.40	1.02	58.56	0.21
3	Portugal	55.30	47.80	13.50	0.96	20.30	4.90	1.22	51.67	0.30
4	Belgium	45.10	42.70	5.40	0.64	19.50	3.10	0.88	37.99	0.27
4	Czech Republic	56.80	54.00	4.90	0.82	10.40	2.40	0.89	48.08	0.26
4	France	50.80	47.10	7.30	0.77	10.80	4.30	1.07	42.98	0.28
4	Ireland	58.40	53.00	9.30	0.84	13.30	4.10	1.11	21.23	0.19
4	Luxembourg	44.50	42.50	4.30	0.77	7.00	4.10	1.17	37.34	0.20
4	Slovakia	50.10	44.80	10.60	0.82	13.60	2.30	0.90	42.93	0.19
4	Spain	55.40	44.30	20.00	0.83	14.50	4.50	1.37	44.79	0.27
5	Croatia	41.00	36.30	11.60	0.70	31.90	5.10	0.98	37.26	0.28
5	Greece	41.10	34.00	17.20	0.65	23.10	3.90	1.15	57.05	0.32
5	Malta	40.30	37.70	6.50	1.20	20.80	3.20	0.87	54.64	0.26
5	Romania	44.60	43.10	3.30	0.49	35.00	4.50	1.20	53.85	0.24
5	Slovenia	38.40	35.40	7.80	0.80	23.00	3.50	0.91	46.06	0.26

Table A.14: Relative position of older people

Cluster	Country	Activity rate ratio 55-64/20-64	Employment rate ratio 55-64/20-64	Unemployment rate ratio 55-64/20-64	AROPE ratio 55-64/20-64	Inequality ratio 55-64/20-64
1	Denmark	0.82	0.83	0.77	0.85	0.74
1	Finland	0.80	0.81	0.91	1.10	0.92
1	Germany	0.84	0.84	1.02	1.35	0.83
1	Netherlands	0.81	0.80	1.11	1.21	0.89
1	Sweden	0.91	0.93	0.76	0.69	0.92
1	United Kingdom	0.79	0.80	0.74	0.99	0.83
2	Bulgaria	0.77	0.77	1.04	0.99	0.70
2	Estonia	0.84	0.86	0.74	1.22	0.56
2	Latvia	0.79	0.80	0.91	1.02	0.62
2	Lithuania	0.78	0.78	0.99	1.15	0.64
3	Austria	0.60	0.61	0.69	1.14	1.00
3	Cyprus	0.70	0.69	1.02	0.98	0.98
3	Hungary	0.62	0.63	0.84	1.00	0.67
3	Italy	0.71	0.77	0.44	0.99	0.77
3	Poland	0.62	0.64	0.76	1.10	0.69
3	Portugal	0.70	0.71	0.96	1.11	0.82
4	Belgium	0.61	0.63	0.64	1.10	0.82
4	Czech Republic	0.73	0.73	0.82	1.16	0.71
4	France	0.66	0.67	0.77	1.06	0.91
4	Ireland	0.77	0.79	0.84	1.01	0.91
4	Luxembourg	0.58	0.59	0.77	1.04	0.89
4	Slovakia	0.66	0.68	0.82	0.95	0.64
4	Spain	0.70	0.74	0.83	1.00	0.71
5	Croatia	0.58	0.61	0.70	1.07	0.96
5	Greece	0.57	0.64	0.65	1.13	0.59
5	Malta	0.57	0.57	1.20	1.03	0.78
5	Romania	0.63	0.66	0.49	1.00	0.68
5	Slovenia	0.51	0.52	0.80	1.36	0.97

Table A.15: Gender dimension

Cluster	Country	Employment gender gap 55-64	Female employment rate 55-64	Female part-time 20-64	AROPE female +65
1	Denmark	11.3	57.6	35	13
1	Finland	-4.6	61.4	19.3	20.5
1	Germany	11.4	60	46.3	18.3
1	Netherlands	19.9	50.8	76.6	6.7
1	Sweden	5	71.5	37.3	22.5
1	United Kingdom	13.4	54.4	41.3	19.8
2	Bulgaria	8.5	46	2.8	62.1
2	Estonia	2	63.1	11.2	33.5
2	Latvia	-0.1	56.4	8.9	39.8
2	Lithuania	4.5	54.3	10.6	36.3
3	Austria	17.9	36.4	46.3	18.6
3	Cyprus	20.2	36.9	16.8	30
3	Hungary	14.4	35.2	8.3	22.2
3	Italy	19.9	36.6	32.1	25.2
3	Poland	20.2	32.9	10.3	22.5
3	Portugal	12.2	42.1	12.6	21.6
4	Belgium	11.4	37	41.2	20.7
4	Czech Republic	21	43.8	9.5	13.8
4	France	3.5	45.4	30.5	12.3
4	Ireland	16.7	44.7	34.4	14.1
4	Luxembourg	14.8	35	35.6	7.5
4	Slovakia	15.9	37.2	6.8	15.5
4	Spain	13.4	37.8	25.5	15
5	Croatia	18.5	27.3	6.7	35.3
5	Greece	19	25	13	24.3
5	Malta	35.9	19.8	28.8	21
5	Romania	19	34.2	9.5	39.1
5	Slovenia	12.8	29	13.7	27.8

Table A.16: Labour market structure

Cluster	Country	Self-employment 55-64	Voluntary temporary	Voluntary part-time	Working pensioners	Working hours (weekly)	Teleworking	LLL
1	Denmark	10.95	0.74	6.96	5.59	35.63	34.71	29.90
1	Finland	17.40	1.46	7.89	9.61	36.91	24.01	22.50
1	Germany	13.75		7.58	9.11	34.99	13.53	6.70
1	Netherlands	20.93	3.31	19.78	7.42	31.08	14.02	15.60
1	Sweden	13.29	2.46	9.04	16.47	34.96	33.23	26.60
1	United Kingdom	20.50		11.02	16.01	35.84	29.34	14.40
2	Bulgaria	15.24	1.45	0.76	5.37	40.58	2.39	1.50
2	Estonia	10.15	1.06	5.51	16.40	38.46	12.18	10.10
2	Latvia	10.71	0.95	2.95	11.37	38.39	2.98	4.80
2	Lithuania	13.09	0.52	4.60	11.39	38.06	6.22	4.40
3	Austria	18.31	2.24	8.43	5.68	38.43	26.75	12.60
3	Cyprus	27.93	0.17	5.37	6.71	39.80	1.98	6.30
3	Hungary	17.20	1.83	4.67	3.19	38.91	11.88	2.70
3	Italy	26.32	0.66	2.58	4.94	37.20	5.13	7.10
3	Poland	24.86	5.58	4.75	7.89	40.28	14.62	3.50
3	Portugal	29.67	1.25	7.30	10.40	37.72	13.95	8.40
4	Belgium	18.53	0.84	11.81	3.70	36.18	25.45	6.40
4	Czech Republic	21.24	1.94	3.17	8.33	40.16	9.75	8.60
4	France	16.25	2.45	5.16	6.21	37.47	23.89	16.60
4	Ireland	27.66	1.42	7.64	4.84	34.71	20.74	6.00
4	Luxembourg	15.35	1.84	5.47	4.73	36.35	26.93	12.50
4	Slovakia	16.24	1.43	2.58	5.96	40.11	9.08	2.60
4	Spain	25.18	0.33	1.76	2.83	39.17	8.79	8.80
5	Croatia	23.28	4.16	5.27	4.17	39.42	3.44	2.20
5	Greece	54.73	0.50	2.23	1.13	43.06	5.39	2.50
5	Malta	18.02	2.21	6.26	8.36	38.81	4.86	6.40
5	Romania	32.53	0.06	6.87	10.13	39.90	0.82	1.30
5	Slovenia	19.75	1.23	7.36	5.95	40.66	18.46	10.90

Table A.17: Reasons for working/not working

Cluster	Country	Potential longer working lives	Working for non-financial reasons	Working due to insufficient income	Not working due to labour market reasons	Not working for health	Not working for care
1	Denmark	40.7	78.8	9	11.6	31.6	6.2
1	Finland	37	42.2	22.9	16	30.6	2
1	Germany	23.8	16.6	26.5	6.5	30.5	3
1	Netherlands	28.3	51.2	22.2	7.6	21.1	2.1
1	Sweden	29.8	64.8	14.2	4.6	20.1	5.9
1	United Kingdom	40.7	40.7	33.2	7.5	20.6	8.8
2	Bulgaria	16.6	13.4	53	5.4	10.3	1.8
2	Estonia	55	7.6	78.3	27.4	38.3	7.2
2	Latvia	38.3	8.9	58.2	20.7	26.5	
2	Lithuania	10.7	8.3	47.2	8.9	21.3	
3	Austria	34.1	65.4	23.5	6.1	29.3	1.7
3	Cyprus	44.5	27.8	35.8	7.3	16.5	9.4
3	Hungary	17.8	10.2	64.8	5.2	17.7	2.8
3	Italy	27	29.5	45.4	6.9	12.5	5.6
3	Poland	7.4	18	50	5.6	20	2.4
3	Portugal	58.7	25.1	59.1	9.2	37	4.6
4	Belgium	31.2	48.1	27.8	7.5	16.8	4
4	Czech Republic	21.5	18.5	53.5	5	7	0.7
4	France	30.9	24.4	31.9	10.3	14.9	2.6
4	Ireland	36.4	41.4	35.5	6.2	22.5	7
4	Luxembourg	29.9	51.3	20	2.2	25.1	3.1
4	Slovakia	26.3	5.5	62.6	11	16.6	3.5
4	Spain	43.3	31.2	19.5	8.3	29.1	3.2
5	Croatia	32	21.1	59	11.6	30	2.6
5	Greece	12.4		86.1	0.7	5.7	1.2
5	Malta	33.6	38	47		6.3	
5	Romania	18.7	2.2	90.5	6.5	30	7.2
5	Slovenia	9.2	62.4	18.5	2	9.9	

Table A.18: Health, tax and social expenditure

Cluster	Country	Homeownership 50-69	Social expenditure for care	Social expenditure old age (in % tot)	Tax wedge	Healthy life years (at 50)
1	Denmark	12.54045	4.05	41.6185	38.07014	20.46667
1	Finland	31.80073	1.91	39.74359	43.89751	16.8
1	Germany	25.39665	1.97	38.64407	49.31077	14.9
1	Netherlands	7.608344	3.35	37.53754	37.70937	18.91667
1	Sweden	8.45601	1.79	41.96721	42.46088	25.53333
1	United Kingdom	28.95278		44.44444	31.09373	20.95
2	Bulgaria	85.38276	0.11	48.85057	33.62	19.11667
2	Estonia	64.26312	0.26	44.15584	40.04627	12.98333
2	Latvia	72.03625	0.46	55	43.89	13.41667
2	Lithuania	85.27454	0.59	44.24242	41.07	14.81667
3	Austria	31.11715	2.01	49.33775	49.35282	17.15
3	Cyprus	55.57889	0.2	51.08225	13.94	17.8
3	Hungary	68.94406	0.4	51.37615	49.02724	14.16667
3	Italy	59.76892		59.07591	48.219	17.83333
3	Poland	73.17231	0.44	58.56354	35.59731	16.4
3	Portugal	40.66986	0.47	51.67286	41.21882	17.53333
4	Belgium	29.21733	2.54	37.98701	55.57558	20.13333
4	Czech Republic	62.3915	0.29	48.07692	42.64224	17.86667
4	France	33.91975	1.87	42.98246	48.4436	19.28333
4	Ireland	34.67927		21.23077	28.18407	21.6
4	Luxembourg	28.28377	2.22	37.33906	37.56649	21.65
4	Slovakia	80.75721	0.02	42.93478	41.20938	10.28333
4	Spain	47.45623	1.59	44.78764	40.70632	19.2
5	Croatia	86.61852	0.05	37.26415	39.49	16.48333
5	Greece	60.91988	0.27	57.05128	40.40745	18.66667
5	Malta	63.91211		54.63918	25.27	24.05
5	Romania	95.63836	1.03	53.84615	44.56	13.18333
5	Slovenia	77.89108	1.26	46.06299	42.45901	14.6

## REFERENCES

- Aassve, A. and Lappegård, T., 'Childcare cash benefits and fertility timing in Norway', *European Journal of Population*, Vol. 25, 2009, pp. 67-88.
- Akgunduz, Y. E. and Plantenga, J., 'Labour market effects of parental leave in Europe', *Cambridge Journal of Economics*, Vol. 37, 2013, pp. 845-862.
- Bambra, C., 'Defamilisation and welfare state regimes: a Cluster analysis', *International Journal of Social Welfare*, Vol. 16, 2007, pp. 326-338.
- Barnay, T. and Debrand, T., 'Effects of health on the labour force participation of older persons in Europe', *Questions d'économie de la santé*, No. 109, 2006.
- Beblo, M. and Wolf, E., *The wage penalties of heterogeneous employment biographies: an empirical analysis for Germany*, Centre for European Economic Research, June 2002.
- Berlinski, S., Galiani, S. and Gertler, P., 'The effect of pre-primary education on primary school performance', *Journal of Public Economics*, Vol. 93, 2009, pp. 219-234.
- Bettio, F., Tinios, P. and Betti, G., *The Gender Gap in Pensions in the EU*, Directorate-General for Justice, European Commission, 2013.
- Boeckmann, I., Misra, J. and Budig, M. J., 'Cultural and Institutional Factors Shaping Mothers' Employment and Working Hours in Postindustrial Countries', *Social Forces*, online December 8, 2014.
- Borsch-Supan, A., Brugiavini, A. and Croda, E., 'The role of institutions and health in European patterns of work and retirement', *Journal of European Social Policy*, 19(4), 2009.
- Brewer, M., Cattani, S., Crawford, C., Rabe, B. (2014) *The impact of free, universal pre-school education on maternal labour supply*. Institute for Fiscal Studies.
- Brilli, Y., Del Boca, D. and Pronzato, C. *Does child care availability play a role in maternal employment and children's development? Evidence from Italy*. Families And Societies Working Paper 31, 2015. <http://www.familiesandsocieties.eu/wp-content/uploads/2015/02/WP31BrilliEtAl2015.pdf>.
- Bünning, M. and Pollman-Schult, M., 'Family policies and fathers' working hours: cross-national differences in the paternal labour supply', *Work, Employment & Society*, published online 18 June 2015.
- Burchell, B., Hardy, V., Rubery, J. and Smith, M., *A New Method to Understand Occupational Gender Segregation in European Labour Markets*, Directorate-General for Justice, European Commission, 2014.
- Cantillon, B., Ghysels, J., Mussche, N. and van Dam, R., 'Female Employment Differences, Poverty and Care Provisions', *European Societies*, Vol. 3(4), 2001, pp. 447-469.
- Cantillon, B. et al., *The end of decent social protection for the poor? The dynamics of low wages, minimum income packages and median household incomes*, FP7 Project ImpRovE Working Paper No. 15/03, 2015.
- Cooper, K. and Stewart, K., *Does money affect children's outcomes? A systematic review*, Joseph Rowntree Foundation report, October 2013.
- Del Boca, D., Vuri, D. (2005) *Labour supply and child care costs: the effect of rationing*. IZA Discussion Paper, No. 1779.
- Del Boca, D. (2015) *Child care arrangements and labour supply*. IDB Working Paper Series, No. IDB-WP-569.
- DRIVERS FP7 Project European Policy Brief, Well Designed Social Protection Systems can Improve the Lives of People and Reduce Health Inequalities, 2015. [http://health-gradient.eu/wp-content/uploads/2015/02/DRIVERS\\_Policy\\_Brief\\_IncomeSocial\\_Protection\\_rel2.pdf](http://health-gradient.eu/wp-content/uploads/2015/02/DRIVERS_Policy_Brief_IncomeSocial_Protection_rel2.pdf).
- Drobnic, S., 'The Effects of Children on Married and Lone Mothers' Employment in the United States and (West) Germany', *European Sociological Review*, Vol. 16(2), 2000, pp. 137-157.
- EACEA, *Tackling social and cultural inequalities through early childhood education and care in Europe*, Education, Audiovisual and Culture Executive Agency, Brussels, 2009.
- Engster, D. and Olofsdotter Stensöta, H., 'Do family policy regimes matter for children's well-being?', *Social Politics*, Vol. 18(1), 2011, pp. 82-124.
- Eurofound, *Quality of Life in Europe: Families in the Economic Crisis. 3rd European Quality of Life Survey*, Publications Office of the European Union, Luxembourg, 2014.
- European Commission, *Opinion on Flexible and Part-Time Working Arrangements and the Gender Dimension of the Labour Market*, Advisory Committee on Equal Opportunities for Women and Men, December 2010a.
- European Commission, *Strategy for Equality Between Women and Men 2010-2015*, 2010b.
- European Commission, *Barcelona Objectives. The Development of Childcare facilities for Young Children in Europe with a View to Sustainable and Inclusive Growth*, Directorate-General for Justice, 2013a.
- European Commission, *Commission Recommendation of 20.2.2013. Investing in Children: Breaking the Cycle of Disadvantage*, C(2013), 778 final, 2013b.
- European Commission, 'The Gender Impact of the Crisis and the Gap in Total Hours Worked', *Employment and Social Developments in Europe 2013*, 2013c, Chapter 3.
- European Commission, *Country Report Czech Republic 2015*, Commission Staff Working Document, COM(2015) 85 final, 2015a.
- European Commission, *Country Report Hungary 2015*, Commission Staff Working Document, COM(2015) 85 final, 2015b.
- European Commission, *Country Report Slovakia 2015*, Commission Staff Working Document, COM(2015) 85 final, 2015c.
- European Parliament, *Maternity, Paternity and Parental leave: Data Related to Duration and Compensation Rates*, Study for the FEMM Committee, Directorate-General for Internal Policies, 2015.
- Evertsson, M. and Duvander, A. Z., 'Parental leave – possibility or trap? Does family leave length effect Swedish women's labour market opportunities?', *European Sociological Review*, Vol. 27(4), 2011, pp. 435-450.



- Fonseca, R., Kapteyn, A., Lee, J. and Zamarro, G., 'Does Retirement Make You Happy? a Simultaneous Equations Approach,' *Cahiers de recherche*, 1409, Chaire de recherche Industrielle Alliance sur les enjeux économiques des changements démographiques, 2014.
- Galtry, J. and Callister, P., 'Assessing the optimal length of parental leave for child and parental well-being. How can research inform policy?', *Journal of Family Issues*, Vol. 26(2), 2005, pp. 219-246.
- Gornick, J. C., Meyers, M. K. and Ross, K. E., 'Supporting the Employment of Mothers: Policy Variation across Fourteen Welfare States', *Journal of European Social Policy*, Vol. 7(1), 1997, pp. 45-70.
- Greenwood, J., Guner, N., Kocharov, G. and Santos, C., *Marry Your Like: Assortative Mating and Income Inequality*, NBER Working Paper, No. 19829, 2014.
- Gutiérrez-Domènech, M., 'Employment after motherhood: a European comparison', *Labour Economics*, Vol. 12, 2005, pp. 99-123.
- Hank, K. and Kreyenfeld, M., *A Multilevel Analysis of Child Care and the Transition to Motherhood in Western Germany*, DIW Discussion Paper, No. 290, July 2002.
- Hank, K. and Buber, I., 'Grandchildren: Findings from the 2004 Survey of Health, Ageing, and Retirement in Europe', first published on 4 August 2008, *Journal of Family Issues*, 30 January 2009, pp. 53-73.
- Heckman, J. J., 'Sample selection bias as a specification error', *Econometrica*, Vol. 47(1), 1974, pp. 153-161.
- Heckman, J. J. and Masterov, D. V., *The productivity argument for investing in young children*, NBER working paper, No. 13016, April 2007.
- Joseph, O., Pailhé, A., Recotiller, I. and Solaz, A., 'The economic impact of taking short parental leave: evaluation of a French reform', *Labour Economics*, Vol. 25, 2013, pp. 63-75.
- Keck, W. and Saraceno, C., 'The impact of different social-policy frameworks on social inequalities among women in the European Union: the labour-market participation of mothers', *Social Politics*, Vol. 20(3), 2013, pp. 297-328.
- Kimmel, J., 'Child Care Costs as a Barrier to Employment for Single and Married Mothers', *The Review of Economics and Statistics*, Vol. 80(2), 1998, pp. 287-299.
- Korpi, W. and Palme, J., 'The Paradox of Redistribution and Strategies of Equality: Welfare State Institutions, Inequality and Poverty in the Western Countries', *American Sociological Review*, Vol. 63(5), 1998, pp. 661-687.
- Lietzmann, T., 'After Recent Policy Reform in Germany: Probability and Determinants of Labour Market Integration of Lone Mothers and Mothers with a Partner who Receive Welfare Benefits', *Social Politics*, Vol. 21(4), 2014, pp. 585-616.
- Määttä et al., *The impact of living and working longer on pension income in five European countries: Estonia, Finland, Hungary, the Netherlands and Poland*, FP7 Project MOPACT - Report 2014.
- Mandel, H., 'Winners and Losers: The Consequences of Welfare State Policies for Gender Wage Inequality', *European Sociological Review*, Vol. 28(2), 2012, pp. 241-262.
- Marx, I., Salanauskaitė, L. and Verbist, G., *The paradox of redistribution revisited: And that it may rest in peace?*, IZA Discussion Paper, No. 7414, May 2013.
- Matsaganis, M., and Leventi, C., *Distributive Effects of the Crisis and Austerity in Seven EU Countries*, FP7 Project ImpProVE Working Paper No. 14/04, 2014.
- McGinn, K. L., Ruiz Castro, M. and Long Lingo, E., *Mums the Word! Cross-national Effects of Maternal Employment on Gender Inequalities at Work and at Home*, Harvard Business School Working Paper, No. 15-094, June 2015.
- Mourre, G. et al., *The use of tax expenditures in times of fiscal consolidation*, Economic Papers, No. 523, 2014.
- OECD, *OECD Family Database*, OECD, Paris, 2014.
- OECD, *Pension Outlook*, 2015.
- OECD, *Comparing the Effectiveness and Efficiency of family Cash Benefits and Services*, OECD, Paris, 2015a.
- OECD, 'Women, Work and Income Inequality', *In It Together: Why Less*
- Inequality Benefits All*, OECD, Paris, 2015b, Chapter 5.
- Oláh L., *Changing families in the European Union: trends and policy implications*. Families And Societies Working Paper 44, 2015. <http://www.familiesandsocieties.eu/wp-content/uploads/2015/09/WP44Olah2015.pdf>.
- Pertold-Gebicka, B. and Husek, D., *Female Labour Force Participation and Childcare Policies*, IES Occasional Paper, 1/2015, Charles University, Prague, 2015.
- Plantenga, J. and Remery, C., *Childcare Services for School Age Children. A Comparative Review of 33 Countries*, Directorate-General for Justice, European Commission, 2013.
- Präg, P. and Mills, M., *Family-related Working Schedule Flexibility across Europe*, Short Statistical Report, No. 6, Directorate-General for Justice, European Commission, 2014.
- Rastrigina, O. and Verashchagina, A., *Secondary earners and fiscal policies in Europe*, Directorate-General for Justice, European Commission, Luxembourg, 2015.
- Richardson, L., *Can parents afford to work? An update*, paper presented at the European Population Conference, Stockholm, 13-16 June, 2012.
- Richardson, L. and Pacifico, D., *Gender Wage Gaps and Work Incentives*, OECD, Paris, 2015.
- Rønsen, M. and Sundström, M., 'Family policy and after-birth employment among new mothers – a comparison of Finland, Norway and Sweden', *European Journal of Population*, Vol. 18, 2002, pp. 121-152.
- Rønsen, M., 'Long-term effects of cash for childcare on mothers' labour supply', *Labour*, Vol. 23(3), 2009, pp. 507-533.
- Schøne, P., 'Labour supply effects of a cash-for-care subsidy', *Journal of Population Economics*, Vol. 17, 2004, pp. 703-727.
- Steiber, N. and Haas, B., 'Advances in explaining women's employment patterns', *Socio-Economic Review*, Vol. 10, 2012, pp. 343-367.
- Thébaud, S., 'Business as Plan B. Institutional foundations of

gender inequality in entrepreneurship across 24 industrialised countries', *Administrative Science Quarterly*, published online 5 June 2015.

Thévenon, O. and Neyer, G., *Family policies and diversity in Europe: The state-of-the-art regarding fertility, work, care, leave, laws and self-sufficiency*. FP7 Project Families And Societies Working Paper 7, 2014.

Thévenon, O., Ali, N., Adema, W. and Salvi del Pero, A., *Effects of Reducing Gender Gaps in Education and Labour Force Participation on Economic Growth in the OECD*, OECD Social, Employment and Migration Working Papers, No. 138, OECD Publishing, Paris, 2012.

Vaalavuo, M., 'The Redistributive Impact of 'Old' and 'New' Spending', *Journal of Social Policy*, Vol. 42(3), 2013, pp. 513-539.

Valía-Cotanda, E. et al., *Comparative report on explanation of differences in labour market positions between groups*, FP7 Project INSPIRES Report, 2014.

Van Lancker, W., Ghysels, J. and Cantillon, B., 'The Impact of Child Benefits on Single Mother Poverty: Exploring the Role of Targeting in 15 European Countries', *International Journal of Social Welfare*, 2014.

Veliziotis M., et al., *Involuntary part-time employment: perspectives from two*

*European labour markets*, FP7 Project ImPRovE Working Paper No. 15/02, 2015.

Vodopivec, M. and Dolenc, P., *Live longer, work longer: making it happen in the labour market*, World Bank Discussion Paper, No. 0803, 2008.

Vos, A. E., 'Falling Fertility Rates: New Challenges to the European Welfare States', *Socio-Economic Review*, Vol. 7(3), 2009, pp. 485-503.

Ziefle, A. and Gangl, M., 'Do Women Respond to Changes in Family Policy? A Quasi-Experimental Study of the Duration of Mothers' Employment Interruptions in Germany', *European Sociological Review*, Vol. 30(5), 2014, pp. 562-581.

# Statistical annex <sup>(1)</sup> <sup>(2)</sup>

## 1. MACRO ECONOMIC INDICATORS

Macro economic indicators: European Union 28

European Union 28		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Macro Economic Indicators	Annual percentage growth	Real GDP	2.0	3.4	3.1	0.5	-4.4	2.1	1.7	-0.5	0.2	1.4
		Total employment	1.0	1.7	1.9	1.0	-1.7	-0.7	0.1	-0.4	-0.3	1.0
		Labour productivity	1.0	1.7	1.1	-0.5	-2.7	2.8	1.6	-0.1	0.5	0.4
		Annual average hours worked	0.0	-0.1	0.1	-0.2	-1.3	0.1	0.2	-1.1	-0.4	0.1
		Productivity per hour worked	1.0	1.8	1.0	-0.3	-1.4	2.7	1.4	1.0	0.8	0.3
		Harmonized CPI	2.3	2.3	2.4	3.7	1.0	2.1	3.1	2.6	1.5	0.6
	Annual percentage growth	Price deflator GDP	2.3	2.3	2.9	0.2	-1.4	2.3	1.2	2.4	0.7	1.6
		Nominal compensation per employee	2.8	3.0	3.4	0.6	-1.1	3.7	1.9	2.9	0.8	2.0
		Real compensation per employee (GDP deflator)	0.4	0.7	0.5	0.4	0.3	1.4	0.7	0.5	0.1	0.4
		Real compensation per employee (private consumption deflator)	0.5	0.7	1.0	-3.0	-2.0	1.6	-1.2	0.3	-0.7	1.4
		Nominal unit labour costs	1.7	1.3	2.2	1.1	1.7	0.9	0.3	3.0	0.3	1.6
		Real unit labour costs	-0.6	-0.9	-0.6	0.9	3.2	-1.4	-0.9	0.6	-0.3	0.1

<sup>(1)</sup> By David Arranz.

<sup>(2)</sup> Data extracted on 3 December 2015.

European Union 28		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Labour Market Indicators	Total	Total population (000)	488470 e	490703	492836	495025	496622	496096	495566	496770	497764	498725		
		Population aged 15-64 (000)	328984	330488	331903	333115	333561	331942	330488	329862	329029	328146		
		Total employment (000)	211991	216156	220363	222876	218952	216843	216219	215807	215399	217709		
		Employment aged 15-64 (000)	208508	212568	216564	218924	214981	212799	212033	211347	210763	212807		
		Employment rate (% population aged 20-64)	67.9	68.9	69.8	70.3	69.0	68.6	68.6	68.4	68.4	69.2		
		Employment rate (% population aged 15-64)	63.4	64.3	65.2	65.7	64.5	64.1	64.2	64.1	64.1	64.9		
		Employment rate (% population aged 15-24)	35.9	36.4	37.2	37.3	34.8	33.8	33.3	32.5	32.1	32.5		
		Employment rate (% population aged 25-54)	77.0	78.1	79.0	79.4	78.0	77.7	77.7	77.3	76.9	77.5		
		Employment rate (% population aged 55-64)	42.2	43.3	44.5	45.5	45.9	46.2	47.2	48.7	50.1	51.8		
		FTE employment rate (% population aged 20-64)												
		Self-employed (% total employment)	16.3	16.1	15.9	15.7	15.8	16.0	15.9	15.8	15.7	15.6		
		Part-time employment (% total employment)	17.8	18.0	18.1	18.2	18.7	19.2	19.5	20.0	20.4	20.4		
		Fixed-term contracts (% total employees)	14.0	14.5	14.6	14.2	13.6	14.0	14.1	13.7	13.7	14.0		
		Employment in Services (% total employment)	69.1	69.5	69.8	70.1	71.1	71.7	72.1	72.5	72.9	73.1		
		Employment in Industry (% total employment)	24.9	24.8	24.7	24.5	23.6	22.9	22.7	22.4	22.0	21.9		
		Employment in Agriculture (% total employment)	6.0	5.7	5.5	5.4	5.4	5.4	5.2	5.1	5.0	5.0		
		Activity rate (% population aged 15-64)	69.7	70.1	70.3	70.7	70.8	71.0	71.1	71.7	72.0	72.3		
		Activity rate (% population aged 15-24)	44.2	44.1	44.0	44.2	43.5	42.8	42.5	42.3	42.0	41.7		
		Activity rate (% population aged 25-54)	83.6	84.1	84.3	84.6	84.7	85.0	85.0	85.4	85.4	85.5		
		Activity rate (% population aged 55-64)	45.1	46.1	47.0	47.9	48.9	49.6	50.6	52.5	54.3	55.9		
		Total unemployment (000)	20942	19316	16988	16750	21358	22987	23126	25268	26292	24802		
		Unemployment rate (% labour force)	9.0	8.2	7.2	7.0	9.0	9.6	9.7	10.5	10.9	10.2		
		Youth unemployment rate (% labour force 15-24)	19.0	17.7	15.9	15.9	20.3	21.4	21.7	23.3	23.7	22.2		
		Long-term unemployment rate (% labour force)	4.1	3.7	3.1	2.6	3.0	3.8	4.1	4.7	5.1	5.1		
		Share of long-term unemployment (% of total unemployment)	45.9	45.4	42.9	37.1	33.3	40.0	43.0	44.5	47.3	49.5		
		Youth unemployment ratio (% population aged 15-24)	8.3	7.7	6.8	6.9	8.7	9.0	9.2	9.8	9.9	9.2		
		Employment rate for low skilled 25-64 (ISCED 0-2)	55.7 b	56.4	57.1	56.5	54.6	53.8	53.4	52.7	52.0	52.6 b		
		Employment rate for medium skilled 25-64 (ISCED 3-4)	72.6 b	73.5	74.4	74.7	73.5	73.0	73.1	72.9	72.7	73.4 b		
		Employment rate for high skilled 25-64 (ISCED 5-8)	84.1 b	84.7	85.2	85.1	84.3	83.9	83.7	83.5	83.4	83.7 b		
		Employment rate (Nationals aged 15-64)	63.7 b	64.5	65.5	65.9	64.8	64.5	64.5	64.5	64.5	65.2		
		Employment rate (Other EU-28 aged 15-64)		68.6	69.6	69.6	67.8	67.6	68.0	67.8	68.2	69.2		
		Employment rate (Other than EU-28 aged 15-64)		57.3	58.1	59.0	55.2	54.9	54.7	53.4	52.6	53.2		
		Employment rate (Born in the same country aged 15-64)	63.9 b	64.6	65.4	65.9	64.8	64.4	64.4	64.4	64.4	65.2		
		Employment rate (Born in other EU-28 aged 15-64)		67.9	69.1	68.7	66.9	66.6	66.6	66.1	66.5	67.5		
		Employment rate (Born outside EU-28 aged 15-64)		62.1	62.9	63.2	59.5	58.8	58.0	57.0	56.1	57.0		
		Underemployment (% of labour force aged 15-74)				3.2	3.5	3.7	3.7	3.9	4.3	4.2		
		Seeking but not available (% of labour force aged 15-74)	1.2 b	1.2	1.1	1.1	1.0	1.0	1.0	1.0	0.9	0.9		
		Discouraged, available but not seeking (% of labour force aged 15-74)	3.5 b	3.3	3.2	3.1	3.4	3.5	3.6	3.7	3.8 b	3.9		
		Labour Market Indicators	Male	Total population (000)	238012 e	239157	240256	241351	242173	242070	241682	242369	242973	243523
				Population aged 15-64 (000)	163976	164735	165420	166003	166185	165507	164628	164358	163988	163631
				Total employment (000)	118119	120061	122125	123039	119748	118401	117753	117187	116664	117799
				Employment aged 15-64 (000)	115943	117822	119757	120575	117307	115924	115177	114422	113784	114743
Employment rate (% population aged 20-64)	75.9			76.8	77.6	77.8	75.7	75.1	75.0	74.6	74.3	75.0		
Employment rate (% population aged 15-64)	70.7			71.5	72.4	72.6	70.6	70.0	70.0	69.6	69.4	70.1		
Employment rate (% population aged 15-24)	38.8			39.3	40.2	40.1	36.8	35.9	35.3	34.4	33.9	34.3		
Employment rate (% population aged 25-54)	85.1			85.9	86.7	86.8	84.6	84.0	83.9	83.3	82.6	83.2		
Employment rate (% population aged 55-64)	51.4			52.5	53.7	54.8	54.6	54.5	54.9	56.2	57.4	58.8		
FTE employment rate (% population aged 20-64)														
Self-employed (% total employment)	19.3			19.1	19.0	18.8	19.1	19.3	19.3	19.2	19.1	19.0		
Part-time employment (% total employment)	7.4			7.7	7.7	7.8	8.3	8.7	9.0	9.4	9.8	9.9		
Fixed-term contracts (% total employees)	13.6			14.0	13.9	13.3	12.8	13.4	13.6	13.2	13.3	13.6		
Employment in Services (% total employment)	58.6			58.9	59.1	59.2	60.1	60.9	61.2	61.7	62.3	62.5		
Employment in Industry (% total employment)	34.6			34.6	34.6	34.7	33.8	32.9	32.7	32.2	31.7	31.4		
Employment in Agriculture (% total employment)	6.8			6.5	6.3	6.0	6.1	6.2	6.1	6.1	6.0	6.0		
Activity rate (% population aged 15-64)	77.2			77.5	77.6	77.8	77.6	77.6	77.5	77.8	77.9	78.1		
Activity rate (% population aged 15-24)	47.7			47.4	47.4	47.6	46.6	45.9	45.4	45.2	44.8	44.4		
Activity rate (% population aged 25-54)	91.6			91.9	91.9	91.9	91.7	91.8	91.6	91.8	91.5	91.5		
Activity rate (% population aged 55-64)	55.1			55.9	56.8	57.7	58.4	58.8	59.3	61.0	62.6	63.9		
Total unemployment (000)	10792			9858	8630	8677	11747	12583	12469	13638	14175	13275		
Unemployment rate (% labour force)	8.4			7.6	6.6	6.6	9.0	9.7	9.6	10.4	10.8	10.1		
Youth unemployment rate (% labour force 15-24)	18.9			17.4	15.6	16.0	21.4	22.1	22.3	23.9	24.4	22.8		
Long-term unemployment rate (% labour force)	3.8			3.5	2.9	2.4	2.9	3.9	4.2	4.7	5.2	5.1		
Share of long-term unemployment (% of total unemployment)	45.5			45.7	43.1	36.9	32.0	40.6	43.6	44.8	47.7	50.0		
Youth unemployment ratio (% population aged 15-24)	8.9			8.1	7.2	7.5	9.8	10.0	10.1	10.8	10.9	10.1		
Employment rate for low skilled 25-64 (ISCED 0-2)	69.1 b			69.8	70.2	69.7	66.6	65.2	64.3	63.0	62.0	62.5 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	79.3 b			80.1	81.0	81.4	79.6	79.1	79.2	79.0	78.7	79.3 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	87.4 b			88.0	88.7	88.9	87.9	87.4	87.3	87.3	87.1	87.4 b		
Employment rate (Nationals aged 15-64)	70.8 b			71.5	72.4	72.6	70.8	70.2	70.1	69.8	69.6	70.2		
Employment rate (Other EU-28 aged 15-64)				77.1	78.1	78.2	74.9	74.6	74.8	74.5	74.9	76.1		
Employment rate (Other than EU-28 aged 15-64)				69.0	69.8	69.8	63.9	64.3	64.5	62.8	61.8	62.6		
Employment rate (Born in the same country aged 15-64)	71.0 b			71.5	72.3	72.5	70.7	70.1	69.9	69.6	69.4	70.1		
Employment rate (Born in other EU-28 aged 15-64)				77.1	78.4	77.7	74.2	73.6	73.4	72.7	73.0	73.9		
Employment rate (Born outside EU-28 aged 15-64)				73.1	73.9	73.2	67.7	67.2	66.5	65.3	64.2	65.3		
Underemployment (% of labour force aged 15-74)						1.7	1.9	2.1	2.2	2.4	2.6	2.6		
Seeking but not available (% of labour force aged 15-74)	0.9 b			0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.7		
Discouraged, available but not seeking (% of labour force aged 15-74)	2.4 b			2.3	2.2	2.1	2.5	2.7	2.9	2.9	3.0 b	3.1		

European Union 28		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	250457 e	251545	252580	253674	254449	254026	253884	254402	254791	255202
		Population aged 15-64 (000)	165008	165753	166483	167112	167376	166435	165860	165504	165041	164515
		Total employment (000)	93872	96094	98238	99837	99205	98442	98466	98620	98734	99911
		Employment aged 15-64 (000)	92566	94746	96807	98349	97674	96875	96857	96925	96979	98063
		Employment rate (% population aged 20-64)	60.0	61.1	62.1	62.8	62.3	62.1	62.2	62.4	62.6	63.5
		Employment rate (% population aged 15-64)	56.1	57.2	58.1	58.9	58.4	58.2	58.4	58.6	58.8	59.6
		Employment rate (% population aged 15-24)	32.9	33.4	34.1	34.3	32.8	31.7	31.2	30.5	30.2	30.6
		Employment rate (% population aged 25-54)	69.0	70.2	71.3	72.1	71.5	71.4	71.4	71.3	71.1	71.7
		Employment rate (% population aged 55-64)	33.5	34.7	35.8	36.7	37.7	38.5	40.0	41.7	43.3	45.2
		FTE employment rate (% population aged 20-64)										
		Self-employed (% total employment)	12.6	12.3	12.2	11.9	11.9	11.9	11.8	11.8	11.7	11.6
		Part-time employment (% total employment)	30.7	31.0	31.0	30.9	31.3	31.9	32.1	32.5	33.0	32.8
		Fixed-term contracts (% total employees)	14.5	15.1	15.3	15.1	14.5	14.6	14.6	14.3	14.2	14.4
		Employment in Services (% total employment)	81.7	82.3	82.6	83.0	83.9	84.5	84.6	84.9	85.2	85.3
		Employment in Industry (% total employment)	13.2	12.9	12.8	12.4	11.6	11.1	11.2	11.1	11.0	10.9
		Employment in Agriculture (% total employment)	5.1	4.8	4.6	4.6	4.5	4.4	4.2	4.1	3.9	3.8
		Activity rate (% population aged 15-64)	62.2	62.8	63.1	63.6	64.1	64.4	64.8	65.5	66.0	66.5
		Activity rate (% population aged 15-24)	40.5	40.6	40.5	40.6	40.2	39.6	39.4	39.3	39.2	38.9
		Activity rate (% population aged 25-54)	75.6	76.3	76.7	77.3	77.7	78.2	78.4	79.0	79.2	79.5
		Activity rate (% population aged 55-64)	35.7	36.9	37.9	38.6	40.0	41.0	42.6	44.6	46.5	48.4
		Total unemployment (000)	10150	9458	8358	8073	9611	10405	10657	11630	12118	11527
		Unemployment rate (% labour force)	9.8	9.0	7.9	7.5	8.9	9.6	9.8	10.5	10.9	10.3
		Youth unemployment rate (% labour force 15-24)	19.2	18.1	16.2	15.9	19.0	20.5	21.0	22.4	23.0	21.4
		Long-term unemployment rate (% labour force)	4.5	4.1	3.4	2.8	3.1	3.8	4.1	4.7	5.1	5.1
		Share of long-term unemployment (% of total unemployment)	46.2	45.2	42.7	37.4	35.0	39.3	42.2	44.1	47.0	48.9
		Youth unemployment ratio (% population aged 15-24)	7.6	7.2	6.4	6.3	7.5	8.0	8.3	8.8	9.0	8.3
		Employment rate for low skilled 25-64 (ISCED 0-2)	43.9 b	44.6	45.3	44.7	43.8	43.3	43.2	43.1	42.6	43.0 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	65.5 b	66.5	67.4	67.6	66.9	66.6	66.6	66.5	66.4	67.1 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	80.7 b	81.3	81.8	81.6	81.1	80.6	80.3	80.1	80.1	80.4 b
		Employment rate (Nationals aged 15-64)	56.6 b	57.6	58.6	59.3	58.8	58.7	58.9	59.2	59.4	60.2
		Employment rate (Other EU-28 aged 15-64)		60.2	61.3	61.3	60.9	60.8	61.8	61.6	61.9	62.7
		Employment rate (Other than EU-28 aged 15-64)		45.5	46.4	48.1	46.7	45.8	45.3	44.5	43.9	44.5
		Employment rate (Born in the same country aged 15-64)	56.7 b	57.7	58.6	59.3	58.9	58.7	58.9	59.2	59.4	60.2
		Employment rate (Born in other EU-28 aged 15-64)		59.9	61.0	60.8	60.6	60.6	60.8	60.5	61.0	62.1
		Employment rate (Born outside EU-28 aged 15-64)		51.4	52.4	53.7	51.7	51.0	50.1	49.2	48.6	49.4
		Underemployment (% of labour force aged 15-74)				5.1	5.3	5.5	5.4	5.7	6.2	6.1
Seeking but not available (% of labour force aged 15-74)	1.5 b	1.5	1.5	1.4	1.2	1.2	1.2	1.2	1.1	1.1		
Discouraged, available but not seeking (% of labour force aged 15-74)	4.8 b	4.6	4.5	4.3	4.5	4.5	4.6	4.7	4.8 b	4.9		



European Union 28		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)					23.7	24.3	24.7	24.5	24.4 e	
		At-risk-of-poverty (% of total population)					16.4	16.8	16.8	16.6	17.2 e	
		At-risk-of-poverty threshold (PPS single person)										
		Poverty gap (%)						22.8	22.9	23.3	23.8	24.7
		Persistent at-risk-of-poverty (% of total population)							10.1 e	10.3 e	9.1 e	
		At-risk-of-poverty before social transfers excl. pensions (% of total population)						26.0	26.4	25.7	25.9	26.0 e
		Impact of social transfers (excl. pensions) in reducing poverty (%)						36.9	36.4	34.6	35.9	33.9 e
		Severe Material Deprivation (% of total population)						8.4	8.9	9.9	9.6	9.0 e
		Share of people living in low work intensity households (% of people aged 0-59)						10.2	10.4	10.5	10.8	11.0 e
		Gross Household Disposable income adjusted for consumer prices (growth %)	1.3	1.9	2.1	0.6	0.7	-0.3	-0.4	-1.0	-0.3	0.7
		Income quintile share ratio S80/S20						4.9	5.0	5.0	5.0	5.2
		GINI coefficient						30.4	30.8	30.4	30.5	31.0
		Early leavers from education and training (% of population aged 18-24)	15.7	15.3 b	14.9	14.6	14.2	13.9	13.4	12.7	11.9	11.2 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	12.7	11.7 b	10.9	10.9	12.4	12.8	12.9	13.2	13.0	12.5
	Male	At-risk-of-poverty or exclusion (% of male population)						22.6	23.2	23.7	23.6	23.5 e
		At-risk-of-poverty (% of male population)						15.7	16.0	16.2	16.1	16.7 e
		Poverty gap (%)						23.5	23.9	24.2	24.5	25.7
		Persistent at-risk-of-poverty (% of male population)							9.6 e	9.7 e	8.8 e	
		Severe Material Deprivation (% of male population)						8.2	8.6	9.6	9.4	8.8 e
		Share of people living in low work intensity households (% of males aged 0-59)						9.5	9.8	9.9	10.3	10.6 e
Life expectancy at birth (years)							76.9 e	77.4	77.4	77.8 e		
Healthy life years at birth (years) - men							61.8 e	61.7	61.5	61.4 e		
Early leavers from education and training (% of males aged 18-24)		17.7	17.4 b	16.9	16.6	16.1	15.8	15.3	14.5	13.6	12.8 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)		11.5	10.5 b	9.8	9.7	12.0	12.3	12.6	12.9	12.8	12.3	
Female	At-risk-of-poverty or exclusion (% of female population)						24.8	25.4	25.7	25.4	25.2 e	
	At-risk-of-poverty (% of female population)						17.1	17.6	17.4	17.2	17.8 e	
	Poverty gap (%)						22.0	22.1	22.5	23.1	23.9	
	Persistent at-risk-of-poverty (% of female population)							10.6 e	11.0 e	9.3 e		
	Severe Material Deprivation (% of female population)						8.6	9.2	10.2	9.8	9.1 e	
	Share of people living in low work intensity households (% of females aged 0-59)						10.9	11.1	11.0	11.3	11.5 e	
	Life expectancy at birth (years)						82.8 e	83.2	83.1	83.3 e		
	Healthy life years at birth (years) - women						62.6 e	62.1	62.1	61.5 e		
	Early leavers from education and training (% of females aged 18-24)	13.6	13.2 b	12.8	12.6	12.3	11.9	11.5	10.9	10.2	9.6 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	13.9	12.9 b	12.2	12.0	12.9	13.2	13.3	13.4	13.2	12.7	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)						27.5	27.3	27.9	27.7	27.7 e	
	At-risk-of-poverty (% of Children population)						20.8	20.6	20.5	20.2	21.1 e	
	Severe Material Deprivation (% of Children population)						9.8	10.1	11.8	11.1	10.4 e	
	Share of children living in low work intensity households (% of Children population)						9.3	9.2	9.1	9.5	9.6 e	
	Risk of poverty of children in households at work (Working Intensity > 0.2)						15.8	15.6	15.7	15.5	16.1 e	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)						40.9	41.1	39.9	41.8	38.8 e	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)						23.6	24.4	25.3	25.4	25.3 e	
	At-risk-of-poverty (% of Working age population)						15.2	15.9	16.3	16.4	17.1 e	
	Severe Material Deprivation (% of Working age population)						8.4	9.0	10.0	10.0	9.3 e	
	Very low work intensity (18-59)						10.5	10.8	10.9	11.2	11.5 e	
	In-work at-risk-of poverty rate (% of persons employed 18-64)						8.3	8.8	9.0	8.9	9.6 e	
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)						39.0	37.9	35.8	36.4	34.5 e		
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)						20.1	20.5	19.4	18.2	17.9 e	
	At-risk-of-poverty (% of Elderly population)						16.0	15.9	14.6	13.8	13.8 e	
	Severe Material Deprivation (% of Elderly population)						6.7	7.2	7.5	6.9	6.3 e	
	Relative median income of elderly (ratio with median income of people younger than 65)						0.88	0.89	0.92	0.93	0.94	
	Aggregate replacement ratio (ratio)						0.53	0.53	0.54	0.55	0.56	
Expenditure in social protection (% of GDP)	Sickness/Health care				7.6 p	8.4 p	8.3 p	8.3 p	8.4 p			
	Disability				2.0 p	2.1 p	2.1 p	2.1 p	2.1 p			
	Old age and survivors				11.7 p	12.7 p	12.7 p	12.7 p	13.0 p			
	Family/Children				2.2 p	2.5 p	2.5 p	2.4 p	2.4 p			
	Unemployment				1.3 p	1.8 p	1.7 p	1.6 p	1.6 p			
	Housing and Social exclusion n.e.c.				1.0 p	1.1 p	1.2 p	1.1 p	1.1 p			
	Total (including Admin and Other expenditures)				27.0 p	29.8 p	29.7 p	29.4 p	29.8 p			
of which: Means tested benefits				2.7 p	3.0 p	3.0 p	3.0 p	3.0 p				

## Macro economic indicators: Euro Area 18

Euro Area 18		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	1.7	3.2	3.0	0.5	-4.5	2.0	1.6	-0.8	-0.3	0.9		
		Total employment	1.0	1.8	1.9	0.8	-1.8	-0.5	0.1	-0.5	-0.7	0.6		
		Labour productivity	0.6	1.4	1.1	-0.4	-2.7	2.6	1.5	-0.4	0.4	0.3		
		Annual average hours worked	-0.3	-0.1	0.1	-0.1	-1.7	0.1	0.1	-1.3	-0.6	0.0		
		Productivity per hour worked	0.9	1.5	1.0	-0.3	-1.1	2.5	1.3	1.0	1.0	0.3		
		Harmonized CPI	2.2	2.2	2.2	3.3	0.3	1.6	2.7	2.5	1.3	0.4		
		Price deflator GDP	1.9	1.9	2.5	2.0	1.0	0.7	1.0	1.3	1.3	0.9		
		Nominal compensation per employee	2.1	2.3	2.6	3.4	1.6	1.9	2.1	1.5	1.6	1.4		
		Real compensation per employee (GDP deflator)	0.2	0.3	0.2	1.4	0.6	1.2	1.0	0.3	0.2	0.6		
		Real compensation per employee (private consumption deflator)	-0.1	0.1	0.5	0.0	1.3	0.3	-0.6	-0.9	0.2	1.0		
		Nominal unit labour costs	1.5	0.9	1.5	3.8	4.5	-0.6	0.6	1.9	1.2	1.2		
		Real unit labour costs	-0.5	-1.0	-0.9	1.8	3.4	-1.3	-0.4	0.6	-0.2	0.3		
		Labour Market Indicators	Total	Total population (000)	320265	321991	323744	325466	326496	327328	326705	327642	328379	329093
				Population aged 15-64 (000)	214774	215622	216538	217437	217628	217635	216309	216100	215682	215249
Total employment (000)	138341			141114	143902	145332	142502	141694	141042	140176	139355	140165		
Employment aged 15-64 (000)	136494			139185	141838	143177	140336	139518	138778	137733	136824	137482		
Employment rate (% population aged 20-64)	67.9			68.9	69.9	70.2	68.8	68.4	68.4	68.0	67.7	68.2		
Employment rate (% population aged 15-64)	63.6			64.6	65.5	65.8	64.5	64.1	64.2	63.7	63.4	63.9		
Employment rate (% population aged 15-24)	36.3			36.8	37.7	37.5	34.8	33.6	33.0	31.7	31.0	30.7		
Employment rate (% population aged 25-54)	77.2			78.2	79.1	79.4	77.8	77.3	77.3	76.5	75.8	76.1		
Employment rate (% population aged 55-64)	40.4			41.7	43.2	44.3	45.1	45.7	47.0	48.5	49.9	51.7		
FTE employment rate (% population aged 20-64)														
Self-employed (% total employment)	15.5			15.4	15.3	15.1	15.1	15.1	15.0	15.1	15.1	14.9		
Part-time employment (% total employment)	18.5			19.0	19.2	19.3	19.9	20.3	20.8	21.5	22.2	22.4		
Fixed-term contracts (% total employees)	16.0			16.6	16.5	16.2	15.3	15.6	15.7	15.2	15.1	15.3		
Employment in Services (% total employment)	71.5			71.9	72.1	72.6	73.5	74.2	74.5	74.9	75.2	75.5		
Employment in Industry (% total employment)	24.6			24.3	24.2	23.9	23.0	22.4	22.1	21.8	21.4	21.2		
Employment in Agriculture (% total employment)	3.9			3.8	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4		
Activity rate (% population aged 15-64)	69.9			70.4	70.8	71.2	71.3	71.3	71.4	72.0	72.2	72.3		
Activity rate (% population aged 15-24)	44.2			44.1	44.4	44.4	43.5	42.3	41.9	41.4	40.9	40.2		
Activity rate (% population aged 25-54)	83.9			84.5	84.7	85.1	85.1	85.2	85.2	85.6	85.5	85.4		
Activity rate (% population aged 55-64)	43.7			44.8	46.1	47.0	48.4	49.3	50.6	52.7	54.6	56.4		
Total unemployment (000)	13863			12897	11658	11863	15022	15885	15957	17992	19059	18473		
Unemployment rate (% labour force)	9.1			8.4	7.5	7.6	9.6	10.1	10.1	11.4	12.0	11.6		
Youth unemployment rate (% labour force 15-24)	18.5			17.2	15.6	16.1	20.6	21.3	21.2	23.5	24.4	23.8		
Long-term unemployment rate (% labour force)	4.1			3.9	3.3	3.0	3.4	4.3	4.6	5.3	6.0	6.1		
Share of long-term unemployment (% of total unemployment)	45.2			46.1	44.1	39.1	35.5	42.5	45.2	46.4	49.8	52.6		
Youth unemployment ratio (% population aged 15-24)	7.9			7.3	6.7	6.9	8.7	8.8	8.8	9.7	9.9	9.5		
Employment rate for low skilled 25-64 (ISCED 0-2)	56.2 b			57.0	57.5	57.2	55.1	54.4	54.1	53.0	52.1	52.2 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	73.1 b			74.2	75.1	75.6	74.5	74.2	74.1	73.8	73.4	73.7 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	83.1 b			83.8	84.5	84.7	83.9	83.4	83.4	83.1	82.6	82.7 b		
Employment rate (Nationals aged 15-64)	63.9 b			64.9	65.9	66.2	65.1	64.7	64.7	64.4	64.1	64.4		
Employment rate (Other EU-28 aged 15-64)				67.4	68.2	67.9	65.8	65.7	65.9	65.7	65.8	66.5		
Employment rate (Other than EU-28 aged 15-64)				56.5	57.8	58.6	54.5	54.2	54.0	52.5	51.5	52.1		
Employment rate (Born in the same country aged 15-64)	64.0 b			64.9	65.8	66.2	65.0	64.6	64.6	64.3	64.0	64.3		
Employment rate (Born in other EU-28 aged 15-64)				66.4	67.4	66.5	64.4	64.1	63.5	62.9	62.9	63.3		
Employment rate (Born outside EU-28 aged 15-64)				62.5	63.4	63.4	58.9	58.0	56.8	55.3	53.8	54.4		
Underemployment (% of labour force aged 15-74)						3.6	3.7	3.8	3.8	4.0	4.6	4.6		
Seeking but not available (% of labour force aged 15-74)	1.4 b			1.4	1.3	1.2	1.1	1.1	1.1	1.1	1.0	1.0		
Discouraged, available but not seeking (% of labour force aged 15-74)	3.4 b			3.3	3.3	3.3	3.5	3.6	3.8	3.9	4.1 b	4.4		

Euro Area 18		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		
Labour Market Indicators	Male	Total population (000)	156236	157177	158086	158952	159452	159827	159343	159871	160292	160684	
		Population aged 15-64 (000)	107255	107745	108188	108620	108647	108589	107733	107638	107431	107251	
		Total employment (000)	78094	79344	80561	80877	78457	77709	77030	76229	75496	75814	
		Employment aged 15-64 (000)	76864	78069	79212	79469	77056	76316	75563	74636	73844	74052	
		Employment rate (% population aged 20-64)	76.6	77.4	78.2	78.1	75.8	75.1	74.9	74.1	73.5	73.8	
		Employment rate (% population aged 15-64)	71.7	72.5	73.2	73.2	70.9	70.3	70.1	69.3	68.7	69.0	
		Employment rate (% population aged 15-24)	39.6	40.2	40.9	40.5	36.9	35.7	35.0	33.6	32.7	32.4	
		Employment rate (% population aged 25-54)	86.3	87.0	87.6	87.4	84.8	84.1	83.9	82.7	81.7	81.9	
		Employment rate (% population aged 55-64)	49.8	50.8	52.2	53.2	53.4	53.7	54.3	55.6	56.7	58.0	
		FTE employment rate (% population aged 20-64)											
		Self-employed (% total employment)	18.5	18.4	18.3	18.2	18.4	18.5	18.6	18.7	18.6	18.4	
		Part-time employment (% total employment)	6.9	7.3	7.4	7.5	8.0	8.4	8.8	9.3	9.9	10.2	
		Fixed-term contracts (% total employees)	15.3	15.8	15.7	15.2	14.2	14.7	15.0	14.5	14.5	14.8	
		Employment in Services (% total employment)	60.8	61.0	61.1	61.4	62.3	63.1	63.6	64.0	64.5	64.7	
		Employment in Industry (% total employment)	34.5	34.4	34.5	34.3	33.4	32.6	32.1	31.7	31.1	30.9	
		Employment in Agriculture (% total employment)	4.7	4.6	4.4	4.3	4.3	4.3	4.3	4.3	4.4	4.4	
		Activity rate (% population aged 15-64)	78.1	78.3	78.5	78.6	78.3	78.1	77.9	78.2	78.1	78.1	
		Activity rate (% population aged 15-24)	47.8	47.8	47.8	47.8	46.6	45.3	44.6	44.1	43.4	42.7	
		Activity rate (% population aged 25-54)	92.8	93.0	93.0	92.9	92.5	92.4	92.2	92.2	91.8	91.6	
		Activity rate (% population aged 55-64)	53.7	54.5	55.5	56.4	57.3	58.1	58.8	60.7	62.4	63.8	
		Total unemployment (000)	7012	6408	5750	6002	8119	8566	8498	9637	10211	9836	
		Unemployment rate (% labour force)	8.3	7.5	6.7	7.0	9.4	10.0	9.9	11.2	11.9	11.5	
		Youth unemployment rate (% labour force 15-24)	17.8	16.4	14.9	15.9	21.4	21.9	21.5	23.9	24.8	24.2	
		Long-term unemployment rate (% labour force)	3.7	3.5	3.0	2.7	3.2	4.3	4.5	5.2	5.9	6.0	
		Share of long-term unemployment (% of total unemployment)	44.7	46.3	44.1	38.4	33.7	42.6	45.4	46.4	49.8	52.7	
		Youth unemployment ratio (% population aged 15-24)	8.2	7.5	6.8	7.3	9.7	9.6	9.5	10.5	10.7	10.3	
		Employment rate for low skilled 25-64 (ISCED 0-2)	71.2 b	71.7	71.9	70.9	67.5	66.1	65.3	63.4	61.9	62.1 b	
		Employment rate for medium skilled 25-64 (ISCED 3-4)	80.2 b	81.0	82.0	82.2	80.4	80.0	80.0	79.5	78.9	79.1 b	
		Employment rate for high skilled 25-64 (ISCED 5-8)	86.9 b	87.7	88.5	88.6	87.5	87.1	87.1	86.8	86.3	86.3 b	
		Employment rate (Nationals aged 15-64)	71.8 b	72.6	73.3	73.3	71.3	70.6	70.4	69.7	69.1	69.3	
		Employment rate (Other EU-28 aged 15-64)		76.3	76.8	76.6	72.8	72.8	72.8	72.1	72.4	73.4	
		Employment rate (Other than EU-28 aged 15-64)		68.5	69.7	69.4	63.1	63.5	63.7	61.5	60.7	61.1	
		Employment rate (Born in the same country aged 15-64)	71.9 b	72.6	73.2	73.2	71.2	70.4	70.3	69.5	68.9	69.1	
		Employment rate (Born in other EU-28 aged 15-64)		76.5	77.1	75.9	71.8	71.5	70.7	69.1	69.1	69.3	
		Employment rate (Born outside EU-28 aged 15-64)		73.8	74.4	73.2	66.7	66.1	64.9	63.1	61.5	61.9	
Underemployment (% of labour force aged 15-74)				1.6	1.8	2.0	2.0	2.2	2.6	2.7			
Seeking but not available (% of labour force aged 15-74)	1.1 b	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.8	0.8			
Discouraged, available but not seeking (% of labour force aged 15-74)	2.2 b	2.0	2.1	2.1	2.4	2.6	2.8	2.8	3.0 b	3.3			

Euro Area 18		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		
Labour Market Indicators	Female	Total population (000)	164029	164815	165658	166515	167044	167501	167362	167771	168086	168409	
		Population aged 15-64 (000)	107520	107877	108351	108817	108981	109046	108576	108462	108251	107998	
		Total employment (000)	60247	61770	63342	64454	64046	63985	64012	63947	63859	64351	
		Employment aged 15-64 (000)	59631	61117	62626	63708	63280	63202	63214	63097	62980	63430	
		Employment rate (% population aged 20-64)	59.2	60.5	61.6	62.4	61.9	61.8	62.0	61.9	61.9	61.9	62.6
		Employment rate (% population aged 15-64)	55.5	56.7	57.8	58.5	58.1	58.0	58.2	58.2	58.2	58.2	58.7
		Employment rate (% population aged 15-24)	32.9	33.3	34.3	34.4	32.7	31.4	31.0	29.7	29.2	29.2	28.9
		Employment rate (% population aged 25-54)	68.1	69.4	70.5	71.3	70.7	70.6	70.6	70.3	70.0	70.0	70.3
		Employment rate (% population aged 55-64)	31.5	33.0	34.6	35.8	37.1	38.2	40.0	41.9	43.6	45.6	
		FTE employment rate (% population aged 20-64)											
		Self-employed (% total employment)	11.7	11.6	11.4	11.2	11.0	10.9	10.8	10.8	10.9	10.9	10.8
		Part-time employment (% total employment)	33.5	34.0	34.2	34.1	34.5	34.9	35.3	35.9	36.8	36.7	36.7
		Fixed-term contracts (% total employees)	16.9	17.6	17.5	17.3	16.6	16.5	16.5	15.9	15.7	15.7	15.8
		Employment in Services (% total employment)	84.7	85.2	85.5	86.0	86.6	87.0	87.2	87.4	87.5	87.5	87.7
		Employment in Industry (% total employment)	12.4	12.0	11.8	11.4	10.8	10.5	10.4	10.3	10.3	10.3	10.1
		Employment in Agriculture (% total employment)	2.9	2.8	2.7	2.6	2.6	2.5	2.4	2.3	2.2	2.2	2.2
		Activity rate (% population aged 15-64)	61.7	62.6	63.2	63.8	64.3	64.6	65.0	65.8	66.2	66.2	66.6
		Activity rate (% population aged 15-24)	40.5	40.4	40.8	40.9	40.4	39.3	39.1	38.6	38.3	38.3	37.6
		Activity rate (% population aged 25-54)	75.0	75.9	76.4	77.1	77.6	78.0	78.2	78.9	79.2	79.2	79.3
		Activity rate (% population aged 55-64)	34.1	35.6	37.1	38.1	39.8	41.0	42.9	45.2	47.2	49.4	
		Total unemployment (000)	6851	6490	5908	5861	6904	7319	7460	8355	8849	8637	
		Unemployment rate (% labour force)	10.2	9.6	8.6	8.4	9.8	10.3	10.4	11.5	12.1	11.8	
		Youth unemployment rate (% labour force 15-24)	19.3	18.3	16.5	16.4	19.6	20.6	20.9	23.1	23.9	23.3	
		Long-term unemployment rate (% labour force)	4.7	4.4	3.8	3.3	3.7	4.4	4.7	5.4	6.0	6.2	
		Share of long-term unemployment (% of total unemployment)	45.7	45.9	44.1	39.9	37.5	42.3	44.9	46.5	49.7	52.5	
		Youth unemployment ratio (% population aged 15-24)	7.6	7.1	6.5	6.5	7.6	7.9	8.1	8.9	9.1	8.7	
		Employment rate for low skilled 25-64 (ISCED 0-2)	42.4 b	43.4	44.1	44.3	43.3	43.2	43.2	42.9	42.4	42.4 b	
		Employment rate for medium skilled 25-64 (ISCED 3-4)	65.8 b	67.2	68.0	68.8	68.4	68.3	68.1	68.0	67.8	68.3 b	
		Employment rate for high skilled 25-64 (ISCED 5-8)	79.1 b	79.8	80.4	80.8	80.3	79.9	80.0	79.6	79.1	79.3 b	
		Employment rate (Nationals aged 15-64)	56.0 b	57.2	58.4	59.2	58.8	58.7	59.0	59.0	59.1	59.6	
		Employment rate (Other EU-28 aged 15-64)		58.7	59.7	59.5	59.0	58.9	59.5	59.6	59.6	60.0	
		Employment rate (Other than EU-28 aged 15-64)		44.4	45.9	47.6	45.9	45.2	44.8	44.0	42.8	43.7	
		Employment rate (Born in the same country aged 15-64)	56.1 b	57.3	58.4	59.2	58.8	58.7	59.0	59.0	59.1	59.5	
		Employment rate (Born in other EU-28 aged 15-64)		57.7	59.0	58.5	57.9	57.7	57.5	57.7	57.7	58.2	
		Employment rate (Born outside EU-28 aged 15-64)		51.6	52.8	53.9	51.4	50.5	49.3	48.2	46.7	47.6	
		Underemployment (% of labour force aged 15-74)				5.9	6.0	6.1	5.9	6.2	6.9	6.9	
Seeking but not available (% of labour force aged 15-74)	1.8 b	1.9	1.8	1.6	1.4	1.4	1.4	1.4	1.2	1.1			
Discouraged, available but not seeking (% of labour force aged 15-74)	5.1 b	4.8	4.7	4.7	4.8	4.8	4.9	5.2	5.3 b	5.6			

Euro Area 18		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	21.7	22.0	21.8	21.7	21.5	21.8	22.9	23.2	23.1	23.4 e	
		At-risk-of-poverty (% of total population)	15.3	15.6	16.3 e	16.1	16.1	16.2	16.7	16.8	16.6	17.1 e	
		At-risk-of-poverty threshold (PPS single person)											
		Poverty gap (%)	21.5	22.0	22.1	21.2	21.7	22.3	22.6	23.1	23.9	24.9	
		Persistent at-risk-of-poverty (% of total population)				8.8	9.6	10.1	10.6	10.4	9.2		
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	24.3	24.8	24.7	24.1	24.3	25.1	25.6	25.2	25.5	25.6 e	
		Impact of social transfers (excl. pensions) in reducing poverty (%)	37.0	37.1	34.0 e	33.2	33.7	35.5	34.8	33.3	34.9	33.2 e	
		Severe Material Deprivation (% of total population)	5.9	5.7	5.5	5.9	5.9	5.9	6.8	7.7	7.5	7.3 e	
		Share of people living in low work intensity households (% of people aged 0-59)	9.7	10.2	9.7	9.2	9.0	10.4	10.9	10.6	11.1	11.7 e	
		Gross Household Disposable income adjusted for consumer prices (growth %)											
		Income quintile share ratio S80/S20	4.6	4.7	4.8	4.9	4.8	4.8	5.0	4.9	5.0	5.2	
		GINI coefficient	29.3	29.3	30.0	30.4	30.2	30.2	30.5	30.3	30.6	31.0	
		Early leavers from education and training (% of population aged 18-24)	17.6	17.3 b	16.7	16.4	15.8	15.5	14.7	13.8	12.9	11.9 b	
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	12.1	11.2 b	10.7	11.0	12.6	12.7	12.8	13.1	12.9	12.6	
		Male	At-risk-of-poverty or exclusion (% of male population)	20.2	20.4	20.2	20.2	20.2	20.7	21.7	22.2	22.2	22.5 e
	At-risk-of-poverty (% of male population)		14.3	14.6	15.3 e	15.1	15.2	15.4	16.0	16.1	16.0	16.5 e	
	Poverty gap (%)		22.4	22.7	22.8	21.9	22.3	22.7	23.5	23.9	24.6	25.7	
	Persistent at-risk-of-poverty (% of male population)					8.0	8.6	9.3	10.0	9.6	9.0		
	Severe Material Deprivation (% of male population)		5.7	5.5	5.1	5.6	5.7	5.7	6.6	7.5	7.3	7.1 e	
	Share of people living in low work intensity households (% of males aged 0-59)		8.7	9.1	8.6	8.3	8.2	9.7	10.3	10.0	10.7	11.3 e	
Life expectancy at birth (years)													
Healthy life years at birth (years) - men													
Early leavers from education and training (% of males aged 18-24)	20.2		20.0 b	19.4	19.0	18.3	18.0	17.0	16.0	14.7	13.7 b		
NEET: Young people not in employment, education or training (% of males aged 15-24)	11.0		10.1 b	9.7	10.2	12.6	12.6	12.6	13.2	13.0	12.7		
Female	At-risk-of-poverty or exclusion (% of female population)		23.1	23.5	23.4	23.1	22.8	22.9	23.9	24.3	23.9	24.2 e	
	At-risk-of-poverty (% of female population)		16.3	16.5	17.2 e	17.1	17.1	17.0	17.5	17.5	17.2	17.7 e	
	Poverty gap (%)		20.7	21.4	21.5	20.7	21.4	21.9	21.9	22.5	23.3	24.2	
	Persistent at-risk-of-poverty (% of female population)					9.5	10.4	10.9	11.2	11.2	9.4		
	Severe Material Deprivation (% of female population)		6.2	6.0	5.9	6.1	6.0	6.0	7.1	7.8	7.6	7.4 e	
	Share of people living in low work intensity households (% of females aged 0-59)	10.7	11.3	10.7	10.1	9.8	11.1	11.6	11.3	11.6	12.2 e		
	Life expectancy at birth (years)												
	Healthy life years at birth (years) - women												
	Early leavers from education and training (% of females aged 18-24)	15.0	14.5 b	14.0	13.7	13.3	12.9	12.4	11.6	10.9	10.1 b		
	NEET: Young people not in employment, education or training (% of females aged 15-24)	13.3	12.4 b	11.8	11.8	12.6	12.8	12.9	13.1	12.8	12.5		
	Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	22.8	23.1	23.0	23.8	24.2	25.3	25.5	25.5	25.2	25.5 e	
		At-risk-of-poverty (% of Children population)	17.8	17.7	18.6 e	19.2	19.7	20.6	20.5	20.4	19.8	20.4 e	
		Severe Material Deprivation (% of Children population)	6.8	6.5	6.1	7.2	7.1	7.0	7.8	8.9	8.4	8.3 e	
		Share of children living in low work intensity households (% of Children population)	7.5	7.8	7.4	6.9	7.1	8.6	9.0	8.2	8.7	9.2 e	
		Risk of poverty of children in households at work (Working Intensity > 0.2)	13.7	13.8	14.4	15.3	15.6	15.6	15.3	15.3	14.8	15.1 e	
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)		43.0	43.8	41.7 e	39.2	38.6	39.1	39.2	37.6	40.4	38.4 e		
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	21.3	21.9	21.6	21.4	21.3	22.1	23.4	24.2	24.4	25.0 e		
	At-risk-of-poverty (% of Working age population)	13.6	14.1	14.8 e	14.6	14.8	15.2	16.1	16.6	16.7	17.4 e		
	Severe Material Deprivation (% of Working age population)	5.9	5.8	5.5	5.9	6.0	6.0	7.0	7.9	7.9	7.7 e		
	Very low work intensity (18-59)	10.5	11.0	10.4	9.9	9.6	11.0	11.6	11.5	11.9	12.6 e		
	In-work at-risk-of poverty rate (% of persons employed 18-64)	7.3	7.3	7.9	8.1	8.2	7.9	8.5	8.6	8.7	9.4 e		
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	40.4	40.3	36.5 e	36.0	36.2	38.0	36.6	34.7	35.5	34.1 e		
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	21.7	21.1	21.3	20.4	19.3	17.4	18.1	17.5	16.4	16.1 e		
	At-risk-of-poverty (% of Elderly population)	19.1	18.7	19.1 e	18.2	17.3	15.2	15.1	14.1	13.2	13.3 e		
	Severe Material Deprivation (% of Elderly population)	5.0	4.6	4.7	4.4	4.1	4.1	5.3	5.6	5.2	4.9 e		
	Relative median income of elderly (ratio with median income of people younger than 65)	0.86	0.86	0.85	0.86	0.88	0.89	0.91	0.93	0.94	0.95		
	Aggregate replacement ratio (ratio)	0.52	0.51	0.49	0.50	0.51	0.52	0.54	0.54	0.56	0.57		
Expenditure in social protection (% of GDP)	Sickness/Health care	7.6	7.6	7.5	7.8 p	8.6 p	8.6 p	8.5 p	8.6 p				
	Disability	1.9	1.9	1.8	1.9 p	2.0 p	2.0 p	2.0 p	2.0 p				
	Old age and survivors	12.2	12.0	11.8	12.1 p	13.0 p	13.1 p	13.0 p	13.3 p				
	Family/Children	2.1	2.1	2.1	2.1 p	2.3 p	2.3 p	2.2 p	2.2 p				
	Unemployment	1.8	1.6	1.6	1.6 p	2.1 p	2.0 p	1.9 p	1.9 p				
	Housing and Social exclusion n.e.c.	0.8	0.8	0.8	0.8 p	0.9 p	0.9 p	0.9 p	0.9 p				
	Total (including Admin and Other expenditures)	27.6	27.2	26.8	27.5 p	30.4 p	30.3 p	30.0 p	30.4 p				
	of which: Means tested benefits	2.8	2.7	2.7	2.8 p	3.1 p	3.1 p	3.1 p	3.1 p				



## Macro economic indicators: Belgium

Belgium		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	2.1	2.5	3.4	0.7	-2.3	2.7	1.8	0.2	0.0	1.3		
		Total employment	1.4	1.1	1.7	1.8	-0.2	0.6	1.4	0.4	-0.4	0.3		
		Labour productivity	0.6	1.4	1.7	-1.0	-2.1	2.0	0.4	-0.2	0.4	1.0		
		Annual average hours worked	-0.5	0.4	0.3	-0.4	-1.4	-0.2	0.9	0.0	-0.1	0.1		
		Productivity per hour worked	1.1	0.9	1.4	-0.6	-0.7	2.2	-0.5	-0.2	0.5	0.9		
		Harmonized CPI	2.5	2.3	1.8	4.5	0.0	2.3	3.4	2.6	1.2	0.5		
		Price deflator GDP	2.1	2.3	2.1	2.0	0.8	1.9	2.0	2.0	1.3	0.7		
		Nominal compensation per employee	1.8	3.6	3.6	3.7	1.1	1.4	3.1	3.2	2.6	1.0		
		Real compensation per employee (GDP deflator)	-0.3	1.2	1.5	1.7	0.3	-0.6	1.1	1.2	1.2	0.3		
		Real compensation per employee (private consumption deflator)	-0.7	1.2	1.7	-0.8	1.1	-0.9	-0.2	0.6	1.4	0.4		
		Nominal unit labour costs	1.1	2.2	1.8	4.7	3.3	-0.7	2.7	3.4	2.2	-0.1		
		Real unit labour costs	-1.0	-0.2	-0.2	2.7	2.5	-2.6	0.7	1.3	0.8	-0.7		
		Labour Market Indicators	Total	Total population (000)	10477	10546	10614	10708	10796	10892	10989	11063	11125	11181
				Population aged 15-64 (000)	6876	6941	7008	7073	7126	7177	7220	7242	7257	7266
Total employment (000)	4235			4264	4380	4446	4421	4489	4509	4524	4530	4544		
Employment aged 15-64 (000)	4199			4233	4348	4414	4389	4451	4471	4479	4485	4497		
Employment rate (% population aged 20-64)	66.5			66.5	67.7	68.0	67.1	67.6	67.3	67.2	67.2	67.3		
Employment rate (% population aged 15-64)	61.1			61.0	62.0	62.4	61.6	62.0	61.9	61.8	61.8	61.9		
Employment rate (% population aged 15-24)	27.5			27.6	27.5	27.4	25.3	25.2	26.0	25.3	23.6	23.2		
Employment rate (% population aged 25-54)	78.3			78.4	79.7	80.5	79.8	80.0	79.3	79.3	79.0	79.1		
Employment rate (% population aged 55-64)	31.8			32.0	34.4	34.5	35.3	37.3	38.7	39.5	41.7	42.7		
FTE employment rate (% population aged 20-64)	60.7 b			60.5	61.8	62.0	61.0	61.4	60.6 b	60.7	60.7	61.2		
Self-employed (% total employment)	16.3			16.2	16.1	16.1	16.2	16.2	16.2	16.4	16.5	16.6		
Part-time employment (% total employment)	22.0			22.2	22.1	22.6	23.4	24.0	25.1	25.1	24.7	24.1		
Fixed-term contracts (% total employees)	8.9			8.7	8.6	8.3	8.2	8.1	9.0	8.1	8.2	8.7		
Employment in Services (% total employment)	77.5			77.6	77.9	78.1	78.7	79.3	79.5	79.7	80.1	80.6		
Employment in Industry (% total employment)	20.8			20.7	20.5	20.3	19.8	19.3	19.1	19.0	18.6	18.2		
Employment in Agriculture (% total employment)	1.8			1.7	1.6	1.6	1.5	1.4	1.3	1.3	1.3	1.3		
Activity rate (% population aged 15-64)	66.7			66.5	67.1	67.1	66.9	67.7	66.7	66.9	67.5	67.7		
Activity rate (% population aged 15-24)	35.0			34.7	33.9	33.4	32.4	32.5	32.0	31.5	31.0	30.2		
Activity rate (% population aged 25-54)	84.6			84.5	85.3	85.7	85.6	86.3	84.7	85.0	85.3	85.6		
Activity rate (% population aged 55-64)	33.3			33.6	35.9	36.1	37.2	39.2	40.3	41.4	44.1	45.1		
Total unemployment (000)	390			383	353	333	380	406	347	369	417	423		
Unemployment rate (% labour force)	8.5			8.3	7.5	7.0	7.9	8.3	7.2	7.6	8.4	8.5		
Youth unemployment rate (% labour force 15-24)	21.5			20.5	18.8	18.0	21.9	22.4	18.7	19.8	23.7	23.2		
Long-term unemployment rate (% labour force)	4.4			4.2	3.8	3.3	3.5	4.1	3.5	3.4	3.9	4.3		
Share of long-term unemployment (% of total unemployment)	51.7			51.2	50.4	47.6	44.2	48.8	48.3	44.7	46.1	49.9		
Youth unemployment ratio (% population aged 15-24)	7.5			7.1	6.4	6.0	7.1	7.3	6.0	6.2	7.3	7.0		
Employment rate for low skilled 25-64 (ISCED 0-2)	48.9 b			49.0	49.8	49.4 b	48.0	48.9	47.7 b	47.6	47.8	47.5 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	74.0 b			73.2	74.2	74.7 b	74.0	74.5	74.0 b	73.5	73.6	72.8 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	84.2 b			83.6	84.9	84.7 b	84.2	84.0	84.2 b	84.6	84.1	84.7 b		
Employment rate (Nationals aged 15-64)	62.0 b			62.0	62.9	63.1	62.5	62.8	63.0 b	63.0	62.9	62.9		
Employment rate (Other EU-28 aged 15-64)				58.6	61.2	62.3	59.6	62.4	62.2 b	62.0	60.6	62.5		
Employment rate (Other than EU-28 aged 15-64)				33.6	38.1	39.9	38.8	38.0	37.4 b	36.2	37.6	38.0		
Employment rate (Born in the same country aged 15-64)	62.7 b			62.7	63.5	63.8	63.2	63.6	63.7 b	63.8	63.6	63.8		
Employment rate (Born in other EU-28 aged 15-64)				56.2	57.8	60.8	58.7	61.2	62.1 b	61.5	62.1	62.6		
Employment rate (Born outside EU-28 aged 15-64)		44.9	45.2	48.1	47.1	46.5	45.8 b	45.4	46.0	45.7				
Underemployment (% of labour force aged 15-74)				0.8	0.8	0.8	0.8 b	3.2 b	3.3	3.1				
Seeking but not available (% of labour force aged 15-74)	2.3 b	1.9	1.8	1.5	1.6	1.7	1.4 b	1.2 b	1.2	1.0				
Discouraged, available but not seeking (% of labour force aged 15-74)	0.8 b	0.8	0.8	0.7	0.7	0.7	2.2 b	2.0 b	2.1	2.0				

Belgium		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	5127	5162	5197	5246	5291	5340	5390	5429	5461	5491
		Population aged 15-64 (000)	3459	3491	3524	3557	3582	3607	3628	3639	3646	3649
		Total employment (000)	2387	2392	2444	2461	2429	2458	2462	2466	2451	2435
		Employment aged 15-64 (000)	2361	2371	2421	2439	2406	2433	2435	2433	2420	2403
		Employment rate (% population aged 20-64)	74.3	74.0	75.0	74.7	73.2	73.5	73.0	72.7	72.3	71.6
		Employment rate (% population aged 15-64)	68.3	67.9	68.7	68.6	67.2	67.4	67.1	66.9	66.4	65.8
		Employment rate (% population aged 15-24)	29.7	30.4	29.9	29.7	27.4	27.3	27.7	27.8	25.3	24.5
		Employment rate (% population aged 25-54)	86.1	85.9	87.0	87.0	85.7	85.5	84.9	84.5	84.0	83.2
		Employment rate (% population aged 55-64)	41.7	40.9	42.9	42.8	42.9	45.6	46.0	46.0	47.7	48.4
		FTE employment rate (% population aged 20-64)	73.0 b	72.6	73.6	73.2	71.5	71.8	70.9 b	70.9	70.2	70.0
		Self-employed (% total employment)	18.8	19.0	18.9	19.2	19.3	19.5	19.8	20.0	20.6	20.3
		Part-time employment (% total employment)	7.6	7.4	7.5	7.9	8.6	9.0	9.8	9.7	9.4	9.1
		Fixed-term contracts (% total employees)	6.8	6.9	6.8	6.6	6.5	6.8	7.7	7.1	7.3	7.7
		Employment in Services (% total employment)	67.7	67.2	67.8	67.3	68.1	69.1	69.1	69.2	69.4	70.0
		Employment in Industry (% total employment)	30.1	30.6	30.1	30.7	30.0	29.1	29.2	29.0	28.8	28.4
		Employment in Agriculture (% total employment)	2.2	2.2	2.0	2.0	2.0	1.9	1.7	1.8	1.8	1.7
		Activity rate (% population aged 15-64)	73.9	73.4	73.6	73.3	72.8	73.4	72.3	72.5	72.7	72.4
		Activity rate (% population aged 15-24)	37.6	37.4	36.1	36.0	34.9	35.2	34.1	35.0	33.7	32.3
		Activity rate (% population aged 25-54)	92.2	91.9	92.5	92.3	91.8	92.2	90.7	90.7	90.9	90.7
		Activity rate (% population aged 55-64)	43.4	42.7	44.4	44.4	45.2	47.6	47.8	47.9	50.5	51.3
	Total unemployment (000)	196	191	174	170	204	217	188	204	232	241	
	Unemployment rate (% labour force)	7.6	7.4	6.7	6.5	7.8	8.1	7.1	7.7	8.7	9.0	
	Youth unemployment rate (% labour force 15-24)	21.0	18.8	17.1	17.3	21.5	22.4	18.7	20.4	24.7	24.0	
	Long-term unemployment rate (% labour force)	3.9	3.7	3.3	3.0	3.4	4.0	3.4	3.5	4.0	4.7	
	Share of long-term unemployment (% of total unemployment)	50.7	49.8	49.3	47.0	43.5	49.6	47.1	46.0	46.5	51.9	
	Youth unemployment ratio (% population aged 15-24)	7.9	7.0	6.2	6.2	7.5	7.9	6.4	7.1	8.3	7.7	
	Employment rate for low skilled 25-64 (ISCED 0-2)	62.2 b	61.2	61.9	60.6 b	58.7	59.2	57.9 b	57.5	56.9	56.1 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	81.8 b	81.2	82.0	81.9 b	80.5	81.6	80.7 b	79.8	79.4	78.1 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	88.0 b	87.2	88.2	88.2 b	87.2	86.7	86.9 b	87.2	87.2	87.2 b	
	Employment rate (Nationals aged 15-64)	68.9 b	68.7	69.2	68.9	67.7	68.0	67.8 b	67.8	67.3	66.5	
	Employment rate (Other EU-28 aged 15-64)		67.0	69.4	70.4	67.3	68.5	68.3 b	67.1	65.5	67.3	
	Employment rate (Other than EU-28 aged 15-64)		45.7	52.4	54.1	51.3	50.0	49.3 b	45.3	47.1	48.4	
	Employment rate (Born in the same country aged 15-64)	69.3 b	69.0	69.7	69.2	68.1	68.5	68.2 b	68.2	67.5	66.9	
	Employment rate (Born in other EU-28 aged 15-64)		65.8	65.5	69.5	66.8	67.6	68.1 b	67.4	67.5	67.6	
	Employment rate (Born outside EU-28 aged 15-64)		56.5	57.2	60.1	57.1	56.5	56.7 b	55.2	55.5	55.0	
	Underemployment (% of labour force aged 15-74)				0.4	0.5	0.5	0.6 b	1.6 b	1.6	1.6	
	Seeking but not available (% of labour force aged 15-74)	1.7 b	1.4	1.4	1.1	1.2	1.4	0.9 b	0.9 b	0.9	0.8	
	Discouraged, available but not seeking (% of labour force aged 15-74)	0.7 b	0.6	0.6	0.5	0.7	0.6	2.0 b	1.9 b	2.0	1.8	

Belgium		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	5350	5384	5417	5462	5505	5553	5600	5635	5664	5691
		Population aged 15-64 (000)	3417	3450	3484	3517	3543	3570	3592	3603	3611	3616
		Total employment (000)	1849	1872	1937	1985	1991	2031	2047	2058	2080	2108
		Employment aged 15-64 (000)	1838	1862	1927	1975	1984	2018	2036	2046	2065	2095
		Employment rate (% population aged 20-64)	58.6	58.8	60.3	61.3	61.0	61.6	61.5	61.7	62.1	62.9
		Employment rate (% population aged 15-64)	53.8	54.0	55.3	56.2	56.0	56.5	56.7	56.8	57.2	57.9
		Employment rate (% population aged 15-24)	25.2	24.7	25.0	25.0	23.2	23.1	24.2	22.6	21.9	21.8
		Employment rate (% population aged 25-54)	70.4	70.7	72.3	73.8	73.8	74.4	73.8	73.9	74.0	74.9
		Employment rate (% population aged 55-64)	22.1	23.2	26.0	26.3	27.7	29.2	31.6	33.1	35.8	37.0
		FTE employment rate (% population aged 20-64)	49.2 b	49.2	50.6	51.5	51.1	51.7	51.2 b	51.5	52.1	53.3
		Self-employed (% total employment)	13.1	12.7	12.5	12.2	12.3	12.2	11.9	12.0	11.8	12.4
		Part-time employment (% total employment)	40.5	41.1	40.6	40.9	41.5	42.3	43.4	43.6	42.7	41.4
		Fixed-term contracts (% total employees)	11.4	10.9	10.8	10.2	10.2	9.6	10.3	9.3	9.2	9.7
		Employment in Services (% total employment)	89.5	90.2	89.9	90.8	91.0	91.0	91.4	91.9	92.0	92.2
		Employment in Industry (% total employment)	9.3	8.7	9.0	8.2	8.0	8.1	7.7	7.4	7.2	6.9
		Employment in Agriculture (% total employment)	1.2	1.1	1.1	1.0	1.0	0.9	0.9	0.8	0.8	0.9
		Activity rate (% population aged 15-64)	59.5	59.5	60.4	60.8	60.9	61.8	61.1	61.3	62.3	63.0
		Activity rate (% population aged 15-24)	32.3	31.9	31.6	30.8	29.9	29.8	29.8	27.9	28.2	28.1
		Activity rate (% population aged 25-54)	76.8	77.0	78.0	79.0	79.2	80.4	78.7	79.1	79.7	80.6
		Activity rate (% population aged 55-64)	23.4	24.6	27.5	27.9	29.3	30.9	33.0	34.9	37.8	39.0
		Total unemployment (000)	194	192	179	163	176	189	158	165	185	182
		Unemployment rate (% labour force)	9.5	9.3	8.5	7.6	8.1	8.5	7.2	7.4	8.2	7.9
		Youth unemployment rate (% labour force 15-24)	22.1	22.6	20.9	18.7	22.5	22.4	18.7	18.9	22.5	22.3
		Long-term unemployment rate (% labour force)	5.0	4.9	4.3	3.7	3.6	4.1	3.6	3.2	3.7	3.8
		Share of long-term unemployment (% of total unemployment)	52.8	52.6	51.4	48.1	45.0	47.8	49.8	43.1	45.5	47.4
		Youth unemployment ratio (% population aged 15-24)	7.1	7.2	6.6	5.8	6.7	6.7	5.6	5.3	6.3	6.3
		Employment rate for low skilled 25-64 (ISCED 0-2)	35.7 b	36.6	37.7	38.1 b	37.0	38.2	37.0 b	36.9	37.9	38.1 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	65.5 b	64.5	65.4	66.8 b	66.8	66.7	66.7 b	66.5	67.1	66.9 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	80.6 b	80.2	81.9	81.5 b	81.6	81.6	81.8 b	82.3	81.5	82.6 b
		Employment rate (Nationals aged 15-64)	55.0 b	55.3	56.6	57.3	57.3	57.7	58.1 b	58.1	58.6	59.4
		Employment rate (Other EU-28 aged 15-64)		49.5	52.0	53.5	51.2	55.8	55.9 b	56.8	55.3	57.5
		Employment rate (Other than EU-28 aged 15-64)		22.0	24.8	26.0	26.4	26.7	25.6 b	27.1	27.8	28.1
		Employment rate (Born in the same country aged 15-64)	56.0 b	56.2	57.2	58.2	58.2	58.7	59.1 b	59.4	59.7	60.5
Employment rate (Born in other EU-28 aged 15-64)		47.3	50.7	52.8	50.9	55.2	56.8 b	56.5	56.9	57.9		
Employment rate (Born outside EU-28 aged 15-64)		33.7	34.2	36.6	37.4	36.9	35.2 b	35.9	37.0	36.8		
Underemployment (% of labour force aged 15-74)				1.2	1.1	1.1	1.0 b	5.2 b	5.3	4.8		
Seeking but not available (% of labour force aged 15-74)	3.1 b	2.6	2.4	2.0	2.2	2.1	2.0 b	1.6 b	1.4	1.3		
Discouraged, available but not seeking (% of labour force aged 15-74)	1.1 b	1.1	1.0	1.0	0.9	0.9	2.5 b	2.2 b	2.3	2.3		

Belgium		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	22.6	21.5	21.6	20.8	20.2	20.8	21.0	21.6	20.8	21.2
		At-risk-of-poverty (% of total population)	14.8	14.7	15.2	14.7	14.6	14.6	15.3	15.3	15.1	15.5
		At-risk-of-poverty threshold (PPS single person)	9320	9707	9787	10046	10501	10399	10895	11038	11738	11755
		Poverty gap (%)	17.8	19.4	17.8	17.2	18.1	18.0	18.6	18.7	19.2	18.8
		Persistent at-risk-of-poverty (% of total population)			7.8	9.0	9.2	9.3	8.0	9.9	8.7	9.5
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	28.3	26.8	27.5	27.0	26.7	26.7	27.8	27.7	26.3	27.5
		Impact of social transfers (excl. pensions) in reducing poverty (%)	47.7	45.2	44.7	45.6	45.3	45.3	45.0	44.8	42.6	43.6
		Severe Material Deprivation (% of total population)	6.5	6.4	5.7	5.6	5.2	5.9	5.7	6.3	5.1	5.9
		Share of people living in low work intensity households (% of people aged 0-59)	15.1	14.3	13.8	11.7	12.3	12.7	13.8	13.9	14.0	14.6
		Gross Household Disposable income adjusted for consumer prices (growth %)	1.0	2.3	2.1	2.4	2.2	-1.0	-1.0	0.6	-0.6	0.5
		Income quintile share ratio S80/S20	4.0	4.2	3.9	4.1	3.9	3.9	3.9	4.0	3.8	3.8
		GINI coefficient	28.0	27.8	26.3	27.5	26.4	26.6	26.3	26.5	25.9	25.9
		Early leavers from education and training (% of population aged 18-24)	12.9	12.6 b	12.1	12.0 b	11.1	11.9	12.3	12.0	11.0	9.8 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	13.0	11.2 b	11.2	10.1	11.1	10.9	11.8 b	12.3	12.7	12.0
	Male	At-risk-of-poverty or exclusion (% of male population)	21.4	20.0	19.9	19.1	18.5	20.0	20.4	20.9	20.4	20.9
		At-risk-of-poverty (% of male population)	14.1	13.7	14.4	13.6	13.4	13.9	14.6	14.7	14.6	15.0
		Poverty gap (%)	18.0	20.7	19.2	18.2	18.9	18.0	19.9	18.9	20.1	19.6
		Persistent at-risk-of-poverty (% of male population)			7.3	8.3	7.8	8.5	8.2	9.5	9.1	9.6
		Severe Material Deprivation (% of male population)	6.5	6.2	5.2	5.2	4.9	5.7	5.9	6.3	5.5	6.2
		Share of people living in low work intensity households (% of males aged 0-59)	13.7	12.8	12.6	10.3	11.1	11.9	13.2	13.4	14.0	14.2
		Life expectancy at birth (years)	76.2	76.6	77.1	76.9	77.3	77.5	78.0	77.8	78.1	
		Healthy life years at birth (years) - men	62.4 bd	63.0	63.5	63.4	63.9	64.0	63.4	64.2	64.0	
		Early leavers from education and training (% of males aged 18-24)	15.3	15.1 b	13.9	13.4 b	12.8	13.8	14.9	14.4	13.2	11.8 b
		NEET: Young people not in employment, education or training (% of males aged 15-24)	12.5	10.2 b	10.2	9.2	10.5	10.8	11.6 b	12.5	13.2	12.6
Female	At-risk-of-poverty or exclusion (% of female population)	23.7	23.1	23.1	22.4	21.8	21.7	21.5	22.3	21.2	21.5	
	At-risk-of-poverty (% of female population)	15.5	15.6	15.9	15.9	15.7	15.2	16.0	15.9	15.5	15.9	
	Poverty gap (%)	16.8	18.5	16.9	16.6	17.7	18.0	17.4	18.5	18.5	18.1	
	Persistent at-risk-of-poverty (% of female population)			8.3	9.7	10.4	10.0	7.8	10.3	8.4	9.4	
	Severe Material Deprivation (% of female population)	6.5	6.7	6.2	6.0	5.5	6.0	5.4	6.3	4.7	5.6	
	Share of people living in low work intensity households (% of females aged 0-59)	16.5	15.9	15.0	13.2	13.6	13.5	14.4	14.3	14.0	14.9	
	Life expectancy at birth (years)	81.9	82.3	82.6	82.6	82.8	83.0	83.3	83.1	83.2		
	Healthy life years at birth (years) - women	62.3 bd	63.2	63.9	64.1	63.7	62.6	63.6	65.0	63.7		
	Early leavers from education and training (% of females aged 18-24)	10.5	10.0 b	10.3	10.6 b	9.3	10.0	9.7	9.5	8.7	7.7 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	13.6	12.3 b	12.2	11.1	11.7	10.9	12.0 b	12.2	12.1	11.5	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	23.7	21.4	21.6	21.3	20.5	23.2	23.3	22.8	21.9	23.2	
	At-risk-of-poverty (% of Children population)	18.1	15.3	16.9	17.2	16.6	18.3	18.7	17.3	17.2	18.8	
	Severe Material Deprivation (% of Children population)	8.5	9.4	7.0	7.3	6.5	7.7	8.2	8.3	5.5	6.8	
	Share of children living in low work intensity households (% of Children population)	13.4	13.1	12.2	8.9	11.0	12.0	14.0	13.0	12.2	13.0	
	Risk of poverty of children in households at work (Working Intensity > 0.2)	9.7	6.7	9.2	11.1	8.8	10.3	8.5	8.6	9.2	10.1	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	46.3	47.2	46.2	45.6	48.6	42.5	44.7	46.6	46.6	43.9	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	21.9	20.7	20.7	20.1	19.3	20.0	20.0	21.3	20.8	21.6	
	At-risk-of-poverty (% of Working age population)	12.0	12.2	12.6	12.2	12.1	12.1	12.9	13.5	13.4	14.2	
	Severe Material Deprivation (% of Working age population)	6.5	6.2	5.9	5.7	5.3	6.0	5.6	6.6	5.8	6.5	
	Very low work intensity (18-59)	15.7	14.8	14.4	12.8	12.8	12.9	13.7	14.2	14.7	15.1	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	3.9	4.0	4.3	4.7	4.5	4.4	4.1	4.5	4.4	4.8	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	55.6	53.1	52.3	53.1	51.8	52.9	51.1	50.6	47.7	48.0	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	23.3	25.2	25.0	22.9	23.1	21.0	21.6	21.2	19.5	17.3	
	At-risk-of-poverty (% of Elderly population)	21.4	23.2	23.0	21.2	21.6	19.4	20.2	19.4	18.4	16.1	
	Severe Material Deprivation (% of Elderly population)	3.6	3.3	3.6	3.2	3.1	2.8	2.6	2.8	2.0	2.4	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.73	0.71	0.74	0.74	0.74	0.75	0.74	0.74	0.76	0.77	
	Aggregate replacement ratio (ratio)	0.42	0.42	0.44	0.45	0.45	0.46	0.44	0.46	0.47	0.47	
Expenditure in social protection (% of GDP)	Sickness/Health care	7.4	7.1	7.2	7.6	8.3	8.2	8.3	8.5	8.5		
	Disability	2.0	1.9	1.8	1.9	2.1	2.1	2.2	2.3	2.4		
	Old age and survivors	10.6	10.5	10.2	10.8	11.6	11.3	11.6	11.7	12.0		
	Family/Children	2.1	2.1	2.1	2.1	2.3	2.3	2.3	2.2	2.2		
	Unemployment	3.4	3.4	3.2	3.3	3.8	3.7	3.7	3.7	3.5		
	Housing and Social exclusion n.e.c.	0.9	0.9	0.9	1.0	1.1	1.0	1.0	1.1	1.1		
	Total (including Admin and Other expenditures) of which: Means tested benefits	27.5 1.2	27.2 1.3	26.9 1.3	28.4 1.4	30.7 1.5	30.2 1.5	30.5 1.5	30.8 1.5	30.9 1.6		

## Macro economic indicators: Bulgaria

Bulgaria		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	7.2	6.8	7.7	5.6	-4.2	0.1	1.6	0.2	1.3	1.5		
		Total employment	2.7	3.3	3.2	2.4	-1.7	-3.9	-2.2	-2.5 p	-0.4 p	0.4 p		
		Labour productivity	4.4	3.3	4.4	3.2	-2.6	4.1	3.9	2.8 p	1.7 p	1.2 p		
		Annual average hours worked	-0.3	-0.3	0.0	2.4	-2.8	-0.1	-0.1	0.1 p	0.0 p	-0.1 p		
		Productivity per hour worked	4.7	3.6	4.3	0.8	0.3	4.2	3.9	2.8 p	1.7 p	1.2 p		
		Harmonized CPI	6.0	7.4	7.6	12.0	2.5	3.0	3.4	2.4	0.4	-1.6		
		Price deflator GDP	6.5	6.7	11.1	8.2	4.0	1.2	6.9	1.6	-0.7	0.4		
		Nominal compensation per employee	9.3	6.3	12.7	16.8	8.1	9.9	6.8	7.7 p	8.8 p	5.6 p		
		Real compensation per employee (GDP deflator)	2.7	-0.4	1.5	8.0	3.9	8.6	-0.1	6.1 p	9.6 p	5.1 p		
		Real compensation per employee (private consumption deflator)	3.1	-1.0	4.8	4.3	5.5	6.7	3.3	5.2 p	8.4 p	7.3 p		
		Nominal unit labour costs	4.7	2.9	8.0	13.2	10.9	5.6	2.8	4.8 p	7.0 p	4.4 p		
		Real unit labour costs	-1.8	-3.6	-2.8	4.6	6.6	4.3	-3.8	3.2 p	7.8 p	4.0 p		
		Labour Market Indicators	Total	Total population (000)	7747	7706	7673	7640	7607	7564	7333 b	7278	7242	7210
				Population aged 15-64 (000)	5283	5238	5198	5169	5122	5046	5010 b	4924	4859	4796
Total employment (000)	2982			3110	3253	3361	3254	3053	2965 b	2934	2935	2981		
Employment aged 15-64 (000)	2947			3072	3209	3306	3205	3010	2928 b	2895	2889	2927		
Employment rate (% population aged 20-64)	61.9			65.1	68.4	70.7	68.8	65.4	62.9 b	63.0	63.5	65.1		
Employment rate (% population aged 15-64)	55.8			58.6	61.7	64.0	62.6	59.7	58.4 b	58.8	59.5	61.0		
Employment rate (% population aged 15-24)	21.6			23.2	24.5	26.3	24.8	22.2	22.1 b	21.9	21.2	20.7		
Employment rate (% population aged 25-54)	73.0			75.7	79.4	81.3	79.2	75.7	73.3 b	73.1	73.3	74.5		
Employment rate (% population aged 55-64)	34.7			39.6	42.6	46.0	46.1	43.5	44.6 b	45.7	47.4	50.0		
FTE employment rate (% population aged 20-64)	61.4 b			64.7	68.1	70.3 b	68.4	64.8	62.4 b	62.4	62.9	64.4		
Self-employed (% total employment)	27.8			27.2	26.5	26.4	26.7	27.1	26.6 b	26.1 p	26.6 p	27.0 p		
Part-time employment (% total employment)	2.1			2.0	1.7	2.3	2.3	2.4	2.4 b	2.4	2.7	2.7		
Fixed-term contracts (% total employees)	6.4			6.2	5.2	5.0	4.7	4.5	4.1 b	4.5	5.7	5.3		
Employment in Services (% total employment)	51.4			51.4	51.4	50.6	52.5	54.1	54.6	55.3 p	55.7 p	55.6 p		
Employment in Industry (% total employment)	27.4			28.3	29.2	30.1	27.9	26.2	25.9	25.8 p	25.1 p	25.0 p		
Employment in Agriculture (% total employment)	21.2			20.3	19.4	19.3	19.7	19.7	19.6	18.9 p	19.2 p	19.4 p		
Activity rate (% population aged 15-64)	62.1			64.5	66.3	67.8	67.2	66.5	65.9 b	67.1	68.4	69.0		
Activity rate (% population aged 15-24)	27.9			28.9	28.9	30.1	29.5	28.9	29.5 b	30.4	29.6	27.2		
Activity rate (% population aged 25-54)	80.2			82.3	84.5	85.5	84.3	83.4	81.9 b	82.3	83.1	83.3		
Activity rate (% population aged 55-64)	38.0			43.0	45.7	48.7	49.2	47.9	48.9 b	51.1	54.1	56.6		
Total unemployment (000)	338			309	242	202	240	352 i	376	410	436	385		
Unemployment rate (% labour force)	10.1			9.0	6.9	5.6	6.8	10.3 i	11.3	12.3	13.0	11.4		
Youth unemployment rate (% labour force 15-24)	21.0			18.3	14.1	11.9	15.1	21.9 i	25.0	28.1	28.4	23.8		
Long-term unemployment rate (% labour force)	6.1			5.0	4.1	2.9	3.0	4.8	6.3	6.8	7.4	6.9		
Share of long-term unemployment (% of total unemployment)	59.8			55.7	58.8	51.7	43.3	46.4	55.7 b	55.2	57.3	60.4		
Youth unemployment ratio (% population aged 15-24)	6.2			5.6	4.4	3.8	4.8	6.7	7.4 b	8.5	8.4	6.5		
Employment rate for low skilled 25-64 (ISCED 0-2)	40.8 b			41.4 b	44.5	47.6 b	46.4	41.0 b	38.0 b	37.4	38.1	40.0 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	69.9 b			73.0 b	75.7	77.8 b	75.4	70.7 b	69.3 b	69.1	69.3	71.1 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	80.9 b			82.7 b	85.1	86.4 b	85.8	83.2 b	81.8 b	81.8	81.4	82.7 b		
Employment rate (Nationals aged 15-64)	55.8 b			58.7	61.7	64.0 b	62.6	59.8 b	58.5 b	58.8	59.5	61.1		
Employment rate (Other EU-28 aged 15-64)														
Employment rate (Other than EU-28 aged 15-64)				54.2 u	60.6 u		42.7 u	42.5 bu			47.5 u	55.4 u		
Employment rate (Born in the same country aged 15-64)				58.6	61.7	64.0 b	62.6	59.8 b	58.5 b	58.8	59.5	61.1		
Employment rate (Born in other EU-28 aged 15-64)														
Employment rate (Born outside EU-28 aged 15-64)				61.4	61.0 u	55.2 bu	51.7 u	46.6 bu	49.7 bu	54.7 u	57.9	60.3		
Underemployment (% of labour force aged 15-74)						0.6 b	0.6	0.8	0.8 b	0.8	1.0	1.0		
Seeking but not available (% of labour force aged 15-74)	0.5 b			0.6	0.5	0.7 b	0.6	0.7	0.8 b	0.8	0.9	0.7		
Discouraged, available but not seeking (% of labour force aged 15-74)	13.1 b			10.4	8.0	5.8 b	6.8	8.3	8.5 b	8.1	7.5	6.9		



Bulgaria		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	3754	3731	3714	3700	3681	3659	3567 b	3538	3519	3503
		Population aged 15-64 (000)	2614	2590	2578	2562	2540	2508	2517 b	2476	2446	2417
		Total employment (000)	1592	1653	1732	1793	1732	1608	1567 b	1542	1547	1577
		Employment aged 15-64 (000)	1569	1626	1701	1756	1699	1579	1541 b	1517	1518	1543
		Employment rate (% population aged 20-64)	66.8	69.9	73.4	76.1	73.8	69.1	66.0 b	65.8	66.4	68.1
		Employment rate (% population aged 15-64)	60.0	62.8	66.0	68.5	66.9	63.0	61.2 b	61.3	62.1	63.9
		Employment rate (% population aged 15-24)	23.9	25.4	27.1	29.3	28.0	25.4	25.1 b	24.9	24.0	24.0
		Employment rate (% population aged 25-54)	75.7	78.6	82.5	84.7	82.7	77.9	74.7 b	74.3	75.0	76.4
		Employment rate (% population aged 55-64)	45.5	49.5	51.8	55.8	54.1	50.3	50.5 b	50.8	51.9	54.5
		FTE employment rate (% population aged 20-64)	66.5 b	69.7	73.2	75.9 b	73.4	68.5	65.5 b	65.2	65.9	67.5
		Self-employed (% total employment)	32.9	32.8	32.1	31.2	31.7	31.7	31.9 b	31.7	32.7	33.1
		Part-time employment (% total employment)	1.7	1.5	1.3	2.0	2.0	2.2	2.1 b	2.2	2.2	2.3
		Fixed-term contracts (% total employees)	6.7	6.3	5.0	5.6	5.2	5.0	4.5 b	4.9	6.2	5.7
		Employment in Services (% total employment)	44.5	43.7	43.4	42.3	43.6	45.0	45.7 b	46.9	47.2	46.5
		Employment in Industry (% total employment)	30.5	32.2	33.4	35.1	33.0	31.6	30.4 b	29.4	28.8	29.0
		Employment in Agriculture (% total employment)	25.0	24.1	23.1	22.6	23.4	23.4	23.9 b	23.7	24.0	24.5
		Activity rate (% population aged 15-64)	67.0	68.8	70.6	72.5	72.0	70.8	69.9 b	71.0	72.2	72.9
		Activity rate (% population aged 15-24)	31.1	31.3	31.7	34.0	34.0	33.5	33.9 b	35.3	34.3	31.5
		Activity rate (% population aged 25-54)	83.3	85.1	87.5	88.8	88.0	86.3	84.5 b	84.8	85.7	86.2
		Activity rate (% population aged 55-64)	49.9	53.6	55.3	58.7	57.4	55.7	55.8 b	57.3	59.9	62.5
		Total unemployment (000)	185	159	123	105	132	200 i	219	241	250	221
		Unemployment rate (% labour force)	10.3	8.6	6.5	5.5	6.9	10.9 i	12.3	13.5	13.9	12.3
		Youth unemployment rate (% labour force 15-24)	22.0	17.7	13.5	12.8	16.7	23.2 i	26.0	29.5	30.2	23.8
		Long-term unemployment rate (% labour force)	6.0	4.7	3.7	2.7	2.8	5.0	7.0 b	7.7	8.1	7.7
		Share of long-term unemployment (% of total unemployment)	58.8	55.0	56.6	50.0	40.7	46.3	56.9 b	56.7	58.3	62.4
		Youth unemployment ratio (% population aged 15-24)	7.3	5.9	4.6	4.7	6.0	8.1	8.8 b	10.4	10.4	7.5
		Employment rate for low skilled 25-64 (ISCED 0-2)	48.2 b	49.2 b	52.2	56.9 b	54.9	47.5 b	43.7 b	42.7	43.4	45.4 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	74.9 b	77.8 b	80.9	82.7 b	80.1	75.3 b	72.7 b	72.1	72.5	74.7 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	85.4 b	86.5 b	88.6	90.2 b	89.9	85.7 b	83.7 b	83.6	84.1	85.6 b
		Employment rate (Nationals aged 15-64)	60.0 b	62.8	66.0	68.5 b	66.9	63.4 b	61.2 b	61.3	62.1	63.9
		Employment rate (Other EU-28 aged 15-64)										
		Employment rate (Other than EU-28 aged 15-64)										
		Employment rate (Born in the same country aged 15-64)		62.8	66.0	68.5 b	66.9	63.4 b	61.2 b	61.3	62.1	63.8
		Employment rate (Born in other EU-28 aged 15-64)										
		Employment rate (Born outside EU-28 aged 15-64)		67.7 u	58.8 u						62.4 u	71.0 u
		Underemployment (% of labour force aged 15-74)				0.5 b	0.6	0.8	0.7 b	0.7	0.7	0.9
Seeking but not available (% of labour force aged 15-74)	0.5 b	0.6	0.5	0.6 b	0.6	0.7	0.8 b	0.7	0.8	0.6		
Discouraged, available but not seeking (% of labour force aged 15-74)	12.6 b	10.0	7.6	5.4 b	6.5	8.4	8.8 b	8.1	7.8	7.2		

Bulgaria		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		
Labour Market Indicators	Female	Total population (000)	3993	3975	3958	3941	3925	3904	3767 b	3740	3723	3707	
		Population aged 15-64 (000)	2669	2647	2621	2607	2582	2538	2493 b	2448	2414	2379	
		Total employment (000)	1390	1457	1521	1568	1521	1445	1398 b	1392	1388	1404	
		Employment aged 15-64 (000)	1378	1446	1508	1551	1506	1431	1386 b	1378	1378	1372	1384
		Employment rate (% population aged 20-64)	57.1	60.4	63.5	65.4	64.0	61.7	59.8 b	60.2	60.7	62.0	
		Employment rate (% population aged 15-64)	51.7	54.6	57.6	59.5	58.3	56.4	55.6 b	56.3	56.8	58.2	
		Employment rate (% population aged 15-24)	19.4	21.0	21.8	23.1	21.4	18.9	19.0 b	18.7	18.4	17.3	
		Employment rate (% population aged 25-54)	70.3	72.8	76.2	77.9	75.8	73.6	71.9 b	71.8	71.5	72.5	
		Employment rate (% population aged 55-64)	25.5	31.1	34.5	37.7	39.2	37.7	39.4 b	41.3	43.4	46.0	
		FTE employment rate (% population aged 20-64)	56.5 b	59.9	63.1	64.9 b	63.5	61.2	59.2 b	59.5	59.9	61.3	
		Self-employed (% total employment)	21.9	20.8	20.0	20.9	21.0	21.9	20.7 b	19.8	19.9	20.2	
		Part-time employment (% total employment)	2.5	2.5	2.1	2.7	2.7	2.6	2.6 b	2.7	3.2	3.1	
		Fixed-term contracts (% total employees)	6.2	6.1	5.5	4.4	4.2	4.0	3.7 b	4.0	5.1	4.9	
		Employment in Services (% total employment)	59.6	60.5	61.0	60.4	63.0	64.5	65.3 b	65.4	66.0	66.7	
		Employment in Industry (% total employment)	23.7	23.7	24.0	24.3	21.7	20.0	20.4 b	21.5	20.7	20.2	
		Employment in Agriculture (% total employment)	16.7	15.8	15.0	15.4	15.2	15.5	14.4 b	13.1	13.3	13.2	
		Activity rate (% population aged 15-64)	57.3	60.2	62.1	63.1	62.5	62.3	61.9 b	63.2	64.5	65.0	
		Activity rate (% population aged 15-24)	24.5	26.4	26.0	26.1	24.8	24.2	24.8 b	25.3	24.7	22.7	
		Activity rate (% population aged 25-54)	77.2	79.4	81.4	82.1	80.6	80.5	79.3 b	79.8	80.3	80.2	
		Activity rate (% population aged 55-64)	27.8	33.9	37.2	40.2	42.1	41.3	42.8 b	45.5	49.0	51.4	
		Total unemployment (000)	152	150	120	96	108	153 i	157	169	187	163	
		Unemployment rate (% labour force)	10.0	9.4	7.4	5.8	6.7	9.6 i	10.1	10.8	11.8	10.4	
		Youth unemployment rate (% labour force 15-24)	19.7	18.9	14.8	10.5	12.8	20.1 i	23.6	26.0	25.7	23.7	
		Long-term unemployment rate (% labour force)	6.1	5.3	4.5	3.1	3.1	4.5	5.5 b	5.7	6.6	6.0	
		Share of long-term unemployment (% of total unemployment)	61.1	56.4	61.0	53.5	46.4	46.5	54.1 b	53.0	55.9	57.6	
		Youth unemployment ratio (% population aged 15-24)	5.2	5.3	4.1	3.0	3.4	5.3	5.9 b	6.6	6.3	5.4	
		Employment rate for low skilled 25-64 (ISCED 0-2)	33.4 b	33.8 b	37.0	38.6 b	38.0	34.5 b	32.2 b	32.0	32.6	34.1 b	
		Employment rate for medium skilled 25-64 (ISCED 3-4)	64.1 b	67.5 b	69.9	72.2 b	70.0	65.3 b	65.1 b	65.5	65.4	66.8 b	
		Employment rate for high skilled 25-64 (ISCED 5-8)	78.0 b	80.3 b	82.9	84.0 b	83.2	81.6 b	80.7 b	80.6	79.7	80.8 b	
		Employment rate (Nationals aged 15-64)	51.7 b	54.6	57.5	59.5 b	58.4	56.3 b	55.6 b	56.3	56.8	58.2	
		Employment rate (Other EU-28 aged 15-64)											
		Employment rate (Other than EU-28 aged 15-64)											
		Employment rate (Born in the same country aged 15-64)		54.6	57.5	59.5 b	58.4	56.3 b	55.6 b	56.3	56.8	58.2	
		Employment rate (Born in other EU-28 aged 15-64)											
		Employment rate (Born outside EU-28 aged 15-64)		56.9 u	63.0 u	55.7 bu	53.3 u	46.7 bu	47.9 bu	51.1 u	54.9 u	53.8 u	
		Underemployment (% of labour force aged 15-74)				0.7 b	0.7	0.8	0.9 b	0.9	1.2	1.1	
Seeking but not available (% of labour force aged 15-74)	0.5 bu	0.7	0.5 u	0.8 b	0.6	0.7	0.9 b	0.8	1.0	0.9			
Discouraged, available but not seeking (% of labour force aged 15-74)	13.6 b	10.9	8.4	6.3 b	7.1	8.2	8.2 b	8.0	7.2	6.6			

Bulgaria		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)		61.3	60.7	44.8 b	46.2	49.2	49.1	49.3	48.0	40.1 b
		At-risk-of-poverty (% of total population)		18.4	22.0	21.4	21.8	20.7	22.2	21.2	21.0	21.8
		At-risk-of-poverty threshold (PPS single person)		1920 b	1979	2859	3436	3531	3499	3418	3540	4052
		Poverty gap (%)		28.1	33.5	27.0	27.4	29.6	29.4	31.4	30.9	33.2
		Persistent at-risk-of-poverty (% of total population)					10.7	16.4	16.9	12.9	13.4	16.5
		At-risk-of-poverty before social transfers excl. pensions (% of total population)		24.7	25.5	27.1	26.4	27.1	27.4	25.9	26.7	27.3
		Impact of social transfers (excl. pensions) in reducing poverty (%)		25.5	13.7	21.0	17.4	23.6	19.0	18.2	21.4	20.2
		Severe Material Deprivation (% of total population)		57.7	57.6	41.2	41.9	45.7	43.6	44.1	43.0	33.1 b
		Share of people living in low work intensity households (% of people aged 0-59)		14.7	16.0	8.1 b	6.9	8.0	11.0	12.5	13.0	12.1
		Gross Household Disposable income adjusted for consumer prices (growth %)	2.7	11.3	2.1	14.6	0.0	-1.5	3.3	-1.2	5.9	
	Income quintile share ratio S80/S20		5.1	7.0	6.5	5.9	5.9	6.5	6.1	6.6	6.8	
	GINI coefficient		31.2 b	35.3	35.9	33.4	33.2	35.0	33.6	35.4	35.4	
	Early leavers from education and training (% of population aged 18-24)	20.4	17.3 b	14.9	14.8	14.7	13.9	11.8 b	12.5	12.5	12.9 b	
	NEET: Young people not in employment, education or training (% of total population aged 15-24)	25.1	22.2 b	19.1	17.4 b	19.5	21.8	21.8 b	21.5	21.6	20.2	
	Male	At-risk-of-poverty or exclusion (% of male population)		60.5	59.4	43.0 b	44.1	47.3	47.7	47.6	46.5	38.8 b
		At-risk-of-poverty (% of male population)		17.3	20.9	19.8	19.8	19.0	20.8	19.5	19.7	20.9
		Poverty gap (%)		30.8	37.1	26.8	27.3	29.0	31.0	32.6	31.8	34.8
		Persistent at-risk-of-poverty (% of male population)					9.8	13.7	15.9	11.0	11.8	15.7
		Severe Material Deprivation (% of male population)		57.1	56.6	39.6	40.1	44.2	42.5	42.9	41.6	31.7 b
		Share of people living in low work intensity households (% of males aged 0-59)		14.5	15.6	7.8 b	7.0	7.8	11.1	12.5	12.9	12.1
Life expectancy at birth (years)		69.0	69.2	69.5	69.8 b	70.1	70.3	70.7	70.9	71.3		
Healthy life years at birth (years) - men			66.2 d	67.1	62.1 b	62.1	63.0	62.1	62.1	62.4		
Early leavers from education and training (% of males aged 18-24)		20.6	17.7 b	15.2	14.1	13.7	13.2	11.2 b	12.1	12.3	12.8 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)		23.7	19.9 b	17.7	15.6 b	18.1	20.7	21.8 b	21.6	22.1	19.2	
Female	At-risk-of-poverty or exclusion (% of female population)		62.1	61.9	46.4 b	48.1	50.9	50.5	50.9	49.4	41.3 b	
	At-risk-of-poverty (% of female population)		19.3	23.0	22.9	23.7	22.3	23.6	22.8	22.2	22.6	
	Poverty gap (%)		26.6	31.6	27.0	27.5	30.2	29.0	30.5	30.4	31.9	
	Persistent at-risk-of-poverty (% of female population)					11.5	18.9	17.8	14.6	15.0	17.3	
	Severe Material Deprivation (% of female population)		58.2	58.6	42.8	43.5	47.2	44.6	45.3	44.4	34.3 b	
	Share of people living in low work intensity households (% of females aged 0-59)		15.0	16.4	8.3 b	6.8	8.2	11.0	12.4	13.2	12.1	
	Life expectancy at birth (years)	76.2	76.3	76.6	77.0 b	77.4	77.4	77.8	77.9	78.6		
	Healthy life years at birth (years) - women		71.9 d	73.9	65.7 b	65.9	67.1	65.9	65.7	66.6		
	Early leavers from education and training (% of females aged 18-24)	20.3	17.0 b	14.7	15.5	15.8	14.5	12.6 b	13.0	12.7	12.9 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	26.5	24.7 b	20.6	19.3 b	20.9	23.0	21.9 b	21.5	21.1	21.4	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)		61.0	60.8	44.2 b	47.3	49.8	51.8	52.3	51.5	45.2 b	
	At-risk-of-poverty (% of Children population)		25.0	29.9	25.5	24.9	26.7	28.4	28.2	28.4	31.7	
	Severe Material Deprivation (% of Children population)		57.6	58.3	40.8	43.6	46.5	45.6	46.6	46.3	38.4 b	
	Share of children living in low work intensity households (% of Children population)		16.8	18.9	9.5 b	7.6	10.4	14.1	16.8	18.2	15.2	
	Risk of poverty of children in households at work (Working Intensity > 0.2)		13.4	16.6	18.2	19.3	19.3	19.0	17.0	16.6	22.5	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)		23.1	11.8	18.0	17.3	21.7	19.3	21.5	25.5	18.5	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)		58.1	57.9	39.5 b	40.6	45.0	45.2	45.6	44.3	36.4 b	
	At-risk-of-poverty (% of Working age population)		16.2	19.4	17.0	16.4	16.0	18.2	17.4	17.1	18.9	
	Severe Material Deprivation (% of Working age population)		54.2	54.9	36.2	37.1	42.2	40.3	40.8	39.9	29.5 b	
	Very low work intensity (18-59)		14.1	15.1	7.7 b	6.7	7.3	10.2	11.2	11.6	11.2	
	In-work at-risk-of poverty rate (% of persons employed 18-64)		5.5	5.9	7.6	7.5	7.7	8.2	7.4	7.2	9.3	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)		24.3	14.5	24.1	21.2	28.9	21.9	21.3	24.7	22.2	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)		73.7	71.1	65.5 b	66.0	63.9	61.1	59.1	57.6	47.8 b	
	At-risk-of-poverty (% of Elderly population)		19.9	23.9	33.8	39.3	32.2	31.2	28.2	27.9	22.6	
	Severe Material Deprivation (% of Elderly population)		70.7	67.2	61.0	58.4	58.1	53.7	53.2	50.7	40.3 b	
	Relative median income of elderly (ratio with median income of people younger than 65)		0.79 b	0.78	0.66	0.63	0.74	0.72	0.74	0.76	0.82	
	Aggregate replacement ratio (ratio)		0.37	0.37	0.34	0.34	0.43	0.41	0.42	0.39	0.44	
Expenditure in social protection (% of GDP)	Sickness/Health care	4.2	3.6	3.7	4.4	3.9	4.2	4.5	4.4	4.6		
	Disability	1.2	1.3	1.1	1.2	1.4	1.4	1.3	1.3	1.5		
	Old age and survivors	7.5	7.3	7.0	7.4	8.6	9.0	8.6	8.4	9.0		
	Family/Children	1.0	1.0	1.2	1.3	2.0	2.0	1.9	1.8	1.9		
	Unemployment	0.3	0.3	0.3	0.3	0.5	0.6	0.6	0.6	0.6		
	Housing and Social exclusion n.e.c.	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3		
	Total (including Admin and Other expenditures)	15.1	14.2	14.1	15.5	17.2	18.1	17.7	17.4	18.5		
of which: Means tested benefits	1.0	0.8	0.7	0.7	0.7	0.8	0.7	0.7	0.7			

## Macro economic indicators: Czech Republic

Czech Republic		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Macro Economic Indicators	Annual percentage growth	Real GDP	6.4	6.9	5.5	2.7	-4.8	2.3	2.0	-0.9	-0.5	2.0
		Total employment	1.9	1.3	2.1	2.2	-1.8	-1.0	-0.3	0.4	0.3	0.6
		Labour productivity	4.4	5.5	3.4	0.5	-3.1	3.4	2.2	-1.3	-0.8	1.4
		Annual average hours worked	0.0	-1.0	-0.8	0.3	-0.6	1.2	0.3	-1.6	-0.7	0.4
		Productivity per hour worked	4.4	6.5	4.2	0.2	-2.5	2.2	1.9	0.3	-0.1	1.0
		Harmonized CPI	1.6	2.1	3.0	6.3	0.6	1.2	2.1	3.5	1.4	0.4
		Price deflator GDP	0.1	0.7	3.5	2.0	2.6	-1.5	-0.2	1.4	1.4	2.5
		Nominal compensation per employee	3.9	5.9	6.2	4.1	-0.6	3.3	2.8	1.7	-0.3	1.5
		Real compensation per employee (GDP deflator)	3.8	5.2	2.5	2.0	-3.1	4.9	3.1	0.3	-1.7	-0.9
		Real compensation per employee (private consumption deflator)	2.2	3.8	3.1	-2.1	-1.2	2.1	0.6	-1.8	-1.6	1.1
		Nominal unit labour costs	-0.5	0.5	2.7	3.5	2.6	0.0	0.6	3.1	0.6	0.1
		Real unit labour costs	-0.5	-0.3	-0.8	1.5	-0.1	1.5	0.8	1.7	-0.9	-2.2
		Labour Market Indicators	Total	Total population (000)	10229	10265	10320	10422	10499	10522	10497 b	10515
Population aged 15-64 (000)	7270			7307	7347	7410	7431	7400	7296 b	7229	7154	7081
Total employment (000)	4764			4828	4922	5003	4934	4885	4873 b	4890	4937	4974
Employment aged 15-64 (000)	4710			4769	4856	4934	4857	4810	4796 b	4810	4846	4884
Employment rate (% population aged 20-64)	70.7			71.2	72.0	72.4	70.9	70.4	70.9 b	71.5	72.5	73.5
Employment rate (% population aged 15-64)	64.8			65.3	66.1	66.6	65.4	65.0	65.7 b	66.5	67.7	69.0
Employment rate (% population aged 15-24)	27.5			27.7	28.5	28.1	26.5	25.2	24.5 b	25.2	25.6	27.1
Employment rate (% population aged 25-54)	82.0			82.5	83.5	83.8	82.5	82.2	82.8 b	82.9	83.5	83.8
Employment rate (% population aged 55-64)	44.5			45.2	46.0	47.6	46.8	46.5	47.7 b	49.3	51.6	54.0
FTE employment rate (% population aged 20-64)	69.9 b			70.2	70.9	71.3	69.8	69.1	69.8 b	70.3	71.0	72.2
Self-employed (% total employment)	15.1			15.1	15.0	14.6	15.1	15.9	16.1 b	16.0	15.5	15.3
Part-time employment (% total employment)	4.9			5.0	5.0	4.9	5.5	5.9	5.5 b	5.8	6.6	6.4
Fixed-term contracts (% total employees)	8.6			8.7	8.6	8.0	8.5	8.9	8.5 b	8.8	9.6	10.2
Employment in Services (% total employment)	57.4			57.9	58.2	58.7	59.8	60.3	59.7	59.7	60.0	59.9
Employment in Industry (% total employment)	38.9			38.6	38.4	38.0	36.9	36.6	37.1	37.1	36.7	36.8
Employment in Agriculture (% total employment)	3.7			3.5	3.3	3.2	3.3	3.1	3.2	3.3	3.3	3.3
Activity rate (% population aged 15-64)	70.4			70.3	69.9	69.7	70.1	70.2	70.5 b	71.6	72.9	73.5
Activity rate (% population aged 15-24)	34.0			33.5	31.9	31.1	31.8	30.9	29.9 b	31.3	31.5	32.2
Activity rate (% population aged 25-54)	88.3			88.2	87.8	87.3	87.7	87.8	88.0 b	88.4	89.1	88.8
Activity rate (% population aged 55-64)	46.9			47.7	48.2	49.5	49.6	49.7	50.6 b	52.4	54.8	56.8
Total unemployment (000)	410			371	276	230	352	384	351	367	370	324
Unemployment rate (% labour force)	7.9			7.1	5.3	4.4	6.7	7.3	6.7	7.0	7.0	6.1
Youth unemployment rate (% labour force 15-24)	19.3			17.5	10.7	9.9	16.6	18.3	18.1	19.5	18.9	15.9
Long-term unemployment rate (% labour force)	4.2			3.9	2.8	2.2	2.0	3.0	2.7	3.0	3.0	2.7
Share of long-term unemployment (% of total unemployment)	53.0			54.2	52.2	49.2	30.0	40.9	40.6 b	43.4	43.4	43.5
Youth unemployment ratio (% population aged 15-24)	6.5			5.9	3.4	3.1	5.3	5.7	5.4 b	6.1	6.0	5.1
Employment rate for low skilled 25-64 (ISCED 0-2)	41.2 b			43.9	45.7	46.5	43.9	43.2	42.2 b	40.4	41.8	43.0 b
Employment rate for medium skilled 25-64 (ISCED 3-4)	75.5 b			75.6	76.1	76.6	75.1	74.5	75.2 b	75.9	76.6	77.6 b
Employment rate for high skilled 25-64 (ISCED 5-8)	85.8 b			85.1	85.2	85.1	84.3	83.3	83.1 b	83.6	84.9	84.5 b
Employment rate (Nationals aged 15-64)	64.7 b			65.2	66.0	66.5	65.3	64.9	65.6 b	66.4	67.6	68.9
Employment rate (Other EU-28 aged 15-64)				74.9	81.7	76.1	77.3	78.4	75.6 b	74.0	74.4	72.7
Employment rate (Other than EU-28 aged 15-64)				70.7	71.6	72.1	68.2	70.9	70.0 b	72.9	76.0	75.4
Employment rate (Born in the same country aged 15-64)	64.9 b			65.4	66.1	66.6	65.4	64.9	65.7 b	66.5	67.7	68.9
Employment rate (Born in other EU-28 aged 15-64)				57.5	65.5	64.3	64.2	67.3	65.4 b	63.0	66.0	69.2
Employment rate (Born outside EU-28 aged 15-64)				67.9	71.3	71.3	69.4	69.3	71.9 b	73.8	75.2	75.9
Underemployment (% of labour force aged 15-74)						0.3	0.4	0.6	0.5 b	0.5	0.7	0.7
Seeking but not available (% of labour force aged 15-74)	0.6 b	0.6	0.4	0.4	0.3	0.4	0.3 b	0.3	0.3	0.3		
Discouraged, available but not seeking (% of labour force aged 15-74)	1.2 b	1.2	0.8	0.7	1.0	1.1	1.1 b	1.2	1.3	1.1		

Czech Republic		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	4987	5012	5045	5107	5156	5166	5153 b	5163	5167	5166
		Population aged 15-64 (000)	3646	3671	3696	3739	3760	3744	3691 b	3660	3624	3588
		Total employment (000)	2706	2742	2806	2863	2824	2798	2778 b	2779	2794	2817
		Employment aged 15-64 (000)	2671	2704	2764	2820	2777	2753	2733 b	2732	2742	2764
		Employment rate (% population aged 20-64)	80.1	80.4	81.5	82.0	80.2	79.6	79.9 b	80.2	81.0	82.2
		Employment rate (% population aged 15-64)	73.3	73.7	74.8	75.4	73.8	73.5	74.0 b	74.6	75.7	77.0
		Employment rate (% population aged 15-24)	31.3	31.5	32.8	32.4	31.1	29.6	29.0 b	29.2	29.9	32.3
		Employment rate (% population aged 25-54)	89.8	90.4	91.7	92.1	90.5	90.5	90.9 b	90.9	91.2	91.5
		Employment rate (% population aged 55-64)	59.3	59.5	59.6	61.9	59.6	58.4	58.9 b	60.3	62.5	64.8
		FTE employment rate (% population aged 20-64)	80.1 b	80.3	81.4	81.9	79.9	79.4	79.7 b	79.9	80.6	81.7
		Self-employed (% total employment)	19.1	18.9	18.9	18.3	18.8	19.7	19.6 b	19.3	18.3	18.7
		Part-time employment (% total employment)	2.1	2.2	2.3	2.2	2.8	2.9	2.5 b	2.9	3.3	3.3
		Fixed-term contracts (% total employees)	7.6	7.5	7.3	6.5	7.0	7.5	7.2 b	7.4	8.0	8.8
		Employment in Services (% total employment)	46.7	47.4	47.3	47.8	48.3	48.4	47.9 b	47.6	48.1	48.0
		Employment in Industry (% total employment)	48.9	48.4	48.6	48.3	47.6	47.5	48.0 b	48.2	47.8	47.6
		Employment in Agriculture (% total employment)	4.5	4.2	4.1	3.9	4.0	4.1	4.2 b	4.2	4.1	4.3
		Activity rate (% population aged 15-64)	78.4	78.3	78.1	78.1	78.5	78.6	78.7 b	79.5	80.5	81.2
		Activity rate (% population aged 15-24)	38.9	37.7	36.7	35.9	37.3	36.2	35.5 b	36.4	36.8	38.1
		Activity rate (% population aged 25-54)	94.8	94.8	95.0	94.8	95.1	95.5	95.3 b	95.5	95.8	95.6
		Activity rate (% population aged 55-64)	62.1	62.7	62.5	64.2	63.2	62.5	62.6 b	64.0	66.1	67.9
		Total unemployment (000)	187	169	124	103	175	191	171	178	176	151
		Unemployment rate (% labour force)	6.5	5.8	4.2	3.5	5.9	6.4	5.8	6.0	5.9	5.1
		Youth unemployment rate (% labour force 15-24)	19.4	16.6	10.6	9.8	16.6	18.2	18.2	19.9	18.7	15.0
		Long-term unemployment rate (% labour force)	3.4	3.1	2.1	1.7	1.6	2.6	2.4 b	2.6	2.5	2.2
		Share of long-term unemployment (% of total unemployment)	52.1	53.1	50.6	49.5	27.8	40.0	40.6 b	43.3	41.8	43.8
		Youth unemployment ratio (% population aged 15-24)	7.5	6.3	3.9	3.5	6.2	6.6	6.4 b	7.2	6.9	5.7
		Employment rate for low skilled 25-64 (ISCED 0-2)	49.4 b	52.6	56.3	57.4	53.6	53.1	50.7 b	48.6	52.5	53.5 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	84.2 b	84.5	85.2	85.9	84.0	83.3	83.5 b	84.3	84.5	85.6 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	92.0 b	91.1	91.4	92.2	91.0	91.0	91.5 b	91.2	92.7	92.3 b
		Employment rate (Nationals aged 15-64)	73.2 b	73.6	74.7	75.3	73.7	73.3	73.9 b	74.4	75.5	76.8
		Employment rate (Other EU-28 aged 15-64)		81.7	90.6	85.5	85.9	90.8	88.7 b	89.0	85.7	84.2
		Employment rate (Other than EU-28 aged 15-64)		82.1	80.6	82.7	77.7	83.5	80.8 b	86.6	86.6	88.4
		Employment rate (Born in the same country aged 15-64)	73.3 b	73.7	74.8	75.4	73.8	73.4	73.9 b	74.5	75.5	76.8
		Employment rate (Born in other EU-28 aged 15-64)		66.3	73.8	75.5	73.7	78.2	78.9 b	75.2	76.3	80.4
		Employment rate (Born outside EU-28 aged 15-64)		80.6	83.0	82.5	76.7	80.9	82.6 b	86.7	86.5	89.4
Underemployment (% of labour force aged 15-74)				0.1 u	0.2	0.2	0.2 b	0.2	0.3	0.3		
Seeking but not available (% of labour force aged 15-74)	0.4 b	0.3	0.3	0.3	0.2	0.2	0.2 b	0.2	0.2	0.2		
Discouraged, available but not seeking (% of labour force aged 15-74)	0.8 b	0.9	0.6	0.5	0.8	0.8	0.9 b	0.9	0.9	0.8		



Czech Republic		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	5242	5252	5275	5315	5343	5356	5344 b	5351	5354	5352
		Population aged 15-64 (000)	3624	3636	3651	3671	3671	3656	3605 b	3569	3530	3493
		Total employment (000)	2059	2086	2116	2139	2111	2087	2095 b	2112	2143	2157
		Employment aged 15-64 (000)	2039	2065	2092	2114	2081	2057	2064 b	2079	2104	2120
		Employment rate (% population aged 20-64)	61.3	61.8	62.4	62.5	61.4	60.9	61.7 b	62.5	63.8	64.7
		Employment rate (% population aged 15-64)	56.3	56.8	57.3	57.6	56.7	56.3	57.2 b	58.2	59.6	60.7
		Employment rate (% population aged 15-24)	23.4	23.7	23.9	23.5	21.7	20.6	19.8 b	21.0	21.0	21.6
		Employment rate (% population aged 25-54)	74.0	74.5	74.9	75.2	74.1	73.4	74.3 b	74.6	75.5	75.7
		Employment rate (% population aged 55-64)	30.9	32.1	33.5	34.4	35.0	35.5	37.2 b	39.0	41.4	43.8
		FTE employment rate (% population aged 20-64)	59.7 b	60.2	60.5	60.7	59.6	58.8	59.8 b	60.5	61.3	62.5
		Self-employed (% total employment)	9.8	10.2	9.8	9.6	10.3	10.9	11.5 b	11.7	11.7	10.9
		Part-time employment (% total employment)	8.6	8.7	8.5	8.5	9.2	9.9	9.4 b	9.5	11.0	10.4
		Fixed-term contracts (% total employees)	9.8	10.1	10.2	9.8	10.2	10.6	10.1 b	10.5	11.5	11.8
		Employment in Services (% total employment)	71.5	71.6	72.3	73.0	74.9	75.9	75.1 b	75.4	75.4	75.3
		Employment in Industry (% total employment)	26.0	25.8	25.3	24.7	22.8	22.1	22.9 b	22.6	22.3	22.7
		Employment in Agriculture (% total employment)	2.6	2.6	2.3	2.3	2.3	1.9	2.0 b	2.1	2.2	1.9
		Activity rate (% population aged 15-64)	62.4	62.3	61.5	61.0	61.5	61.5	62.2 b	63.5	65.1	65.6
		Activity rate (% population aged 15-24)	28.9	29.2	26.9	26.1	26.1	25.3	24.1 b	25.9	26.1	26.1
		Activity rate (% population aged 25-54)	81.6	81.3	80.3	79.6	79.9	79.8	80.4 b	80.9	81.9	81.6
		Activity rate (% population aged 55-64)	32.9	34.0	35.2	36.1	37.2	38.0	39.4 b	41.5	44.2	46.3
		Total unemployment (000)	223	202	153	127	177	193	180	189	194	172
		Unemployment rate (% labour force)	9.8	8.8	6.7	5.6	7.7	8.5	7.9	8.2	8.3	7.4
		Youth unemployment rate (% labour force 15-24)	19.1	18.7	11.0	9.9	16.7	18.5	18.0	19.0	19.3	17.1
		Long-term unemployment rate (% labour force)	5.3	4.9	3.6	2.8	2.5	3.5	3.2 b	3.6	3.7	3.2
		Share of long-term unemployment (% of total unemployment)	53.7	55.2	53.6	49.1	32.3	41.9	40.5 b	43.4	44.8	43.2
		Youth unemployment ratio (% population aged 15-24)	5.5	5.4	2.9	2.6	4.4	4.7	4.3 b	4.9	5.1	4.5
		Employment rate for low skilled 25-64 (ISCED 0-2)	37.4 b	39.8	40.6	41.3	39.1	38.3	38.0 b	36.1	35.7	37.1 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	66.2 b	66.1	66.4	66.6	65.5	65.0	66.2 b	66.8	67.9	68.7 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	78.1 b	77.9	77.9	77.2	76.9	75.0	74.4 b	76.0	77.3	77.2 b
		Employment rate (Nationals aged 15-64)	56.3 b	56.7	57.2	57.5	56.6	56.2	57.2 b	58.3	59.6	60.7
		Employment rate (Other EU-28 aged 15-64)		66.0	71.2	63.2	66.6	62.9	58.7 b	53.0	61.7	61.2
		Employment rate (Other than EU-28 aged 15-64)		59.2	61.5	62.3	58.9	58.7	59.1 b	60.3	63.1	60.5
		Employment rate (Born in the same country aged 15-64)	56.4 b	56.9	57.3	57.6	56.7	56.3	57.3 b	58.3	59.6	60.7
Employment rate (Born in other EU-28 aged 15-64)		49.1	56.7	52.7	54.2	55.1	49.5 b	49.6	55.4	58.3		
Employment rate (Born outside EU-28 aged 15-64)		55.5	59.7	61.1	62.4	58.0	61.5 b	61.7	62.8	61.4		
Underemployment (% of labour force aged 15-74)				0.6	0.8	1.0	0.9 b	0.9	1.2	1.1		
Seeking but not available (% of labour force aged 15-74)	0.9 b	0.9	0.6	0.6	0.5	0.6	0.5 b	0.5	0.5	0.5		
Discouraged, available but not seeking (% of labour force aged 15-74)	1.7 b	1.6	1.1	1.0	1.3	1.4	1.3 b	1.5	1.7	1.4		

Czech Republic		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	19.6	18.0	15.8	15.3	14.0	14.4	15.3	15.4	14.6	14.8	
		At-risk-of-poverty (% of total population)	10.4	9.9	9.6	9.0	8.6	9.0	9.8	9.6	8.6	9.7	
		At-risk-of-poverty threshold (PPS single person)	4585 b	4956	5305	5835	5666	5796	5993	6188	6481	6654	
		Poverty gap (%)	18.2	16.8	18.1	18.5	18.8	21.1	17.2	19.1	16.6	18.0	
		Persistent at-risk-of-poverty (% of total population)				3.9	3.7	5.5	4.2	4.3	4.1		
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	21.2	21.6	20.1	20.0	17.9	18.1	18.0	17.6	16.6	17.2	
		Impact of social transfers (excl. pensions) in reducing poverty (%)	50.9	54.2	52.2	55.0	52.0	50.3	45.6	45.5	48.2	43.6	
		Severe Material Deprivation (% of total population)	11.8	9.6	7.4	6.8	6.1	6.2	6.1	6.6	6.6	6.7	
		Share of people living in low work intensity households (% of people aged 0-59)	8.9	8.9	8.6	7.2	6.0	6.4	6.6	6.8	6.9	7.6	
		Gross Household Disposable income adjusted for consumer prices (growth %)	4.5	5.5	3.3	2.4	2.0	0.2	-1.4	-1.1	-0.8	1.6	
		Income quintile share ratio S80/S20	3.7	3.5	3.5	3.4	3.5	3.5	3.5	3.5	3.5	3.4	3.5
		GINI coefficient	26.0 b	25.3	25.3	24.7	25.1	24.9	25.2	24.9	24.6	25.1	
		Early leavers from education and training (% of population aged 18-24)	6.2	5.1 b	5.2	5.6	5.4	4.9	4.9 b	5.5	5.4 b	5.5 b	
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	13.3	9.2 b	6.9	6.7	8.5	8.8	8.3 b	8.9	9.1 b	8.1	
		Male	At-risk-of-poverty or exclusion (% of male population)	17.8	16.6	14.2	13.3	12.3	12.7	13.7	13.7	13.1	13.3
	At-risk-of-poverty (% of male population)		9.7	8.9	8.7	8.0	7.5	8.0	8.9	8.7	7.7	8.9	
	Poverty gap (%)		18.9	18.6	19.0	21.4	22.0	23.6	19.1	20.2	17.8	18.7	
	Persistent at-risk-of-poverty (% of male population)					3.5	3.1	5.1	3.8	3.4	3.3		
	Severe Material Deprivation (% of male population)		10.8	9.4	7.0	6.3	5.8	5.8	5.6	6.0	5.9	6.2	
	Share of people living in low work intensity households (% of males aged 0-59)		7.4	8.2	7.4	6.2	4.8	5.2	5.8	6.1	6.2	6.8	
	Life expectancy at birth (years)		72.9	73.5	73.8 b	74.1	74.2	74.5	74.8	75.1	75.2		
	Healthy life years at birth (years) - men		58.0 d	57.9	61.4 b	61.3	61.1	62.2	62.2	62.3	62.5		
	Early leavers from education and training (% of males aged 18-24)		6.1	5.4 b	5.7	5.8	5.5	4.9	5.4 b	6.1	5.4 b	5.8 b	
	NEET: Young people not in employment, education or training (% of males aged 15-24)		11.2	7.3 b	4.9	4.8	7.2	7.5	7.1 b	8.1	7.5 b	6.5	
	Female	At-risk-of-poverty or exclusion (% of female population)	21.4	19.4	17.4	17.2	15.7	16.0	16.9	16.9	16.1	16.3	
At-risk-of-poverty (% of female population)		11.0	10.8	10.5	10.1	9.5	10.0	10.6	10.5	9.4	10.5		
Poverty gap (%)		17.5	15.6	17.2	15.1	16.3	18.9	16.5	17.7	16.1	17.4		
Persistent at-risk-of-poverty (% of female population)					4.3	4.2	5.9	4.5	5.2	4.9			
Severe Material Deprivation (% of female population)		12.7	9.9	7.7	7.3	6.5	6.5	6.7	7.2	7.2	7.2		
Share of people living in low work intensity households (% of females aged 0-59)		10.4	9.6	9.9	8.2	7.1	7.6	7.4	7.5	7.7	8.4		
Life expectancy at birth (years)		79.2	79.9	80.2 b	80.5	80.5	80.9	81.1	81.2	81.3			
Healthy life years at birth (years) - women		60.0 d	59.9	63.3 b	63.4	62.7	64.5	63.6	64.1	64.2			
Early leavers from education and training (% of females aged 18-24)		6.3	4.9 b	4.7	5.4	5.2	4.8	4.4 b	4.9	5.5 b	5.2 b		
NEET: Young people not in employment, education or training (% of females aged 15-24)		15.4	11.1 b	9.1	8.7	9.9	10.3	9.5 b	9.8	10.8 b	9.9		
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	25.6	22.7	21.5	18.6	17.2	18.9	20.0	18.8	16.4	19.5		
	At-risk-of-poverty (% of Children population)	17.6	16.5	16.6	13.2	13.3	14.3	15.2	13.9	11.3	14.7		
	Severe Material Deprivation (% of Children population)	15.3	12.2	10.0	8.3	7.4	8.6	8.0	8.5	7.3	9.7		
	Share of children living in low work intensity households (% of Children population)	9.1	8.6	10.0	7.6	6.2	7.0	6.9	6.7	6.2	9.4		
	Risk of poverty of children in households at work (Working Intensity > 0.2)	11.0	10.3	9.0	8.1	8.6	9.2	10.5	9.6	7.3	7.7		
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	47.2	48.4	46.1	55.6	47.4	45.0	43.7	46.5	49.6	42.8		
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	19.0	17.8	15.3	15.0	13.7	14.1	15.1	15.5	15.2	14.6		
	At-risk-of-poverty (% of Working age population)	9.4	8.8	8.6	8.3	7.6	8.1	9.1	9.3	8.6	9.1		
	Severe Material Deprivation (% of Working age population)	10.9	9.3	6.8	6.5	5.9	6.0	5.8	6.3	6.7	6.3		
	Very low work intensity (18-59)	8.8	8.9	8.2	7.1	5.9	6.2	6.5	6.9	7.1	7.0		
	In-work at-risk-of poverty rate (% of persons employed 18-64)	3.5	3.5	3.3	3.6	3.2	3.7	4.1	4.6	4.1	3.6		
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	52.8	56.9	54.3	55.4	54.5	52.6	47.7	47.2	49.7	45.8		
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	14.7	12.7	10.9	12.5	11.7	10.1	10.7	10.8	10.4	10.7		
	At-risk-of-poverty (% of Elderly population)	5.3	5.9	5.5	7.4	7.2	6.8	6.6	6.0	5.8	7.0		
	Severe Material Deprivation (% of Elderly population)	10.8	8.0	6.5	6.4	5.7	4.3	5.4	6.0	5.3	5.1		
	Relative median income of elderly (ratio with median income of people younger than 65)	0.83 b	0.82	0.81	0.79	0.78	0.82	0.82	0.84	0.85	0.84		
	Aggregate replacement ratio (ratio)	0.51	0.52	0.51	0.51	0.51	0.54	0.53	0.55	0.56	0.55		
Expenditure in social protection (% of GDP)	Sickness/Health care	6.3	6.0	5.9	5.8	6.4	6.3	6.3	6.4	6.3			
	Disability	1.4	1.5	1.4	1.4	1.5	1.5	1.5	1.4	1.4			
	Old age and survivors	7.6	7.5	7.7	8.0	9.0	9.2	9.7	10.0	9.7			
	Family/Children	1.8	1.8	2.0	2.1	2.1	2.1	1.9	1.9	1.9			
	Unemployment	0.6	0.6	0.6	0.6	1.0	0.8	0.7	0.7	0.7			
	Housing and Social exclusion n.e.c.	0.6	0.6	0.3	0.2	0.3	0.3	0.4	0.5	0.6			
	Total (including Admin and Other expenditures)	18.9	18.5	18.5	18.7	21.0	20.9	21.2	21.5	21.2			
of which: Means tested benefits	1.0	0.9	0.6	0.4	0.4	0.4	0.4	0.4	0.6				

## Macro economic indicators: Denmark

Denmark		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Macro Economic Indicators	Annual percentage growth	Real GDP	2.4	3.8	0.8	-0.7	-5.1	1.6	1.2	-0.1	-0.2	1.3
		Total employment	1.4	2.2	2.2	1.1	-3.0	-2.3	-0.1	-0.6	0.1	0.8
		Labour productivity	1.0	1.6	-1.4	-1.8	-2.2	4.0	1.2	0.5	-0.4	0.5
		Annual average hours worked	-0.5	0.3	-1.6	-0.4	-0.2	-0.7	1.3	-1.2	1.4	0.1
		Productivity per hour worked	1.5	1.3	0.2	-1.5	-1.9	4.8	-0.1	1.7	-1.7	0.4
		Harmonized CPI	1.7	1.9	1.7	3.6	1.1	2.2	2.7	2.4	0.5	0.3
		Price deflator GDP	2.9	2.2	2.5	4.1	0.5	3.2	0.8	2.8	1.4	0.8
		Nominal compensation per employee	3.4	3.6	3.9	3.9	2.8	3.2	1.4	1.7	1.2	1.8
		Real compensation per employee (GDP deflator)	0.5	1.4	1.3	-0.2	2.3	-0.1	0.7	-1.0	-0.2	1.0
		Real compensation per employee (private consumption deflator)	1.6	1.7	2.2	0.2	1.7	0.9	-1.3	-0.6	0.7	1.5
		Nominal unit labour costs	2.3	2.0	5.3	5.9	5.1	-0.8	0.2	1.2	1.5	1.3
		Real unit labour costs	-0.6	-0.2	2.8	1.7	4.5	-3.9	-0.6	-1.5	0.1	0.6
		Labour Market Indicators	Total	Total population (000)	5396	5415	5438	5485	5517	5542	5566	5586
Population aged 15-64 (000)	3566			3569	3582	3605	3616	3619	3613	3611	3615	3626
Total employment (000)	2752			2805	2804	2853	2771	2706	2703	2689	2688	2714
Employment aged 15-64 (000)	2706			2762	2759	2807	2724	2654	2643	2621	2622	2640
Employment rate (% population aged 20-64)	78.0			79.4	79.0	79.7	77.5	75.8	75.7	75.4	75.6	75.9
Employment rate (% population aged 15-64)	75.9			77.4	77.0	77.9	75.3	73.3	73.1	72.6	72.5	72.8
Employment rate (% population aged 15-24)	62.3			64.6	65.3	66.4	62.5	58.1	57.5	55.0	53.7	53.7
Employment rate (% population aged 25-54)	84.5			86.1	86.1	87.5	84.7	82.8	82.3	81.9	82.0	82.0
Employment rate (% population aged 55-64)	59.5			60.7	58.9	58.4	58.2	58.4	59.5	60.8	61.7	63.2
FTE employment rate (% population aged 20-64)	73.1 b			73.9	73.7 b	74.3	71.8	69.7	69.4	69.3	69.4	69.2
Self-employed (% total employment)	7.2			7.1	7.0	6.8	7.0	6.9	6.9	6.9	6.9	6.7
Part-time employment (% total employment)	22.1			23.6	23.7	24.4	25.9	26.3	25.9	25.7	25.4	25.5
Fixed-term contracts (% total employees)	9.8			8.9	9.1	8.5	8.7	8.4	8.8	8.5	8.8	8.5
Employment in Services (% total employment)	76.8			77.0	77.0	77.1	78.7	79.8	79.9	79.9	80.0	80.0
Employment in Industry (% total employment)	20.3			20.3	20.4	20.3	18.7	17.6	17.5	17.5	17.3	17.4
Employment in Agriculture (% total employment)	2.9			2.7	2.6	2.6	2.6	2.6	2.5	2.6	2.6	2.6
Activity rate (% population aged 15-64)	79.8			80.6	80.1	80.7	80.2	79.4	79.3	78.6	78.1	78.1
Activity rate (% population aged 15-24)	68.1			69.9	70.6	72.2	70.9	67.5	67.1	64.1	61.7	61.5
Activity rate (% population aged 25-54)	88.1			88.9	88.9	89.9	89.4	88.7	88.2	87.8	87.5	87.1
Activity rate (% population aged 55-64)	62.8			63.2	61.0	59.9	60.8	61.8	63.2	64.4	65.0	66.4
Total unemployment (000)	140			114 i	111	101	177	218	221	219	202	191
Unemployment rate (% labour force)	4.8			3.9 i	3.8	3.4	6.0	7.5	7.6	7.5	7.0	6.6
Youth unemployment rate (% labour force 15-24)	8.6			7.7 i	7.5	8.0	11.8	13.9	14.2	14.1	13.0	12.6
Long-term unemployment rate (% labour force)	1.1			0.8	0.6	0.5	0.6	1.5	1.8	2.1	1.8	1.7
Share of long-term unemployment (% of total unemployment)	23.4			20.8	16.1	13.5	9.5	20.2	24.4	28.0	25.5	25.2
Youth unemployment ratio (% population aged 15-24)	5.9			5.4	5.3	5.8	8.4	9.4	9.6	9.1	8.1	7.8
Employment rate for low skilled 25-64 (ISCED 0-2)	61.5 b			62.8	67.5 b	68.4	65.2	62.8	62.6	61.4	60.9	61.4 b
Employment rate for medium skilled 25-64 (ISCED 3-4)	79.9 b			81.3	82.3 b	82.7	80.0	79.1	79.0	78.7	79.3	79.1 b
Employment rate for high skilled 25-64 (ISCED 5-8)	86.4 b			87.4	87.2 b	88.5	86.8	85.7	85.8	86.4	86.5	86.0 b
Employment rate (Nationals aged 15-64)	76.6 b			77.9	78.1	78.7	76.0	74.1	74.1	73.7	73.5	73.8
Employment rate (Other EU-28 aged 15-64)				76.6	75.0	80.8	80.2	75.4	72.4	71.7	72.3	75.7
Employment rate (Other than EU-28 aged 15-64)				59.2	54.0	57.4	58.5	54.2	53.7	52.5	56.0	54.6
Employment rate (Born in the same country aged 15-64)	76.9 b			78.4	78.5	79.0	76.2	74.6	74.7	74.2	73.9	74.2
Employment rate (Born in other EU-28 aged 15-64)		70.9	75.7	78.8	77.6	73.5	71.0	71.8	73.3	76.1		
Employment rate (Born outside EU-28 aged 15-64)		61.2	60.5	64.1	64.3	59.6	57.9	56.5	58.3	58.3		
Underemployment (% of labour force aged 15-74)				2.3	3.2	3.0	3.1	3.0	2.7	2.5		
Seeking but not available (% of labour force aged 15-74)	0.8 b	0.8	0.9	0.7	0.7	0.7	0.9	0.8	0.9	0.8		
Discouraged, available but not seeking (% of labour force aged 15-74)	1.5 b	1.2	1.8	1.6	1.9	2.0	2.6	2.4	2.3	1.9		

Denmark		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	2671	2682	2692	2717	2734	2747	2758	2770	2782	2798
		Population aged 15-64 (000)	1799	1803	1807	1819	1823	1823	1820	1820	1820	1827
		Total employment (000)	1470	1496	1492	1517	1454	1415	1421	1413	1410	1433
		Employment aged 15-64 (000)	1436	1464	1460	1484	1421	1378	1381	1368	1365	1384
		Employment rate (% population aged 20-64)	82.3	83.8	83.2	83.9	80.5	78.6	79.0	78.6	78.7	79.5
		Employment rate (% population aged 15-64)	79.8	81.2	80.8	81.6	78.0	75.6	75.9	75.2	75.0	75.8
		Employment rate (% population aged 15-24)	63.9	65.0	66.5	67.4	62.2	56.7	56.6	54.6	52.3	52.7
		Employment rate (% population aged 25-54)	88.3	90.1	89.8	90.9	86.9	85.3	85.7	84.6	85.0	85.5
		Employment rate (% population aged 55-64)	65.6	67.1	64.9	65.2	64.9	63.3	63.8	65.9	66.5	68.9
		FTE employment rate (% population aged 20-64)	80.5 b	81.5	80.9 b	81.2	77.6	75.7	75.8	75.0	75.1	75.6
		Self-employed (% total employment)	9.7	9.3	9.5	9.5	9.7	9.4	9.5	9.4	9.3	9.0
		Part-time employment (% total employment)	12.7	13.3	13.3	14.3	15.3	15.1	15.3	16.0	15.9	16.3
		Fixed-term contracts (% total employees)	8.5	8.0	7.8	7.7	7.9	8.1	8.3	7.8	8.1	8.1
		Employment in Services (% total employment)	66.3	66.2	66.9	66.9	68.5	69.5	69.7	69.9	69.9	70.1
		Employment in Industry (% total employment)	29.5	29.8	29.3	29.2	27.5	26.3	26.3	26.0	25.9	25.7
		Employment in Agriculture (% total employment)	4.3	4.1	3.8	4.0	4.0	4.2	4.0	4.0	4.2	4.2
		Activity rate (% population aged 15-64)	83.6	84.1	83.7	84.3	83.6	82.6	82.3	81.4	80.6	81.1
		Activity rate (% population aged 15-24)	70.0	70.5	72.0	72.8	71.7	67.6	67.1	64.1	61.1	61.0
		Activity rate (% population aged 25-54)	91.7	92.3	92.3	93.3	92.2	92.0	91.5	90.6	90.2	90.3
		Activity rate (% population aged 55-64)	68.7	69.6	66.9	66.9	68.1	67.8	68.3	69.9	70.2	72.6
	Total unemployment (000)	68	52 i	53	50	103	129	118	115	102	98	
	Unemployment rate (% labour force)	4.4	3.3 i	3.4	3.2	6.6	8.4	7.7	7.5	6.7	6.4	
	Youth unemployment rate (% labour force 15-24)			7.6	7.3	13.2	16.0	15.6	14.7	14.2	13.7	
	Long-term unemployment rate (% labour force)	1.1	0.7	0.5	0.4	0.6	1.8	2.0	2.1	1.6	1.6	
	Share of long-term unemployment (% of total unemployment)	24.1	20.8	15.6	14.2	9.3	21.9	26.2	28.5	23.5	25.9	
	Youth unemployment ratio (% population aged 15-24)	6.1	5.6	5.5	5.4	9.5	10.9	10.5	9.5	8.7	8.4	
	Employment rate for low skilled 25-64 (ISCED 0-2)	70.4 b	70.9	75.8 b	76.2	71.7	69.6	70.0	67.1	67.6	69.2 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	83.7 b	85.6	85.1 b	85.7	82.4	80.8	81.5	81.5	82.6	83.0 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	88.9 b	90.0	89.6 b	90.6	88.7	87.5	88.2	89.2	88.4	89.2 b	
	Employment rate (Nationals aged 15-64)	80.3 b	81.5	81.6	82.1	78.3	76.0	76.5	75.9	75.6	76.3	
	Employment rate (Other EU-28 aged 15-64)		77.8	81.5	87.6	84.8	77.5	76.9	77.0	77.8	81.5	
	Employment rate (Other than EU-28 aged 15-64)		71.4	61.6	64.7	63.0	61.4	59.7	57.6	61.0	61.2	
	Employment rate (Born in the same country aged 15-64)	80.4 b	81.9	81.9	82.2	78.5	76.5	77.1	76.3	76.0	76.5	
	Employment rate (Born in other EU-28 aged 15-64)		75.8	83.4	84.5	82.2	72.9	73.5	77.5	78.3	82.2	
	Employment rate (Born outside EU-28 aged 15-64)		68.8	66.7	72.6	69.6	64.6	63.2	61.2	62.3	65.2	
	Underemployment (% of labour force aged 15-74)				1.6	2.4	2.2	2.3	2.1	2.0	1.8	
	Seeking but not available (% of labour force aged 15-74)	0.5 b	0.7	0.7	0.6	0.6	0.6	0.8	0.7	0.8	0.7	
	Discouraged, available but not seeking (% of labour force aged 15-74)	1.4 b	1.1	1.7	1.6	2.0	1.9	2.5	2.4	2.4	1.9	

Denmark		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	2725	2733	2746	2768	2783	2796	2807	2816	2827	2840
		Population aged 15-64 (000)	1767	1767	1775	1786	1793	1795	1793	1791	1795	1799
		Total employment (000)	1283	1309	1312	1336	1316	1292	1282	1276	1278	1282
		Employment aged 15-64 (000)	1270	1297	1299	1323	1303	1276	1262	1254	1257	1256
		Employment rate (% population aged 20-64)	73.7	74.8	74.7	75.5	74.5	73.0	72.4	72.2	72.4	72.2
		Employment rate (% population aged 15-64)	71.9	73.4	73.2	74.1	72.7	71.1	70.4	70.0	70.0	69.8
		Employment rate (% population aged 15-24)	60.5	64.1	64.0	65.3	62.8	59.5	58.5	55.4	55.0	54.9
		Employment rate (% population aged 25-54)	80.6	82.0	82.3	84.0	82.5	80.3	78.9	79.1	79.0	78.4
		Employment rate (% population aged 55-64)	53.5	54.3	52.9	51.5	51.7	53.6	55.3	55.8	56.8	57.6
		FTE employment rate (% population aged 20-64)	66.7 b	67.3	67.5 b	68.4	67.0	64.8	64.0	64.3	64.5	63.5
		Self-employed (% total employment)	4.4	4.5	4.1	3.9	4.1	4.3	4.1	4.2	4.3	4.2
		Part-time employment (% total employment)	33.0	35.4	35.5	36.0	37.5	38.4	37.6	36.4	35.8	35.7
		Fixed-term contracts (% total employees)	11.3	10.0	10.4	9.4	9.6	8.7	9.4	9.3	9.5	8.9
		Employment in Services (% total employment)	88.3	88.9	87.9	88.3	89.7	90.9	91.0	90.6	90.9	90.8
		Employment in Industry (% total employment)	10.3	9.9	10.8	10.6	9.2	8.2	8.1	8.3	8.1	8.3
		Employment in Agriculture (% total employment)	1.4	1.3	1.4	1.1	1.1	0.9	0.9	1.1	1.0	0.9
		Activity rate (% population aged 15-64)	75.9	77.0	76.4	77.0	76.8	76.0	76.1	75.8	75.6	75.0
		Activity rate (% population aged 15-24)	66.2	69.3	69.1	71.5	70.0	67.4	67.1	64.0	62.4	62.0
		Activity rate (% population aged 25-54)	84.5	85.4	85.3	86.4	86.5	85.3	84.7	84.9	84.8	83.8
		Activity rate (% population aged 55-64)	56.8	56.7	55.1	53.0	53.5	55.9	58.0	58.9	59.9	60.3
		Total unemployment (000)	71	62 i	57	52	74	89	103	104	100	94
		Unemployment rate (% labour force)	5.3	4.5 i	4.2	3.7	5.3	6.5	7.5	7.5	7.3	6.8
		Youth unemployment rate (% labour force 15-24)			7.4	8.7	10.3	11.8	12.7	13.5	11.8	11.5
		Long-term unemployment rate (% labour force)	1.2	0.9	0.7	0.5	0.5	1.2	1.7	2.1	2.0	1.7
		Share of long-term unemployment (% of total unemployment)	22.8	20.8	16.6	12.8	9.8	17.8	22.3	27.5	27.5	24.4
		Youth unemployment ratio (% population aged 15-24)	5.7	5.2	5.1	6.2	7.2	7.9	8.5	8.6	7.4	7.1
		Employment rate for low skilled 25-64 (ISCED 0-2)	53.7 b	55.9	59.8 b	61.2	59.3	56.3	55.3	55.5	53.9	52.4 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	75.4 b	76.0	78.9 b	79.1	76.9	76.9	75.9	75.0	75.1	74.5 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	84.3 b	85.2	85.1 b	86.6	85.3	84.3	83.9	84.3	85.0	83.4 b
		Employment rate (Nationals aged 15-64)	72.8 b	74.1	74.5	75.2	73.5	72.2	71.7	71.4	71.4	71.2
		Employment rate (Other EU-28 aged 15-64)		75.4	69.9	75.1	75.2	73.4	68.3	66.7	67.2	69.1
		Employment rate (Other than EU-28 aged 15-64)		49.8	47.5	51.6	55.3	49.4	49.3	48.6	52.2	49.3
		Employment rate (Born in the same country aged 15-64)	73.2 b	74.8	75.0	75.7	73.9	72.6	72.3	72.0	71.7	71.8
Employment rate (Born in other EU-28 aged 15-64)		66.0	69.8	73.7	73.1	74.2	68.7	66.8	69.0	69.6		
Employment rate (Born outside EU-28 aged 15-64)		55.2	54.7	56.6	59.8	55.6	53.7	52.3	54.8	52.2		
Underemployment (% of labour force aged 15-74)				3.1	4.0	3.8	4.1	4.1	3.5	3.4		
Seeking but not available (% of labour force aged 15-74)	1.0 b	0.9	1.1	0.8	0.9	0.8	1.0	1.0	0.9	0.9		
Discouraged, available but not seeking (% of labour force aged 15-74)	1.6 b	1.3	1.9	1.6	1.8	2.0	2.6	2.4	2.3	2.0		



Denmark		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	17.2	16.7	16.8	16.3	17.6	18.3	18.9	19.0	18.3	17.8 b
		At-risk-of-poverty (% of total population)	11.8	11.7	11.7	11.8	13.1	13.3	13.0	13.1	11.9	11.9 b
		At-risk-of-poverty threshold (PPS single person)	9513	9688	10121	10561	10751	10770	11277	11183	11846	11957 b
		Poverty gap (%)	15.6	16.5	17.0	18.0	18.4	21.6	21.4	22.8	23.5	18.8 b
		Persistent at-risk-of-poverty (% of total population)			4.7	4.9	2.7	6.3	6.4	5.7	5.1	
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	29.9	28.0	27.1	27.8	31.2	29.1	28.4	28.3	27.8	26.8 b
		Impact of social transfers (excl. pensions) in reducing poverty (%)	60.5	58.2	56.8	57.6	58.0	54.3	54.2	53.7	57.2	55.6 b
		Severe Material Deprivation (% of total population)	3.2	3.1	3.3	2.0	2.3	2.7	2.6	2.8	3.6	3.2
		Share of people living in low work intensity households (% of people aged 0-59)	10.1	9.6	10.1	8.5	8.8	10.6	11.7	11.3	11.9	12.1
		Gross Household Disposable income adjusted for consumer prices (growth %)	2.5	2.6	-0.3	-0.4	1.3	3.3	0.7	-0.2	-1.1	0.0
		Income quintile share ratio S80/S20	3.5	3.4	3.7	3.6	4.6	4.4 b	4.4	4.5	4.0	4.1 b
		GINI coefficient	23.9	23.7	25.2	25.1	26.9	26.9 b	27.8	28.1	26.8	27.5 b
		Early leavers from education and training (% of population aged 18-24)	8.7	9.1	12.9 b	12.5	11.3	11.0	9.6	9.1	8.0	7.8 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	4.3	3.6	4.3 b	4.3	5.4	6.0	6.3	6.6	6.0	5.8
		Male	At-risk-of-poverty or exclusion (% of male population)	16.2	15.5	15.9	15.7	17.0	17.7	18.2	19.1	18.1
	At-risk-of-poverty (% of male population)		11.6	11.4	11.3	11.7	12.8	13.1	13.0	13.3	12.0	12.2 b
	Poverty gap (%)		15.5	18.8	18.8	19.3	21.9	23.3	25.1	23.5	25.5	24.0 b
	Persistent at-risk-of-poverty (% of male population)				4.5	5.2	4.0	5.5	6.7	6.0	4.0	
	Severe Material Deprivation (% of male population)		3.1	2.8	2.9	1.5	2.2	2.8	2.0	2.7	3.5	3.2
	Share of people living in low work intensity households (% of males aged 0-59)		9.3	8.3	9.1	8.4	8.2	9.7	11.1	11.7	12.2	11.7
Life expectancy at birth (years)	76.0		76.1	76.2	76.5 b	76.9	77.2	77.8	78.1	78.3		
Healthy life years at birth (years) - men	68.4		67.7	67.4	62.4 b	61.8	62.3	63.6	60.6	60.4		
Early leavers from education and training (% of males aged 18-24)	10.5		10.5	16.2 b	15.0	14.3	14.1	12.1	10.8	9.9	9.5 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)	3.6		3.4	4.7 b	4.4	5.9	6.7	6.4	6.6	6.3	6.2	
Female	At-risk-of-poverty or exclusion (% of female population)		18.3	17.9	17.7	17.0	18.2	19.0	19.5	18.9	18.6	18.1 b
	At-risk-of-poverty (% of female population)		12.1	12.0	12.0	12.0	13.4	13.4	13.0	12.9	11.8	11.7 b
	Poverty gap (%)		15.9	15.2	16.4	17.2	17.1	20.9	17.1	19.1	17.9	17.0 b
	Persistent at-risk-of-poverty (% of female population)				4.9	4.6	1.5	7.0	6.1	5.3	6.2	
	Severe Material Deprivation (% of female population)		3.3	3.5	3.6	2.4	2.4	2.5	3.3	3.0	3.7	3.2
	Share of people living in low work intensity households (% of females aged 0-59)	11.0	11.0	11.1	8.6	9.4	11.4	12.3	11.0	11.5	12.6	
	Life expectancy at birth (years)	80.5	80.7	80.6	81.0 b	81.1	81.4	81.9	82.1	82.4		
	Healthy life years at birth (years) - women	68.4	67.2	67.4	60.8 b	60.4	61.4	59.4	61.4	59.1		
	Early leavers from education and training (% of females aged 18-24)	6.9	7.7	9.5 b	10.0	8.1	7.7	7.0	7.4	6.2	6.1 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	5.1	3.8	3.8 b	4.2	4.9	5.4	6.1	6.7	5.8	5.4	
	Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	15.6	14.5	14.2	12.7	14.0	15.1	16.0	15.3	15.4	14.5 b
		At-risk-of-poverty (% of Children population)	10.4	9.9	9.6	9.1	10.6	10.9	10.2	10.2	9.1	9.2 b
		Severe Material Deprivation (% of Children population)	3.9	4.3	4.8	2.5	2.1	3.1	3.3	3.6	3.8	3.1
		Share of children living in low work intensity households (% of Children population)	7.5	7.1	6.9	4.3	5.5	7.4	8.9	5.8	7.8	7.5
		Risk of poverty of children in households at work (Working Intensity > 0.2)	6.8	6.7	6.2	7.6	7.9	6.8	7.1	7.5	6.6	6.6 b
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)		58.7	59.3	59.8	58.8	56.4	54.6	60.3	58.4	64.0	61.5 b	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	17.7	17.1	17.4	17.1	18.1	19.5	20.5	21.5	21.6	21.3 b	
	At-risk-of-poverty (% of Working age population)	11.0	11.0	10.9	11.3	12.2	12.9	13.1	13.9	13.4	13.7 b	
	Severe Material Deprivation (% of Working age population)	3.7	3.2	3.3	2.0	2.7	2.9	2.9	3.2	4.3	4.0	
	Very low work intensity (18-59)	11.2	10.7	11.5	10.2	10.1	11.9	12.8	13.6	13.5	14.0	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	4.8	4.5	4.2	5.0	5.9	6.3	6.3	5.7	5.4	4.8 b	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	61.5	60.2	58.9	59.4	58.9	56.1	56.5	55.5	57.3	55.8 b	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	17.8	18.3	18.3	18.6	20.6	18.4	16.6	14.6	10.8	10.4 b	
	At-risk-of-poverty (% of Elderly population)	17.6	17.4	17.7	18.1	20.1	17.7	16.0	14.1	10.1	9.5 b	
	Severe Material Deprivation (% of Elderly population)	0.2	1.1	0.8	0.9	0.9	0.9	1.1	0.6	1.1	0.9	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.70	0.71	0.70	0.70	0.71	0.71	0.72	0.75	0.76	0.78 b	
	Aggregate replacement ratio (ratio)	0.35	0.37	0.39	0.41	0.42	0.44	0.42	0.42	0.44	0.45 b	
Expenditure in social protection (% of GDP)	Sickness/Health care	6.1	6.1	6.3	6.5	7.3	7.0	6.9	6.9			
	Disability	4.2	4.2	3.8	3.7	4.1	4.2	4.1	4.1			
	Old age and survivors	11.0	10.8	12.6	12.7	14.0	13.8	14.2	14.4			
	Family/Children	3.8	3.7	4.0	4.0	4.5	4.3	4.1	4.0			
	Unemployment	2.5	2.1	1.2	0.9	1.6	1.8	1.8	1.8			
	Housing and Social exclusion n.e.c.	1.7	1.5	1.5	1.4	1.6	1.7	1.8	1.8			
	Total (including Admin and Other expenditures) of which: Means tested benefits	30.2 0.9	29.2 0.8	30.7 1.5	30.7 1.4	34.7 1.6	34.3 1.6	34.3 1.7	34.6 1.8			

## Macro economic indicators: Germany

Germany		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Macro Economic Indicators	Annual percentage growth	Real GDP	0.7	3.7	3.3	1.1	-5.6	4.1	3.7	0.4	0.3	1.6
		Total employment	0.0	0.8	1.7	1.3	0.1	0.3	1.4	1.2	0.6	0.9
		Labour productivity	0.7	2.9	1.5	-0.2	-5.7	3.8	2.3	-0.7	-0.3	0.7
		Annual average hours worked	-0.8	1.0	0.0	-0.4	-3.2	1.3	0.2	-1.3	-1.0	0.3
		Productivity per hour worked	1.5	1.9	1.5	0.2	-2.6	2.5	2.1	0.5	0.7	0.4
		Harmonized CPI	1.9	1.8	2.3	2.8	0.2	1.2	2.5	2.1	1.6	0.8
		Price deflator GDP	0.6	0.3	1.7	0.8	1.8	0.8	1.1	1.5	2.1	1.7
		Nominal compensation per employee	0.2	1.0	0.9	2.1	0.2	2.6	3.0	2.5	1.8	2.6
		Real compensation per employee (GDP deflator)	-0.4	0.7	-0.8	1.3	-1.5	1.8	1.9	1.0	-0.3	0.9
		Real compensation per employee (private consumption deflator)	-1.7	-0.8	-1.4	-0.7	0.0	1.4	0.5	0.4	0.2	1.8
		Nominal unit labour costs	-0.5	-1.8	-0.6	2.3	6.3	-1.2	0.7	3.3	2.2	1.9
		Real unit labour costs	-1.1	-2.1	-2.3	1.5	4.5	-1.9	-0.4	1.8	0.1	0.1
		Labour Market Indicators	Total	Total population (000)	81529 b	81489	81363	81265	80967	80760	79303 b	79526
Population aged 15-64 (000)	54764 b			54543	54229	54066	53763	53546	52314 b	52487	52577	52729
Total employment (000)	36362 b			37172	37989	38542	38471	38738	38787 b	39127	39531	39871
Employment aged 15-64 (000)	35845 b			36633	37397	37902	37808	38073	38045 b	38321	38640	38908
Employment rate (% population aged 20-64)	69.4 b			71.1	72.9	74.0	74.2	74.9	76.5 b	76.9	77.3	77.7
Employment rate (% population aged 15-64)	65.5 b			67.2	69.0	70.1	70.3	71.1	72.7 b	73.0	73.5	73.8
Employment rate (% population aged 15-24)	41.9 b			43.5	45.4	46.6	46.0	46.2	47.9 b	46.6	46.9	46.1
Employment rate (% population aged 25-54)	77.4 b			78.8	80.3	80.9	80.8	81.5	83.0 b	83.3	83.4	83.5
Employment rate (% population aged 55-64)	45.5 b			48.1	51.3	53.7	56.1	57.7	60.0 b	61.6	63.6	65.6
FTE employment rate (% population aged 20-64)	60.4 b			61.4	62.9	64.1	64.4	65.0	66.0 b	66.5	66.8	67.3
Self-employed (% total employment)	11.2			11.3	11.2	11.0	11.0	10.9	11.0 b	10.8	10.5	10.3
Part-time employment (% total employment)	24.0 b			25.8	26.1	25.9	26.1	26.2	26.8 b	26.8	27.7	27.6
Fixed-term contracts (% total employees)	14.2 b			14.5	14.6	14.7	14.5	14.7	14.5 b	13.7	13.3	13.0
Employment in Services (% total employment)	72.6			73.1	73.2	73.1	73.5	73.9	73.8	73.7	73.8	73.9
Employment in Industry (% total employment)	25.7			25.2	25.2	25.3	24.8	24.5	24.6	24.7	24.7	24.6
Employment in Agriculture (% total employment)	1.7			1.6	1.7	1.6	1.6	1.6	1.6	1.6	1.5	1.5
Activity rate (% population aged 15-64)	73.8 b			74.9	75.6	75.9	76.3	76.6	77.3 b	77.2	77.6	77.7
Activity rate (% population aged 15-24)	49.6 b			50.4	51.5	52.2	51.8	51.3	52.4 b	50.7	50.8	49.9
Activity rate (% population aged 25-54)	86.4 b			87.1	87.2	87.0	87.1	87.3	87.7 b	87.7	87.7	87.6
Activity rate (% population aged 55-64)	52.1 b			54.9	57.2	58.7	61.0	62.5	64.1 b	65.4	67.5	69.1
Total unemployment (000)	4506 i			4104	3473	3018	3098	2821	2399	2224	2182	2090
Unemployment rate (% labour force)	11.2 i			10.1	8.5	7.4	7.6	7.0	5.8	5.4	5.2	5.0
Youth unemployment rate (% labour force 15-24)	15.4 i			13.6	11.8	10.4	11.1	9.8	8.5	8.0	7.8	7.7
Long-term unemployment rate (% labour force)	5.9 b			5.7	4.8	3.9	3.5	3.3	2.8	2.4	2.3	2.2
Share of long-term unemployment (% of total unemployment)	53.0 b			56.4	56.6	52.5	45.5	47.3	47.9 b	45.4	44.7	44.3
Youth unemployment ratio (% population aged 15-24)	7.7 b			6.9	6.1	5.5	5.8	5.1	4.5 b	4.1	4.0	3.9
Employment rate for low skilled 25-64 (ISCED 0-2)	51.7 b			53.8	54.6	55.3	54.9	55.3	56.7 b	57.6	58.1	58.0 b
Employment rate for medium skilled 25-64 (ISCED 3-4)	70.7 b			72.5	74.4	75.3	75.5	76.3	77.6 b	78.2	78.9	79.7 b
Employment rate for high skilled 25-64 (ISCED 5-8)	83.0 b			84.3	85.5	85.8	86.4	86.9	88.0 b	88.0	87.9	88.1 b
Employment rate (Nationals aged 15-64)	66.9 b			68.7	70.5	71.7	71.9	72.7	74.0 b	74.2	74.8	75.1
Employment rate (Other EU-28 aged 15-64)				65.5	67.2	68.1	67.8	68.3	71.0 b	71.9	72.4	73.4
Employment rate (Other than EU-28 aged 15-64)				46.3	48.4	50.0	50.6	51.6	53.8 b	55.0	54.9	54.7
Employment rate (Born in the same country aged 15-64)	67.4 b			69.0	70.7	71.7	71.9	72.5	73.8 b	74.0	74.5	74.9
Employment rate (Born in other EU-28 aged 15-64)												
Employment rate (Born outside EU-28 aged 15-64)												
Underemployment (% of labour force aged 15-74)				5.9	5.4	5.4	4.6 b	4.3	4.2	3.9		
Seeking but not available (% of labour force aged 15-74)	2.3 b	2.3	2.2	2.0	1.4	1.4	1.2 b	1.2	1.2	1.1		
Discouraged, available but not seeking (% of labour force aged 15-74)	1.8 b	1.4	1.4	1.4	1.6	1.3	1.4 b	1.3	1.3	1.2		

Germany		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	39938 b	39952	39904	39857	39738	39645	38790 b	38981	39123	39324
		Population aged 15-64 (000)	27 558 b	27482	27297	27213	27055	26943	26209 b	26335	26398	26518
		Total employment (000)	19964 b	20336	20745	21033	20816	20892	20802 b	21019	21143	21301
		Employment aged 15-64 (000)	19636 b	20000	20378	20631	20401	20481	20338 b	20512	20584	20698
		Employment rate (% population aged 20-64)	75.6 b	77.2	79.1	80.1	79.6	80.1	81.7 b	82.1	82.1	82.2
		Employment rate (% population aged 15-64)	71.3 b	72.8	74.7	75.8	75.4	76.0	77.6 b	77.9	78.0	78.1
		Employment rate (% population aged 15-24)	43.6 b	45.3	47.2	48.7	47.5	47.9	49.7 b	48.6	48.4	47.7
		Employment rate (% population aged 25-54)	83.7 b	84.8	86.4	87.1	86.1	86.5	88.0 b	88.4	88.2	88.0
		Employment rate (% population aged 55-64)	53.6 b	56.1	59.4	61.7	63.8	65.0	67.1 b	68.6	69.9	71.4
		FTE employment rate (% population aged 20-64)	73.1 b	74.1	75.9	77.1	76.5	77.0	78.3 b	78.6	78.6	78.7
		Self-employed (% total employment)	13.4 b	13.5	13.4	13.2	13.5	13.5	13.5 b	13.4	13.1	12.7
		Part-time employment (% total employment)	7.8 b	9.3	9.4	9.3	9.6	9.7	10.2 b	10.3	10.6	10.8
		Fixed-term contracts (% total employees)	14.4 b	14.7	14.7	14.7	14.4	14.5	14.4 b	13.7	13.2	13.0
		Employment in Services (% total employment)	61.5 b	62.1	62.0	61.6	61.9	62.4	62.0 b	61.9	62.1	62.1
		Employment in Industry (% total employment)	36.3 b	35.8	35.9	36.4	36.1	35.6	35.9 b	36.1	36.0	35.9
		Employment in Agriculture (% total employment)	2.1 b	2.1	2.1	2.0	2.0	2.0	2.0 b	2.0	1.9	2.0
		Activity rate (% population aged 15-64)	80.6 b	81.3	81.7	82.0	82.2	82.3	82.7 b	82.6	82.6	82.5
		Activity rate (% population aged 15-24)	52.4 b	53.1	54.0	54.7	54.3	53.7	54.8 b	53.2	52.9	52.0
		Activity rate (% population aged 25-54)	93.6 b	93.8	93.8	93.5	93.2	93.1	93.2 b	93.1	92.9	92.6
		Activity rate (% population aged 55-64)	61.2 b	63.7	65.8	67.2	69.3	70.8	71.8 b	73.1	74.5	75.5
		Total unemployment (000)	2522 i	2245	1855	1609	1747	1611	1336	1236	1231	1188
		Unemployment rate (% labour force)	11.4 i	10.2	8.4	7.3	8.0	7.4	6.1	5.6	5.5	5.3
		Youth unemployment rate (% labour force 15-24)	16.6 i	14.6	12.4	10.8	12.2	10.6	9.2	8.7	8.5	8.3
		Long-term unemployment rate (% labour force)	6.0 b	5.7	4.8	3.9	3.5	3.5	3.0 b	2.6	2.5	2.4
		Share of long-term unemployment (% of total unemployment)	53.0 b	56.2	56.7	53.2	44.4	48.1	49.3 b	46.8	45.4	46.2
		Youth unemployment ratio (% population aged 15-24)	8.8 b	7.9	6.8	6.0	6.8	5.8	5.0 b	4.6	4.5	4.3
		Employment rate for low skilled 25-64 (ISCED 0-2)	62.2 b	64.6	65.5	66.3	64.9	65.5	67.0 b	67.8	67.8	67.4 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	76.3 b	77.8	80.0	81.0	80.3	80.8	82.3 b	82.9	83.1	83.5 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	86.3 b	87.6	89.1	89.4	89.7	90.1	91.1 b	91.4	91.3	91.3 b
		Employment rate (Nationals aged 15-64)	72.3 b	73.9	75.8	76.8	76.5	77.0	78.3 b	78.5	78.6	78.7
		Employment rate (Other EU-28 aged 15-64)		73.2	74.6	76.0	74.5	75.5	78.5 b	79.6	80.4	81.5
		Employment rate (Other than EU-28 aged 15-64)		57.1	59.2	61.6	61.1	62.5	66.0 b	66.3	66.5	65.4
		Employment rate (Born in the same country aged 15-64)	72.6 b	74.0	75.7	76.7	76.3	76.7	77.9 b	78.1	78.1	78.3
Employment rate (Born in other EU-28 aged 15-64)												
Employment rate (Born outside EU-28 aged 15-64)												
Underemployment (% of labour force aged 15-74)				2.8	2.7	2.7	2.4 b	2.2	2.1	2.0		
Seeking but not available (% of labour force aged 15-74)	1.9 b	1.8	1.9	1.7	1.2	1.2	1.1 b	1.1	1.1	1.1		
Discouraged, available but not seeking (% of labour force aged 15-74)	1.2 b	0.9	1.0	1.0	1.2	1.0	1.1 b	1.0	1.0	1.0		

Germany		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	41590 b	41537	41460	41408	41229	41115	40513 b	40545	40581	40692
		Population aged 15-64 (000)	27206 b	27061	26932	26854	26708	26604	26105 b	26152	26178	26211
		Total employment (000)	16398 b	16837	17244	17509	17655	17846	17986 b	18108	18389	18570
		Employment aged 15-64 (000)	16209 b	16633	17019	17271	17407	17591	17708 b	17809	18056	18210
		Employment rate (% population aged 20-64)	63.1 b	65.0	66.7	67.8	68.7	69.6	71.3 b	71.6	72.5	73.1
		Employment rate (% population aged 15-64)	59.6 b	61.5	63.2	64.3	65.2	66.1	67.8 b	68.1	69.0	69.5
		Employment rate (% population aged 15-24)	40.2 b	41.6	43.5	44.5	44.4	44.6	46.1 b	44.5	45.2	44.3
		Employment rate (% population aged 25-54)	71.0 b	72.7	74.0	74.7	75.4	76.3	77.9 b	78.2	78.6	78.8
		Employment rate (% population aged 55-64)	37.6 b	40.3	43.4	46.0	48.6	50.5	53.2 b	54.9	57.6	60.0
		FTE employment rate (% population aged 20-64)	48.3 b	49.4	50.6	51.8	52.8	53.6	54.7 b	55.2	55.8	56.7
		Self-employed (% total employment)	8.5 b	8.6	8.6	8.4	8.0	8.0	8.0 b	7.8	7.6	7.5
		Part-time employment (% total employment)	43.8 b	45.8	46.1	45.7	45.4	45.5	46.0 b	45.9	47.3	47.0
		Fixed-term contracts (% total employees)	14.0 b	14.3	14.6	14.8	14.7	14.9	14.7 b	13.7	13.4	13.1
		Employment in Services (% total employment)	85.4 b	85.6	85.9	86.2	86.6	86.8	86.8 b	86.7	86.7	86.8
		Employment in Industry (% total employment)	13.4 b	13.2	13.0	12.6	12.2	12.1	12.1 b	12.2	12.2	12.2
		Employment in Agriculture (% total employment)	1.2 b	1.1	1.1	1.2	1.2	1.1	1.1 b	1.1	1.0	1.1
		Activity rate (% population aged 15-64)	66.9 b	68.5	69.4	69.7	70.4	70.8	71.9 b	71.9	72.6	72.9
		Activity rate (% population aged 15-24)	46.7 b	47.6	49.0	49.5	49.2	48.9	50.0 b	48.0	48.7	47.7
		Activity rate (% population aged 25-54)	79.1 b	80.3	80.6	80.5	81.0	81.3	82.1 b	82.3	82.4	82.5
		Activity rate (% population aged 55-64)	43.2 b	46.3	48.9	50.5	52.9	54.5	56.8 b	58.2	60.8	62.9
		Total unemployment (000)	1985 i	1859	1618	1409	1350	1210	1063	989	951	902
		Unemployment rate (% labour force)	10.9 i	10.1	8.7	7.6	7.2	6.5	5.6	5.2	4.9	4.6
		Youth unemployment rate (% labour force 15-24)	14.0 i	12.5	11.0	9.9	9.7	8.8	7.8	7.3	7.1	7.1
		Long-term unemployment rate (% labour force)	5.8 b	5.7	4.9	3.9	3.4	3.0	2.6 b	2.3	2.2	1.9
		Share of long-term unemployment (% of total unemployment)	53.0 b	56.6	56.4	51.7	46.9	46.3	46.1 b	43.6	43.8	41.9
		Youth unemployment ratio (% population aged 15-24)	6.6 b	6.0	5.4	4.9	4.8	4.3	3.9 b	3.5	3.5	3.4
		Employment rate for low skilled 25-64 (ISCED 0-2)	44.7 b	46.4	47.3	47.7	48.0	48.2	49.5 b	50.4	51.1	50.9 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	65.2 b	67.3	68.9	69.8	70.7	71.9	73.0 b	73.6	74.6	76.0 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	78.2 b	79.8	80.6	81.1	82.2	82.8	84.2 b	83.9	84.0	84.0 b
		Employment rate (Nationals aged 15-64)	61.5 b	63.5	65.2	66.4	67.2	68.2	69.7 b	69.9	70.9	71.5
		Employment rate (Other EU-28 aged 15-64)		57.5	59.4	59.8	60.7	61.0	63.5 b	63.9	63.9	64.4
		Employment rate (Other than EU-28 aged 15-64)		35.1	37.4	38.4	40.2	40.7	42.5 b	44.2	44.0	44.5
		Employment rate (Born in the same country aged 15-64)	62.1 b	63.9	65.6	66.7	67.4	68.3	69.7 b	69.8	70.8	71.4
Employment rate (Born in other EU-28 aged 15-64)												
Employment rate (Born outside EU-28 aged 15-64)												
Underemployment (% of labour force aged 15-74)				9.6	8.5	8.5	7.3 b	6.7	6.6	6.1		
Seeking but not available (% of labour force aged 15-74)	2.7 b	2.8	2.6	2.4	1.5	1.5	1.4 b	1.3	1.3	1.2		
Discouraged, available but not seeking (% of labour force aged 15-74)	2.5 b	2.0	1.9	2.0	2.2	1.6	1.8 b	1.7	1.6	1.5		

Germany		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	18.4	20.2	20.6	20.1	20.0	19.7	19.9	19.6	20.3	20.6
		At-risk-of-poverty (% of total population)	12.2	12.5	15.2	15.2	15.5	15.6	15.8	16.1	16.1	16.7
		At-risk-of-poverty threshold (PPS single person)	9391 b	9100	10395	10804	10770	10544	11037	11525	11687	11580
		Poverty gap (%)	18.9	20.4	23.2	22.2	21.5	20.7	21.4	21.1	20.4	23.2
		Persistent at-risk-of-poverty (% of total population)				7.2	8.1	9.1	10.4	10.4	10.6	
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	23.1	25.7	24.8	24.2	24.1	24.2	25.1	24.3	24.4	25.0
		Impact of social transfers (excl. pensions) in reducing poverty (%)	47.2	51.4	38.7	37.2	35.7	35.5	37.1	33.7	34.0	33.2
		Severe Material Deprivation (% of total population)	4.6	5.1	4.8	5.5	5.4	4.5	5.3	4.9	5.4	5.0
		Share of people living in low work intensity households (% of people aged 0-59)	12.0	13.6	11.5	11.7	10.9	11.2	11.2	9.9	9.9	10.0
		Gross Household Disposable income adjusted for consumer prices (growth %)	0.3	1.1	0.4	0.8	-0.4	0.4	1.0	0.7	0.7	1.5
		Income quintile share ratio S80/S20	3.8	4.1	4.9	4.8	4.5	4.5	4.5	4.3	4.6	5.1
		GINI coefficient	26.1 b	26.8	30.4	30.2	29.1	29.3	29.0	28.3	29.7	30.7
		Early leavers from education and training (% of population aged 18-24)	13.5 b	13.7	12.5	11.8 b	11.1	11.9	11.6 b	10.5	9.8	9.5 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	10.9 b	9.6	8.9	8.4 b	8.8	8.3	7.5 b	7.1	6.3	6.4
	Male	At-risk-of-poverty or exclusion (% of male population)	17.0	18.9	18.8	18.5	18.8	18.6	18.5	18.1	18.8	19.5
		At-risk-of-poverty (% of male population)	11.4	12.1	14.1	14.2	14.7	14.9	14.9	14.9	15.0	15.9
		Poverty gap (%)	20.3	21.4	24.4	23.7	22.3	21.5	22.6	21.8	20.9	24.0
		Persistent at-risk-of-poverty (% of male population)				6.6	7.0	9.0	10.0	9.9	10.0	
		Severe Material Deprivation (% of male population)	4.3	5.0	4.3	5.3	5.3	4.4	5.0	4.5	5.2	4.8
		Share of people living in low work intensity households (% of males aged 0-59)	11.1	12.3	10.5	10.9	10.5	10.7	10.5	9.2	9.4	9.8
Life expectancy at birth (years)		76.7	77.2	77.4	77.6 b	77.8	78.0	78.4	78.6	78.6		
Healthy life years at birth (years) - men		54.5	58.7 bd	59.0	56.4 b	57.1	57.9	57.9	57.4	57.8		
Early leavers from education and training (% of males aged 18-24)		13.3 b	14.0	13.1	12.4 b	11.5	12.7	12.5 b	11.1	10.2	10.0 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)		10.1 b	8.9	8.0	7.5 b	8.2	7.7	6.7 b	6.3	5.6	5.5	
Female	At-risk-of-poverty or exclusion (% of female population)	19.7	21.3	22.3	21.6	21.2	20.9	21.3	21.1	21.9	21.8	
	At-risk-of-poverty (% of female population)	12.9	13.0	16.3	16.2	16.3	16.4	16.8	17.2	17.2	17.4	
	Poverty gap (%)	17.7	19.2	22.4	21.1	20.8	19.6	20.6	20.6	20.1	22.6	
	Persistent at-risk-of-poverty (% of female population)				7.7	9.0	9.2	10.8	10.9	11.1		
	Severe Material Deprivation (% of female population)	4.8	5.1	5.3	5.6	5.4	4.7	5.7	5.2	5.6	5.1	
	Share of people living in low work intensity households (% of females aged 0-59)	12.9	14.8	12.6	12.4	11.3	11.7	11.9	10.7	10.5	10.2	
	Life expectancy at birth (years)	82.0	82.4	82.7	82.7 b	82.8	83.0	83.2	83.3	83.2		
	Healthy life years at birth (years) - women	54.8	58.3 bd	58.6	57.7 b	58.1	58.7	58.7	57.9	57.0		
	Early leavers from education and training (% of females aged 18-24)	13.7 b	13.4	11.9	11.2 b	10.7	11.0	10.7 b	9.9	9.3	8.9 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	11.6 b	10.4	9.8	9.5 b	9.4	9.0	8.3 b	7.9	7.0	7.2	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	17.9	20.9	19.7	20.1	20.4	21.7	19.9	18.4	19.4	19.6	
	At-risk-of-poverty (% of Children population)	12.2	12.4	14.1	15.2	15.0	17.5	15.6	15.2	14.7	15.1	
	Severe Material Deprivation (% of Children population)	5.2	5.9	5.4	6.9	7.1	5.2	5.4	4.8	5.6	5.0	
	Share of children living in low work intensity households (% of Children population)	8.9	11.0	9.2	9.1	9.0	8.9	8.6	6.8	6.9	7.0	
	Risk of poverty of children in households at work (Working Intensity > 0.2)	7.6	8.2	9.2	9.6	9.7	11.7	10.5	10.8	11.3	11.8	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	59.2	63.3	53.6	50.3	50.8	46.7	52.7	50.7	51.7	50.0	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	19.6	21.9	21.9	21.5	21.1	20.8	21.3	21.2	22.0	22.0	
	At-risk-of-poverty (% of Working age population)	11.9	12.6	15.2	15.4	15.8	15.6	16.4	16.6	16.9	17.2	
	Severe Material Deprivation (% of Working age population)	4.9	5.7	5.5	6.1	5.8	5.2	6.0	5.5	6.0	5.6	
	Very low work intensity (18-59)	13.0	14.4	12.3	12.4	11.4	11.9	12.0	10.8	10.8	10.9	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	4.8	5.5	7.4	7.1	6.8	7.1	7.7	7.7	8.6	9.9	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	49.4	53.0	40.4	38.2	36.3	37.4	37.2	34.1	33.7	33.9	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	14.5	13.5	16.8	15.5	16.0	14.8	15.3	15.8	16.0	17.4	
	At-risk-of-poverty (% of Elderly population)	13.4	12.5	16.2	14.9	15.0	14.1	14.2	15.0	14.9	16.3	
	Severe Material Deprivation (% of Elderly population)	2.6	2.1	2.2	2.1	2.5	2.1	3.2	2.8	3.2	3.2	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.94 b	0.93	0.87	0.87	0.88	0.89	0.90	0.88	0.89	0.90	
	Aggregate replacement ratio (ratio)	0.46	0.46	0.46	0.44	0.47	0.49	0.51	0.47	0.47	0.45	
Expenditure in social protection (% of GDP)	Sickness/Health care	8.2	8.0	8.0	8.3	9.7	9.6	9.4	9.6	9.8 p		
	Disability	2.3	2.2	2.1	2.2	2.3	2.3	2.2	2.3	2.3 p		
	Old age and survivors	12.3	11.9	11.5	11.5	12.2	11.8	11.4	11.4	11.3 p		
	Family/Children	3.1	2.9	2.8	2.8	3.2	3.2	3.1	3.2	3.2 p		
	Unemployment	2.1	1.8	1.5	1.4	1.9	1.7	1.3	1.2	1.2 p		
	Housing and Social exclusion n.e.c.	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8 p		
	Total (including Admin and Other expenditures) of which: Means tested benefits	29.9 3.5	28.8 3.5	27.7 3.3	28.0 3.3	31.6 3.6	30.8 3.5	29.6 3.4	29.6 3.4	29.9 p 3.5 p		



## Macro economic indicators: Estonia

Estonia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Macro Economic Indicators	Annual percentage growth	Real GDP	9.4	10.3	7.7	-5.4	-14.7	2.5	7.6	5.2	1.6	2.9
		Total employment	2.3	4.9	0.2	-0.2	-10.2	-4.9	6.5	1.6	1.2	0.8
		Labour productivity	6.9	5.1	7.5	-5.2	-5.0	7.8	1.0	3.5	0.3	2.1
		Annual average hours worked	1.1	-0.4	-0.1	-1.5	-6.9	2.3	2.4	-1.7	-1.1	-0.3
		Productivity per hour worked	5.8	5.5	7.7	-3.7	2.0	5.3	-1.4	5.3	1.4	2.5
		Harmonized CPI	4.1	4.4	6.7	10.6	0.2	2.7	5.1	4.2	3.2	0.5
		Price deflator GDP	6.1	8.9	11.5	7.5	0.4	1.5	5.3	2.7	4.0	2.0
		Nominal compensation per employee	10.6	14.8	25.6	10.6	-2.9	2.6	0.8	6.9	5.8	5.9
		Real compensation per employee (GDP deflator)	4.2	5.4	12.6	2.8	-3.3	1.1	-4.3	4.1	1.8	3.8
		Real compensation per employee (private consumption deflator)	6.2	9.9	17.6	-0.1	-3.1	-0.1	-4.1	2.6	2.5	5.4
		Nominal unit labour costs	3.4	9.2	16.8	16.7	2.2	-4.8	-0.2	3.3	5.5	3.7
		Real unit labour costs	-2.5	0.2	4.8	8.4	1.8	-6.2	-5.2	0.6	1.5	1.6
		Labour Market Indicators	Total	Total population (000)	1348	1345	1338	1334	1331	1329	1326	1320
Population aged 15-64 (000)	916			915	907	902	899	895	890	880	871	862
Total employment (000)	616			652	658	656	594	568	603	615	621	625
Employment aged 15-64 (000)	594			626	632	632	574	548	582	591	597	600
Employment rate (% population aged 20-64)	72.0			75.9	76.9	77.1	70.0	66.8	70.6	72.2	73.3	74.3
Employment rate (% population aged 15-64)	64.8			68.4	69.8	70.1	63.8	61.2	65.3	67.1	68.5	69.6
Employment rate (% population aged 15-24)	30.7			31.4	34.1	35.9	28.3	25.3	31.1	32.3	32.4	33.3
Employment rate (% population aged 25-54)	79.1			84.1	84.8	83.9	76.5	74.9	78.2	79.5	80.4	80.9
Employment rate (% population aged 55-64)	55.7			58.4	59.9	62.3	60.3	53.8	57.5	60.5	62.6	64.0
FTE employment rate (% population aged 20-64)	70.6 b			74.4	75.1	75.5	68.0	64.8	68.6	70.1	71.4	72.5
Self-employed (% total employment)	7.9			8.2	9.3	8.0	8.4	8.6	8.8	9.1	9.4	9.3
Part-time employment (% total employment)	8.0			7.9	8.2	7.2	10.6	11.1	10.8	10.5	10.2	9.6
Fixed-term contracts (% total employees)	2.7			2.7	2.1	2.4	2.5	3.7	4.5	3.7	3.5	3.2
Employment in Services (% total employment)	61.5			62.4	61.0	61.7	65.5	66.9	64.6	65.7	66.6	67.4
Employment in Industry (% total employment)	33.5			32.8	34.4	34.4	30.6	28.9	31.0	29.8	29.2	28.8
Employment in Agriculture (% total employment)	5.0			4.8	4.6	3.9	3.9	4.2	4.4	4.5	4.2	3.7
Activity rate (% population aged 15-64)	70.7			72.8	73.2	74.2	74.0	73.9	74.7	74.8	75.1	75.2
Activity rate (% population aged 15-24)	36.2			35.7	37.9	40.8	39.0	37.8	40.0	40.8	39.8	39.2
Activity rate (% population aged 25-54)	85.8			89.0	88.5	88.2	87.8	88.3	88.4	87.8	87.6	87.1
Activity rate (% population aged 55-64)	58.9			61.0	62.2	65.0	66.5	64.3	65.1	65.1	66.6	67.7
Total unemployment (000)	54			41	32	38 i	93	114	85	68	59	50
Unemployment rate (% labour force)	8.0			5.9	4.6	5.5 i	13.5	16.7	12.3	10.0	8.6	7.4
Youth unemployment rate (% labour force 15-24)	15.1			12.1	10.1	12.0 i	27.4	32.9	22.4	20.9	18.7	15.0
Long-term unemployment rate (% labour force)	4.4			2.9	2.3	1.7	3.7	7.6	7.1	5.5	3.8	3.3
Share of long-term unemployment (% of total unemployment)	54.2			48.6	49.8	31.1	27.3	45.3	57.3	54.7	44.5	45.3
Youth unemployment ratio (% population aged 15-24)	5.5			4.3	3.8	4.9	10.7	12.4	9.0	8.5	7.4	5.9
Employment rate for low skilled 25-64 (ISCED 0-2)	51.3 b			56.1	56.8	58.1	47.5	45.2	48.5	50.3	58.2	60.9 b
Employment rate for medium skilled 25-64 (ISCED 3-4)	72.8 b			77.9	79.4	79.6	71.6	68.8	74.0	74.4	74.5	74.4 b
Employment rate for high skilled 25-64 (ISCED 5-8)	84.3 b			87.6	87.3	85.8	82.7	79.7	79.9	82.3	83.0	84.0 b
Employment rate (Nationals aged 15-64)	65.4 b			68.6	69.7	69.8	64.3	62.2	65.8	67.9	69.0	70.3
Employment rate (Other EU-28 aged 15-64)				65.9 u	64.0 u	80.4 u	69.2 u	62.6 u	58.8 u	59.3 u	63.2 u	77.5
Employment rate (Other than EU-28 aged 15-64)				67.6	70.3	71.1	61.3	56.1	62.6	63.4	65.4	64.8
Employment rate (Born in the same country aged 15-64)	64.1 b			67.8	69.0	69.3	63.2	61.5	65.5	67.1	68.5	69.8
Employment rate (Born in other EU-28 aged 15-64)				65.5	76.2	77.2	74.0	61.4	61.9	59.2	62.6	71.7
Employment rate (Born outside EU-28 aged 15-64)				72.6	74.3	74.9	67.6	59.3	64.3	67.6	68.8	67.6
Underemployment (% of labour force aged 15-74)						0.7	1.8	1.8	1.8	1.5	1.2	1.0
Seeking but not available (% of labour force aged 15-74)								0.3 u	0.2 u	0.4 u	0.3 u	0.4 u
Discouraged, available but not seeking (% of labour force aged 15-74)	6.5 b	4.6	4.2	3.4	5.4	6.0	6.4	6.0	5.1	4.8		

Estonia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	623	624	621	618	617	617	617	614	613	611
		Population aged 15-64 (000)	442	445	441	439	438	437	435	430	427	423
		Total employment (000)	304	330	335	334	291	278	303	309	315	320
		Employment aged 15-64 (000)	295	317	324	323	282	269	295	300	305	309
		Employment rate (% population aged 20-64)	74.6	79.5	81.4	81.5	71.0	67.8	73.5	75.1	76.7	78.3
		Employment rate (% population aged 15-64)	66.7	71.4	73.5	73.7	64.3	61.7	67.8	69.7	71.4	73.0
		Employment rate (% population aged 15-24)	34.5	36.8	38.2	38.9	30.0	26.5	33.1	34.2	34.0	33.4
		Employment rate (% population aged 25-54)	80.8	87.3	89.6	88.2	77.4	75.8	81.6	83.1	84.7	85.6
		Employment rate (% population aged 55-64)	56.5	57.3	59.0	64.7	59.3	51.9	57.2	59.2	61.4	65.1
		FTE employment rate (% population aged 20-64)	74.0 b	79.0	80.6	80.9	69.8	66.6	72.9	74.3	75.7	77.1
		Self-employed (% total employment)	11.0	11.5	12.9	10.8	11.7	11.9	12.3	12.8	12.7	12.6
		Part-time employment (% total employment)	5.2	4.4	4.3	4.1	7.1	7.0	5.6	5.9	6.2	6.5
		Fixed-term contracts (% total employees)	3.5	3.3	2.7	3.4	3.0	4.8	5.6	4.7	4.1	3.4
		Employment in Services (% total employment)	49.4	49.0	46.5	47.7	51.6	52.7	49.6	50.7	52.0	54.1
		Employment in Industry (% total employment)	43.6	44.5	47.2	47.0	43.0	41.6	44.0	42.9	41.9	40.7
		Employment in Agriculture (% total employment)	7.0	6.6	6.3	5.4	5.4	5.7	6.4	6.5	6.1	5.3
		Activity rate (% population aged 15-64)	73.6	76.2	77.8	78.4	77.7	76.8	78.2	78.4	78.6	79.3
		Activity rate (% population aged 15-24)	41.2	40.9	43.5	44.5	43.8	41.2	43.4	44.3	41.4	41.4
		Activity rate (% population aged 25-54)	88.4	92.6	93.5	92.8	91.9	91.8	92.1	92.1	92.3	92.2
		Activity rate (% population aged 55-64)	60.5	61.5	63.4	68.3	67.3	64.3	67.0	65.3	66.9	69.1
		Total unemployment (000)	31	22	19	20 i	58	66	45	38	31	27
	Unemployment rate (% labour force)	9.2	6.2	5.4	5.8 i	16.7	19.3	13.1	10.9	9.1	7.9	
	Youth unemployment rate (% labour force 15-24)	16.1	10.0	12.2	12.6 i	31.6	35.6	23.8	22.8	17.7	19.3	
	Long-term unemployment rate (% labour force)	4.5	3.2	2.9	2.0	4.4	9.3	7.9	6.1	4.2	3.9	
	Share of long-term unemployment (% of total unemployment)	49.5	51.2	53.3	35.5	26.6	48.3	60.5	55.5	46.6	50.2	
	Youth unemployment ratio (% population aged 15-24)	6.6	4.1	5.3	5.6	13.8	14.7	10.3	10.1	7.3	8.0	
	Employment rate for low skilled 25-64 (ISCED 0-2)	53.9 b	62.0	63.9	65.6	51.7	46.5	53.2	54.1	62.5	66.2 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	76.2 b	82.1	84.7	83.8	72.8	71.9	78.1	79.1	79.4	80.1 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	87.0 b	90.8	91.5	92.4	87.3	81.1	84.3	86.2	87.6	89.5 b	
	Employment rate (Nationals aged 15-64)	66.4 b	70.8	72.6	73.2	65.1	62.5	67.9	69.6	71.5	72.9	
	Employment rate (Other EU-28 aged 15-64)		91.4 u		93.1 u	66.1 u	59.8 u	54.9 u	68.6 u		83.2 u	
	Employment rate (Other than EU-28 aged 15-64)		73.6	77.3	75.8	61.2	58.1	67.7	69.8	70.6	72.7	
	Employment rate (Born in the same country aged 15-64)	65.8 b	70.8	72.9	72.8	63.8	61.9	67.5	69.5	71.3	72.8	
	Employment rate (Born in other EU-28 aged 15-64)		70.6 u	88.2 u	94.2 u	75.5 u	58.8 u	51.6 u	58.2 u	52.9 u	73.6	
	Employment rate (Born outside EU-28 aged 15-64)		75.5	77.1	79.6	68.1	60.7	71.0	71.8	73.1	74.7	
	Underemployment (% of labour force aged 15-74)				0.6 u	1.7	1.3	1.0	1.1	1.0	0.9	
	Seeking but not available (% of labour force aged 15-74)											
	Discouraged, available but not seeking (% of labour force aged 15-74)	7.0 b	4.3	4.3	3.5	5.5	5.7	6.1	6.0	4.7	4.3	

Estonia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	725	721	717	716	714	712	709	706	703	700
		Population aged 15-64 (000)	473	471	466	464	462	459	455	450	444	439
		Total employment (000)	311	322	323	322	303	290	301	306	307	305
		Employment aged 15-64 (000)	299	309	309	309	292	279	287	291	292	291
		Employment rate (% population aged 20-64)	69.7	72.5	72.6	72.9	69.0	65.9	67.8	69.4	70.1	70.6
		Employment rate (% population aged 15-64)	63.1	65.6	66.2	66.6	63.2	60.8	63.0	64.7	65.7	66.3
		Employment rate (% population aged 15-24)	26.8	25.8	29.8	32.9	26.7	24.1	29.0	30.3	30.7	33.3
		Employment rate (% population aged 25-54)	77.6	80.9	80.1	79.7	75.7	74.0	75.0	75.8	76.1	76.1
		Employment rate (% population aged 55-64)	55.1	59.3	60.7	60.5	61.1	55.3	57.8	61.5	63.6	63.1
		FTE employment rate (% population aged 20-64)	67.6 b	70.1	70.1	70.6	66.3	63.3	64.7	66.3	67.3	68.1
		Self-employed (% total employment)	4.9	4.8	5.6	5.0	5.3	5.4	5.2	5.3	6.0	5.8
		Part-time employment (% total employment)	10.8	11.5	12.1	10.5	14.0	15.0	16.0	15.3	14.2	12.8
		Fixed-term contracts (% total employees)	1.9	2.1	1.6	1.4	2.0	2.7	3.5	2.7	3.0	3.0
		Employment in Services (% total employment)	73.1	75.9	75.8	76.1	78.7	80.2	79.5	80.7	81.3	81.2
		Employment in Industry (% total employment)	23.7	21.1	21.2	21.5	18.8	17.0	18.0	16.8	16.5	16.6
		Employment in Agriculture (% total employment)	3.1	3.0	3.0	2.4	2.5	2.8	2.4	2.5	2.2	2.2
		Activity rate (% population aged 15-64)	67.9	69.6	68.9	70.3	70.6	71.1	71.5	71.4	71.8	71.3
		Activity rate (% population aged 15-24)	31.1	30.4	32.1	37.1	34.1	34.3	36.5	37.2	38.2	37.0
		Activity rate (% population aged 25-54)	83.3	85.5	83.6	83.7	83.8	84.8	84.7	83.5	82.9	82.0
		Activity rate (% population aged 55-64)	57.7	60.6	61.2	62.4	66.0	64.3	63.5	65.0	66.5	66.5
	Total unemployment (000)	23	19	13	17 i	35	48	39	31	27	22	
	Unemployment rate (% labour force)	6.9	5.6	3.8	5.1 i	10.3	14.1	11.6	9.1	8.2	6.8	
	Youth unemployment rate (% labour force 15-24)	13.8	15.1	7.2	11.3 i	21.8	29.5	20.7	18.5	19.8	10.0	
	Long-term unemployment rate (% labour force)	4.2	2.6	1.7	1.3	2.9	5.8	6.2	4.9	3.4	2.7	
	Share of long-term unemployment (% of total unemployment)	60.5	45.7	44.4	26.1	28.6	41.1	53.7	53.6	42.1	39.4	
	Youth unemployment ratio (% population aged 15-24)	4.3	4.6	2.3	4.2	7.4	10.1	7.5	6.9	7.5	3.7	
	Employment rate for low skilled 25-64 (ISCED 0-2)	47.8 b	47.7	47.3	48.9	41.4	43.3	41.3	44.3	50.7	51.6 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	69.1 b	73.6	73.5	74.8	70.2	65.1	69.3	68.8	68.7	67.6 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	82.7 b	85.6	84.7	82.0	80.2	78.9	77.3	80.0	80.3	80.8 b	
	Employment rate (Nationals aged 15-64)	64.5 b	66.6	67.0	66.9	63.5	62.0	63.9	66.2	66.8	67.9	
	Employment rate (Other EU-28 aged 15-64)									59.3 u	70.6 u	
	Employment rate (Other than EU-28 aged 15-64)		60.7	62.5	65.5	61.4	53.9	56.7	55.8	59.2	55.7	
	Employment rate (Born in the same country aged 15-64)	62.5 b	64.9	65.2	66.1	62.6	61.2	63.5	64.8	65.7	66.8	
	Employment rate (Born in other EU-28 aged 15-64)		61.6 u	67.9 u			65.6 u	75.5 u	60.3 u	69.7 u	69.8	
	Employment rate (Born outside EU-28 aged 15-64)		70.1	72.1	70.8	67.1	58.2	58.9	64.6	65.7	61.9	
	Underemployment (% of labour force aged 15-74)				0.8 u	1.9	2.3	2.6	1.9	1.4	1.1	
	Seeking but not available (% of labour force aged 15-74)						0.5 u	0.3 u	0.6 u	0.4 u	0.5 u	
	Discouraged, available but not seeking (% of labour force aged 15-74)	6.0 b	4.9	4.0	3.2	5.3	6.2	6.7	6.0	5.5	5.2	

Estonia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	25.9	22.0	22.0	21.8	23.4	21.7	23.1	23.4	23.5	
		At-risk-of-poverty (% of total population)	18.3	18.3	19.4	19.5	19.7	15.8	17.5	17.5	18.6	
		At-risk-of-poverty threshold (PPS single person)	2835	3376	3895	4538	4861	4448	4491	4734	5164	
		Poverty gap (%)	24.0	22.0	20.2	20.3	17.0	23.2	26.0	23.8	21.5	
		Persistent at-risk-of-poverty (% of total population)			11.1	13.6	12.9	9.9	10.5	12.0	9.3	
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	24.2	24.6	25.2	24.7	25.9	24.9	24.9	24.8	25.4	
		Impact of social transfers (excl. pensions) in reducing poverty (%)	24.4	25.6	23.0	21.1	23.9	36.6	29.7	29.4	26.8	
		Severe Material Deprivation (% of total population)	12.4	7.0	5.6	4.9	6.2	9.0	8.7	9.4	7.6	
		Share of people living in low work intensity households (% of people aged 0-59)	9.5	7.1	6.2	5.3	5.6	9.0	10.0	9.1	8.4	
		Gross Household Disposable income adjusted for consumer prices (growth %)	8.8	11.9	11.1	4.6	-8.9	-4.6	3.2	0.2	6.2	2.0
	Income quintile share ratio S80/S20	5.9	5.5	5.5	5.0	5.0	5.0	5.3	5.4	5.5		
	GINI coefficient	34.1	33.1	33.4	30.9	31.4	31.3	31.9	32.5	32.9		
	Early leavers from education and training (% of population aged 18-24)	14.0	13.4	14.4	14.0	13.5 b	11.0	10.6	10.3	9.7	11.4 b	
	NEET: Young people not in employment, education or training (% of total population aged 15-24)	10.6	8.8	8.9	8.7	14.5 b	14.0	11.6	12.2	11.3	11.7	
	Male	At-risk-of-poverty or exclusion (% of male population)	24.3	20.0	19.4	18.9	21.1	21.5	23.2	22.3	22.5	
		At-risk-of-poverty (% of male population)	17.4	16.3	16.7	16.5	17.5	15.4	17.6	16.8	17.2	
		Poverty gap (%)	28.6	26.5	24.2	23.8	20.7	25.9	27.9	27.6	27.4	
		Persistent at-risk-of-poverty (% of male population)			9.5	10.1	11.5	7.8	9.9	11.6	8.6	
		Severe Material Deprivation (% of male population)	12.1	6.8	5.4	4.8	6.2	9.3	8.8	9.5	8.1	
		Share of people living in low work intensity households (% of males aged 0-59)	9.6	7.7	6.6	6.0	6.5	9.7	10.9	9.6	9.5	
Life expectancy at birth (years)		67.3	67.4	67.5	68.9 b	69.8	70.9	71.4	71.4	72.8		
Healthy life years at birth (years) - men		48.3	49.6	49.8	53.1 b	55.0	54.2	54.3	53.1	53.9		
Early leavers from education and training (% of males aged 18-24)		16.7	19.5	21.4	19.8	17.9 b	14.4	12.8	13.3	13.6	15.3 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)		8.2	6.6	8.5	8.0	14.4 b	14.6	11.8	11.2	10.8	11.8	
Female	At-risk-of-poverty or exclusion (% of female population)	27.3	23.7	24.2	24.3	25.5	22.0	22.9	24.4	24.4		
	At-risk-of-poverty (% of female population)	19.1	19.9	21.7	22.0	21.6	16.2	17.4	18.1	19.9		
	Poverty gap (%)	20.7	19.9	18.4	19.3	15.5	20.0	24.0	21.8	16.9		
	Persistent at-risk-of-poverty (% of female population)			12.5	16.5	13.9	11.7	11.0	12.3	9.9		
	Severe Material Deprivation (% of female population)	12.6	7.2	5.8	4.9	6.3	8.7	8.6	9.3	7.1		
	Share of people living in low work intensity households (% of females aged 0-59)	9.3	6.5	5.8	4.7	4.8	8.3	9.2	8.6	7.3		
	Life expectancy at birth (years)	78.1	78.6	78.9	79.5 b	80.2	80.8	81.3	81.5	81.7		
	Healthy life years at birth (years) - women	52.4	53.9	54.9	57.5 b	59.2	58.2	57.9	57.2	57.1		
	Early leavers from education and training (% of females aged 18-24)	11.2	6.9	7.2	8.3	9.1 b	7.6	8.4	7.3	5.8	7.5 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	13.0	11.0	9.2	9.4	14.5 b	13.5	11.4	13.2	11.8	11.6	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	28.4	24.1	20.1	19.4	24.5	24.0	24.8	22.4	22.3		
	At-risk-of-poverty (% of Children population)	21.3	20.1	18.2	17.1	20.6	17.3	19.5	17.0	18.1		
	Severe Material Deprivation (% of Children population)	12.7	7.6	4.1	5.3	7.0	10.7	9.1	9.2	7.0		
	Share of children living in low work intensity households (% of Children population)	9.8	6.5	4.6	3.8	4.5	8.4	9.2	6.9	6.6		
	Risk of poverty of children in households at work (Working Intensity > 0.2)	14.7	15.3	14.4	14.3	17.8	12.1	13.7	12.8	13.4		
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	31.5	34.3	35.5	35.0	30.6	44.4	35.9	40.6	34.2		
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	24.2	19.8	19.1	17.5	19.9	21.8	24.2	24.2	22.7		
	At-risk-of-poverty (% of Working age population)	16.8	15.9	16.1	15.0	15.8	15.6	18.0	17.7	17.3		
	Severe Material Deprivation (% of Working age population)	11.6	6.8	5.5	4.5	6.1	9.1	9.3	10.0	8.0		
	Very low work intensity (18-59)	9.3	7.3	6.8	5.8	5.9	9.1	10.3	9.8	9.0		
	In-work at-risk-of poverty rate (% of persons employed 18-64)	7.5	7.8	7.9	7.4	8.3	6.7	8.2	8.5	7.7		
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	25.0	27.4	25.1	24.6	28.2	37.6	30.2	28.9	28.8		
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	29.2	27.8	35.4	40.9	35.6	19.0	17.0	21.8	28.0		
	At-risk-of-poverty (% of Elderly population)	20.3	25.1	33.2	39.0	33.9	15.1	13.1	17.2	24.4		
	Severe Material Deprivation (% of Elderly population)	14.9	7.4	7.9	5.8	5.6	6.6	5.8	7.1	6.3		
	Relative median income of elderly (ratio with median income of people younger than 65)	0.73	0.69	0.65	0.62	0.66	0.73	0.75	0.72	0.69		
	Aggregate replacement ratio (ratio)	0.47	0.49	0.47	0.45	0.52	0.55	0.54	0.50	0.50		
Expenditure in social protection (% of GDP)	Sickness/Health care	4.0	3.7	4.0	4.8	5.3	4.8	4.4	4.3	4.2		
	Disability	1.2	1.1	1.1	1.5	1.9	1.9	1.8	1.8	1.8		
	Old age and survivors	5.4	5.4	5.2	6.4	8.0	7.9	7.0	6.8	6.7		
	Family/Children	1.5	1.5	1.4	1.8	2.2	2.3	2.0	1.7	1.6		
	Unemployment	0.2	0.1	0.1	0.3	1.2	0.8	0.5	0.5	0.5		
	Housing and Social exclusion n.e.c.	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1		
	Total (including Admin and Other expenditures) of which: Means tested benefits	12.6	12.1	12.1	14.9	19.0	18.0	16.1	15.4	15.1		

## Macro economic indicators: Ireland

Ireland		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	6.3	6.3	5.5	-2.2	-5.6	0.4	2.6	0.2	1.4	5.2		
		Total employment	4.9	4.6	4.4	-0.6	-7.8	-4.1	-1.8	-0.6	2.4	1.7		
		Labour productivity	1.4	1.6	1.1	-1.5	2.4	4.6	4.4	0.7	-0.9	3.4		
		Annual average hours worked	0.4	-0.2	-0.7	-1.1	-1.7	-0.6	0.0	0.3	0.5	0.3		
		Productivity per hour worked	0.9	1.8	1.9	-0.4	4.2	5.3	4.4	0.5	-1.4	3.1		
		Harmonized CPI	2.2	2.7	2.9	3.1	-1.7	-1.6	1.2	1.9	0.5	0.3		
		Price deflator GDP	2.4	2.3	1.0	-2.7	-4.3	-2.3	2.0	0.4	1.2	0.1		
		Nominal compensation per employee	5.4	4.3	5.8	3.9	-1.1	-4.5	1.2	0.0	-0.7	1.8		
		Real compensation per employee (GDP deflator)	3.0	1.9	4.7	6.9	3.3	-2.2	-0.8	-0.4	-1.9	1.6		
		Real compensation per employee (private consumption deflator)	3.2	1.5	2.9	0.8	0.5	-3.0	0.1	-2.0	-1.2	1.4		
		Nominal unit labour costs	4.0	2.6	4.6	5.6	-3.4	-8.7	-3.1	-0.8	0.2	-1.6		
		Real unit labour costs	1.6	0.4	3.6	8.5	0.9	-6.6	-5.0	-1.1	-1.1	-1.7		
		Labour Market Indicators	Total	Total population (000)	4149	4253	4400 b	4496	4539	4560	4577	4590	4602	4615
				Population aged 15-64 (000)	2831	2919	3035 b	3089	3096	3081	3064	3042	3022	3007
Total employment (000)	1952			2044	2143 b	2128	1961	1882	1849	1838	1881	1914		
Employment aged 15-64 (000)	1915			2005	2099 b	2081	1917	1838	1804	1790	1828	1856		
Employment rate (% population aged 20-64)	72.6			73.4	73.8 b	72.2	66.9	64.6	63.8	63.7	65.5	67.0		
Employment rate (% population aged 15-64)	67.6			68.7	69.2 b	67.4	61.9	59.6	58.9	58.8	60.5	61.7		
Employment rate (% population aged 15-24)	48.7			50.3	51.0 b	46.2	36.9	31.5	29.5	28.2	29.0	28.4		
Employment rate (% population aged 25-54)	77.9			78.3	78.6 b	77.3	72.3	70.3	69.3	69.5	71.0	72.6		
Employment rate (% population aged 55-64)	51.6			53.1	53.9 b	53.9	51.3	50.2	50.0	49.3	51.3	53.0		
FTE employment rate (% population aged 20-64)	68.8 b			68.0	68.2 b	66.5	60.6 b	57.9	56.8	56.7	58.5	60.0		
Self-employed (% total employment)	16.9			16.3	16.9 b	17.5	17.6	16.9	16.4	16.5	17.3	17.4		
Part-time employment (% total employment)					17.9 b	18.7	21.5	22.7	23.6	24.0	24.1	23.5		
Fixed-term contracts (% total employees)	3.7			6.0	8.5 b	8.6	8.8	9.6	10.2	10.2	10.0	9.3		
Employment in Services (% total employment)	67.3			67.3	68.1	69.6	73.6	75.8	76.5	76.9	76.0	76.0		
Employment in Industry (% total employment)	27.0			27.3	26.7	25.0	21.5	19.6	19.0	18.4	18.3	18.3		
Employment in Agriculture (% total employment)	5.7			5.4	5.2	5.4	4.9	4.5	4.5	4.7	5.7	5.7		
Activity rate (% population aged 15-64)	70.8			71.9	72.6 b	72.1	70.6	69.4	69.2	69.2	69.8	69.8		
Activity rate (% population aged 15-24)	53.3			55.0	56.1 b	53.3	48.5	43.6	41.5	40.5	39.7	37.3		
Activity rate (% population aged 25-54)	80.9			81.4	82.0 b	81.9	81.1	80.5	80.2	80.4	80.8	81.0		
Activity rate (% population aged 55-64)	53.1			54.4	55.3 b	55.8	54.9	55.0	55.4	55.1	57.4	58.4		
Total unemployment (000)	90			97	105	146	268	303	317	316	282	243		
Unemployment rate (% labour force)	4.4			4.5	4.7	6.4	12.0	13.9	14.7	14.7	13.1	11.3		
Youth unemployment rate (% labour force 15-24)	8.7			8.7	9.1	13.3	24.0	27.6	29.1	30.4	26.8	23.9		
Long-term unemployment rate (% labour force)	1.5			1.4	1.4	1.7	3.5	6.8	8.7	9.1	7.9	6.7		
Share of long-term unemployment (% of total unemployment)	33.4			31.6	30.0 b	26.5	29.1	49.1	59.3	61.7	60.6	59.2		
Youth unemployment ratio (% population aged 15-24)	4.6			4.7	5.1 b	7.1	11.7	12.0	12.1	12.3	10.6	8.9		
Employment rate for low skilled 25-64 (ISCED 0-2)	58.4 b			58.8	58.8 b	57.1	50.7 b	47.6	45.8	44.1	46.9	46.6 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	76.7 b			77.2	77.1 b	75.5	69.6 b	66.5	64.9	65.4	66.0	67.9 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	86.8 b			86.1	86.4 b	85.1	82.1 b	81.0	80.5	80.0	80.1	81.1 b		
Employment rate (Nationals aged 15-64)				68.1	68.3 b	66.7	61.7 b	59.6	58.7	58.7	60.4	61.8		
Employment rate (Other EU-28 aged 15-64)				76.7	77.6 b	73.7	65.7 b	62.6	62.5	63.0	65.4	66.1		
Employment rate (Other than EU-28 aged 15-64)				62.3	64.2 b	63.7	56.6 b	52.7	53.8	50.9	51.4	52.2		
Employment rate (Born in the same country aged 15-64)	67.5 b			68.1	68.3 b	66.7	61.9 b	59.7	58.8	58.9	60.5	61.9		
Employment rate (Born in other EU-28 aged 15-64)				74.5	75.6 b	71.9	64.1 b	61.3	60.8	61.2	63.7	64.5		
Employment rate (Born outside EU-28 aged 15-64)				63.0	64.6 b	64.5	57.0 b	53.8	54.3	53.4	54.1	55.0		
Underemployment (% of labour force aged 15-74)						1.9	4.9 b	5.2	6.4	6.9	6.8	5.9		
Seeking but not available (% of labour force aged 15-74)	0.2 b			0.3	0.4 b	0.4	0.4 b	0.6	0.6	0.6	0.8	0.7		
Discouraged, available but not seeking (% of labour force aged 15-74)				0.3	0.6 b	0.7	1.5 b	1.9	2.0	2.0	1.8	1.4		



Ireland		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	2067	2127	2200 b	2243	2259	2264	2270	2271	2279	2282
		Population aged 15-64 (000)	1425	1476	1533 b	1554	1551	1538	1527	1510	1501	1491
		Total employment (000)	1124	1179	1222 b	1194	1064	1010	989	981	1016	1039
		Employment aged 15-64 (000)	1095	1149	1188 b	1158	1031	977	956	946	978	997
		Employment rate (% population aged 20-64)	82.8	83.4	82.9 b	80.2	72.1	69.1	68.2	68.1	70.9	73.0
		Employment rate (% population aged 15-64)	76.9	77.9	77.5 b	74.5	66.5	63.5	62.6	62.7	65.1	66.9
		Employment rate (% population aged 15-24)	51.5	53.9	53.7 b	47.0	34.6	29.6	27.8	26.3	28.5	28.5
		Employment rate (% population aged 25-54)	88.4	88.4	87.7 b	85.5	77.8	75.1	74.0	74.5	76.7	78.8
		Employment rate (% population aged 55-64)	65.7	66.9	67.9 b	66.4	61.2	58.2	57.1	55.8	59.3	61.4
		FTE employment rate (% population aged 20-64)	84.2 b	82.4	81.9 b	78.8	69.6 b	66.1	64.8	64.5	67.2	69.4
		Self-employed (% total employment)	24.2	23.3	24.2 b	25.2	26.2	24.9	24.2	24.3	25.1	25.2
		Part-time employment (% total employment)			7.1 b	8.0	10.9	12.1	13.1	14.1	14.3	13.8
		Fixed-term contracts (% total employees)	3.1	5.1	7.1 b	7.3	7.7	8.9	9.8	9.9	10.1	9.2
		Employment in Services (% total employment)	52.5	52.1	52.5 b	54.7	60.2	63.5	64.7	65.6	64.3	64.2
		Employment in Industry (% total employment)	38.6	39.4	39.3 b	36.7	31.6	28.9	27.8	26.7	26.4	26.5
		Employment in Agriculture (% total employment)	9.0	8.5	8.2 b	8.6	8.2	7.6	7.5	7.7	9.3	9.2
		Activity rate (% population aged 15-64)	80.6	81.7	81.7 b	80.8	78.5	77.0	76.6	76.6	77.0	77.1
		Activity rate (% population aged 15-24)	56.6	59.3	59.6 b	55.9	49.9	44.6	42.7	41.3	40.6	38.8
		Activity rate (% population aged 25-54)	92.1	92.1	91.8 b	91.6	90.3	89.5	89.0	89.3	89.2	89.6
		Activity rate (% population aged 55-64)	67.7	68.6	69.7 b	69.1	66.6	65.3	65.0	64.6	67.8	69.0
		Total unemployment (000)	55	58	64	97	187	207	213	210	179	153
		Unemployment rate (% labour force)	4.6	4.7	5.0	7.6	15.0	17.1	17.8	17.7	15.0	12.9
		Youth unemployment rate (% labour force 15-24)	9.2	9.0	9.9	16.0	30.7	33.7	35.0	36.4	29.8	26.6
		Long-term unemployment rate (% labour force)	1.9	1.8	1.8 b	2.3	4.8	9.2	11.6	12.1	10.1	8.4
		Share of long-term unemployment (% of total unemployment)	41.3	38.3	35.4 b	30.0	32.0	53.9	65.2	68.2	67.2	65.2
		Youth unemployment ratio (% population aged 15-24)	5.1	5.3	5.9 b	9.0	15.3	15.0	14.9	15.1	12.1	10.3
		Employment rate for low skilled 25-64 (ISCED 0-2)	74.3 b	74.4	73.3 b	69.8	60.9 b	56.8	54.2	52.5	57.1	58.1 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	89.4 b	89.4	89.0 b	86.6	77.2 b	73.2	71.7	72.3	73.6	76.4 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	92.1 b	91.6	91.3 b	90.3	86.2 b	84.5	84.5	84.4	84.8	85.6 b
		Employment rate (Nationals aged 15-64)		77.2	76.6 b	73.7	66.0 b	63.2	62.1	62.3	64.6	66.5
		Employment rate (Other EU-28 aged 15-64)		86.1	85.7 b	81.2	71.1 b	68.0	67.5	67.9	71.7	73.2
		Employment rate (Other than EU-28 aged 15-64)		72.7	73.7 b	72.7	63.9 b	59.3	61.3	58.3	59.6	60.9
		Employment rate (Born in the same country aged 15-64)	76.6 b	77.1	76.6 b	73.7	66.1 b	63.3	62.3	62.3	64.6	66.5
Employment rate (Born in other EU-28 aged 15-64)		84.6	84.1 b	79.9	69.4 b	66.3	65.0	65.5	70.1	71.0		
Employment rate (Born outside EU-28 aged 15-64)		73.2	73.7 b	72.7	64.0 b	60.4	61.4	61.0	61.7	63.6		
Underemployment (% of labour force aged 15-74)				1.2	3.7 b	4.1	5.0	5.5	5.4	4.9		
Seeking but not available (% of labour force aged 15-74)		0.3	0.3 b	0.3	0.5 b	0.6	0.6	0.6	0.7	0.7		
Discouraged, available but not seeking (% of labour force aged 15-74)		0.3	0.6 b	0.7	1.9 b	2.3	2.4	2.2	2.0	1.5		

Ireland		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	2081	2126	2200 b	2254	2280	2296	2307	2319	2323	2333
		Population aged 15-64 (000)	1406	1443	1502 b	1536	1545	1543	1537	1532	1521	1517
		Total employment (000)	828	865	922 b	935	898	872	860	857	865	875
		Employment aged 15-64 (000)	820	855	911 b	923	886	860	847	844	851	859
		Employment rate (% population aged 20-64)	62.4	63.3	64.5 b	64.2	61.8	60.2	59.4	59.4	60.3	61.2
		Employment rate (% population aged 15-64)	58.3	59.3	60.6 b	60.1	57.4	55.8	55.1	55.1	55.9	56.7
		Employment rate (% population aged 15-24)	45.9	46.5	48.3 b	45.4	39.1	33.5	31.2	30.2	29.6	28.4
		Employment rate (% population aged 25-54)	67.3	68.0	69.4 b	69.1	66.8	65.5	64.6	64.6	65.6	66.6
		Employment rate (% population aged 55-64)	37.3	39.0	39.8 b	41.2	41.1	42.1	42.9	42.7	43.4	44.7
		FTE employment rate (% population aged 20-64)	54.1 b	54.4	55.4 b	55.0	52.5 b	50.7	50.0	50.0	50.8	51.8
		Self-employed (% total employment)	7.1	6.7	7.2 b	7.5	7.5	7.6	7.4	7.5	8.2	8.1
		Part-time employment (% total employment)			32.1 b	32.4	34.0	34.9	35.7	35.4	35.6	35.0
		Fixed-term contracts (% total employees)	4.2	7.0	10.0 b	10.0	9.8	10.3	10.6	10.4	9.8	9.4
		Employment in Services (% total employment)	87.2	87.7	88.4 b	88.6	89.5	90.1	90.2	90.0	89.7	90.0
		Employment in Industry (% total employment)	11.6	11.1	10.3 b	10.0	9.5	8.8	8.8	8.8	8.8	8.5
		Employment in Agriculture (% total employment)	1.2	1.2	1.3 b	1.4	1.1	1.1	1.0	1.2	1.5	1.5
		Activity rate (% population aged 15-64)	60.8	61.9	63.4 b	63.3	62.6	61.9	61.9	62.0	62.7	62.6
		Activity rate (% population aged 15-24)	49.9	50.6	52.5 b	50.6	47.1	42.5	40.3	39.7	38.7	35.8
		Activity rate (% population aged 25-54)	69.6	70.5	72.0 b	72.0	71.8	71.6	71.5	71.7	72.5	72.7
		Activity rate (% population aged 55-64)	38.2	40.0	40.6 b	42.3	42.9	44.6	45.7	45.6	47.1	48.0
		Total unemployment (000)	36	39	41	49	80	95	104	106	104	90
		Unemployment rate (% labour force)	4.1	4.3	4.3	4.9	8.2	9.9	10.8	11.0	10.7	9.4
		Youth unemployment rate (% labour force 15-24)	8.0	8.3	8.0	10.3	17.0	21.2	22.7	24.0	23.5	20.9
		Long-term unemployment rate (% labour force)	0.9	0.9	0.9 b	1.0	1.8	3.8	5.1	5.4	5.3	4.6
		Share of long-term unemployment (% of total unemployment)	21.0	21.6	21.7 b	19.5	22.2	38.6	47.3	48.8	49.3	49.1
		Youth unemployment ratio (% population aged 15-24)	4.0	4.1	4.2 b	5.2	8.0	9.0	9.1	9.5	9.1	7.5
		Employment rate for low skilled 25-64 (ISCED 0-2)	39.6 b	39.6	41.1 b	41.2	38.1 b	36.3	35.6	33.8	34.4	31.9 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	65.0 b	65.4	65.4 b	64.6	62.2 b	59.7	58.0	58.3	58.2	59.4 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	82.0 b	81.3	82.2 b	80.7	78.5 b	78.0	77.2	76.5	76.3	77.4 b
		Employment rate (Nationals aged 15-64)		59.1	60.0 b	59.7	57.4 b	56.0	55.3	55.3	56.2	57.1
		Employment rate (Other EU-28 aged 15-64)		64.7	68.2 b	65.5	60.1 b	57.3	57.4	58.4	59.1	58.9
		Employment rate (Other than EU-28 aged 15-64)		51.7	54.6 b	54.5	49.1 b	46.2	46.5	44.2	44.1	44.6
		Employment rate (Born in the same country aged 15-64)	58.3 b	59.1	60.0 b	59.7	57.6 b	56.2	55.4	55.4	56.4	57.3
		Employment rate (Born in other EU-28 aged 15-64)		63.1	66.3 b	63.8	58.8 b	56.5	56.8	57.1	57.6	58.1
		Employment rate (Born outside EU-28 aged 15-64)		52.8	55.4 b	55.8	50.0 b	47.3	47.2	46.6	47.3	47.3
		Underemployment (% of labour force aged 15-74)				2.9	6.3 b	6.6	8.0	8.5	8.5	7.2
Seeking but not available (% of labour force aged 15-74)		0.3 u	0.5 b	0.5	0.4 b	0.5	0.6	0.6	0.8	0.7		
Discouraged, available but not seeking (% of labour force aged 15-74)		0.4	0.6 b	0.6	1.1 b	1.3	1.6	1.8	1.6	1.4		

Ireland		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	25.0	23.3	23.1	23.7	25.7	27.3	29.4	30.0	29.5	
		At-risk-of-poverty (% of total population)	19.7	18.5	17.2	15.5	15.0	15.2	15.2	15.7	14.1	
		At-risk-of-poverty threshold (PPS single person)	9048	9563	10633	10901	10386	10102	9999	9622	9581	
		Poverty gap (%)	20.2	16.6	17.6	17.7	16.2	15.5	17.5	19.1	17.4	
		Persistent at-risk-of-poverty (% of total population)			11.6							
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	32.3	32.8	33.1	34.0	37.5	39.9	39.6	39.3	38.5	
		Impact of social transfers (excl. pensions) in reducing poverty (%)	39.0	43.6	48.0	54.4	60.0	61.9	61.6	60.1	63.4	
		Severe Material Deprivation (% of total population)	5.1	4.8	4.5	5.5	6.1	5.7	7.8	9.8	9.9	
		Share of people living in low work intensity households (% of people aged 0-59)	14.7	12.9	14.3	13.7	20.0	22.9	24.2	23.4	23.9	
		Gross Household Disposable income adjusted for consumer prices (growth %)										
		Income quintile share ratio S80/S20	5.0	4.9	4.8	4.4	4.2	4.7	4.6	4.7	4.5	
		GINI coefficient	31.9	31.9	31.3	29.9	28.8	30.7	29.8	29.9	30.0	
		Early leavers from education and training (% of population aged 18-24)	12.5	12.2 b	11.8 b	11.4	11.7 b	11.5	10.8	9.7	8.4	6.9 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	10.9	10.1 b	10.8 b	15.0	18.6 b	19.2	18.8	18.7	16.1	15.2
		Male	At-risk-of-poverty or exclusion (% of male population)	24.1	22.0	21.6	22.7	25.0	26.5	29.0	29.7	28.8
	At-risk-of-poverty (% of male population)		18.9	17.5	16.0	14.5	14.9	14.6	15.4	15.6	14.0	
	Poverty gap (%)		21.1	17.6	17.7	18.9	17.1	15.5	18.7	22.4	18.1	
	Persistent at-risk-of-poverty (% of male population)				11.6							
	Severe Material Deprivation (% of male population)		4.7	4.6	4.0	5.3	5.5	5.5	7.4	9.7	9.2	
	Share of people living in low work intensity households (% of males aged 0-59)		14.0	12.2	13.7	13.1	18.8	21.4	23.4	23.2	23.6	
Life expectancy at birth (years)	77.2		77.3	77.3	77.9	77.7	78.5	78.6	78.7	79.0		
Healthy life years at birth (years) - men	62.9		63.2	62.9	63.5	63.9	65.9	66.1	65.9	65.8		
Early leavers from education and training (% of males aged 18-24)	15.4		15.2 b	14.9 b	14.7	14.7 b	13.4	12.8	11.2	9.8	8.0 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)	10.1		9.0 b	10.2 b	15.5	20.4 b	20.4	20.0	20.1	16.5	14.9	
Female	At-risk-of-poverty or exclusion (% of female population)	25.9	24.6	24.6	24.7	26.4	28.1	29.8	30.4	30.2		
	At-risk-of-poverty (% of female population)	20.6	19.5	18.5	16.4	15.1	15.8	14.9	15.9	14.2		
	Poverty gap (%)	19.5	15.0	17.1	17.4	14.9	15.5	16.6	17.4	16.5		
	Persistent at-risk-of-poverty (% of female population)			11.7								
	Severe Material Deprivation (% of female population)	5.5	5.0	4.9	5.8	6.8	5.9	8.3	10.0	10.6		
	Share of people living in low work intensity households (% of females aged 0-59)	15.5	13.7	15.0	14.3	21.2	24.5	25.1	23.6	24.1		
	Life expectancy at birth (years)	81.6	82.1	82.1	82.4	82.7	83.1	83.0	83.2	83.1		
	Healthy life years at birth (years) - women	64.0	64.9	65.6	65.1	65.2	66.9	68.3	68.5	68.0		
	Early leavers from education and training (% of females aged 18-24)	9.5	9.1 b	8.6 b	8.1	8.6 b	9.6	8.8	8.2	6.9	5.7 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	11.8	11.3 b	11.5 b	14.4	16.9 b	18.0	17.5	17.3	15.8	15.5	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	29.9	28.0	26.2	26.6	31.4	34.1	34.1	33.1	33.9		
	At-risk-of-poverty (% of Children population)	23.0	22.5	19.2	18.0	18.8	18.9	17.1	18.0	16.0		
	Severe Material Deprivation (% of Children population)	8.6	7.4	7.6	6.8	8.4	8.2	10.0	12.4	13.4		
	Share of children living in low work intensity households (% of Children population)	18.7	15.4	15.8	15.1	23.4	25.6	26.0	22.9	24.2		
	Risk of poverty of children in households at work (Working Intensity > 0.2)	11.3	13.4	10.1	11.0	7.5	9.3	6.3	6.8	6.6		
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	42.5	44.9	50.6	55.2	59.7	62.9	65.2	60.8	64.8		
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	21.4	20.5	20.7	22.6	24.8	27.2	30.5	31.7	30.9		
	At-risk-of-poverty (% of Working age population)	16.0	15.3	14.4	13.4	13.2	14.6	15.1	15.4	14.0		
	Severe Material Deprivation (% of Working age population)	4.2	4.3	3.7	5.6	5.8	5.4	7.9	10.1	9.6		
	Very low work intensity (18-59)	12.9	11.8	13.7	13.1	18.4	21.7	23.4	23.6	23.7		
	In-work at-risk-of poverty rate (% of persons employed 18-64)	5.9	6.2	5.5	6.3	4.9	5.5	5.3	5.4	4.5		
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	41.2	45.9	50.3	56.6	61.4	61.8	61.4	61.2	64.5			
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	33.4	27.7	28.7	22.5	17.9	11.3	13.8	14.7	13.3		
	At-risk-of-poverty (% of Elderly population)	32.8	26.9	28.3	21.1	16.2	9.9	11.0	12.2	10.1		
	Severe Material Deprivation (% of Elderly population)	1.8	1.7	1.2	2.2	2.6	1.5	3.0	2.9	3.6		
	Relative median income of elderly (ratio with median income of people younger than 65)	0.66	0.70	0.69	0.74	0.78	0.85	0.86	0.88	0.94		
Aggregate replacement ratio (ratio)	0.46	0.38	0.49	0.49	0.48	0.47	0.43	0.42	0.37			
Expenditure in social protection (% of GDP)	Sickness/Health care	6.4	6.5	6.7	7.9	9.8	11.4	12.8	15.1 p			
	Disability	0.9	0.9	0.9	1.1	1.3	1.4	1.3	1.3 p			
	Old age and survivors	4.6	4.6	4.7	5.5	6.3	6.7	6.7	6.9 p			
	Family/Children	2.5	2.5	2.6	3.1	3.6	3.5	3.4	3.4 p			
	Unemployment	1.3	1.3	1.4	1.8	3.0	3.8	3.7	3.6 p			
	Housing and Social exclusion n.e.c.	0.5	0.5	0.5	0.6	0.8	0.9	0.8	0.8 p			
	Total (including Admin and Other expenditures)	17.2	17.5	18.0	21.2	26.2	29.0	30.2	32.5 p			
of which: Means tested benefits	3.8	3.9	4.2	5.0	6.5	7.8	8.2	8.3 p				

## Macro economic indicators: Greece

Greece		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	0.6	5.7	3.3	-0.3	-4.3	-5.5	-9.1 p	-7.3 p	-3.2 p	0.7 p		
		Total employment	0.9	1.8	1.3	1.3	-0.6	-2.6	-6.9 p	-6.3 p	-3.6 p	0.1 p		
		Labour productivity	-0.3	3.8	1.9	-1.6	-3.8	-3.0	-2.4 p	-1.1 p	0.4 p	0.5 p		
		Annual average hours worked	2.6	-0.5	-0.7	-0.2	-1.2	-3.0	0.9 p	0.9 p	0.4 p	-1.8 p		
		Productivity per hour worked	-2.8	4.3	2.6	-1.4	-2.6	0.0	-3.3 p	-1.9 p	0.1 p	2.4 p		
		Harmonized CPI	3.5	3.3	3.0	4.2	1.3	4.7	3.1	1.0	-0.9	-1.4		
		Price deflator GDP	2.2	3.5	3.4	4.3	2.6	0.7	0.8 p	-0.4 p	-2.5 p	-2.2 p		
		Nominal compensation per employee	8.5	3.1	4.6	3.7	3.1	-2.0	-3.8 p	-3.0 p	-7.0 p	-2.1 p		
		Real compensation per employee (GDP deflator)	6.1	-0.4	1.1	-0.7	0.5	-2.6	-4.5 p	-2.7 p	-4.6 p	0.1 p		
		Real compensation per employee (private consumption deflator)	4.9	-0.2	1.6	-0.6	1.7	-6.4	-6.7 p	-4.0 p	-6.2 p	-0.7 p		
		Nominal unit labour costs	8.9	-0.7	2.6	5.3	7.1	1.0	-1.4 p	-2.0 p	-7.4 p	-2.6 p		
		Real unit labour costs	6.5	-3.9	-0.8	1.0	4.5	0.3	-2.2 p	-1.6 p	-5.0 p	-0.4 p		
		Labour Market Indicators	Total	Total population (000)	10963	10999	11035	11059	11061	11029	10998	10967	10921	10881
				Population aged 15-64 (000)	7313	7331	7355	7366	7346	7289	7224	7156	7090	7040
Total employment (000)	4444			4528	4564	4611	4556	4390	4054	3695	3513	3536		
Employment aged 15-64 (000)	4361			4440	4476	4523	4469	4306	3979	3636	3459	3480		
Employment rate (% population aged 20-64)	64.4			65.6	65.8	66.3	65.6	63.8	59.6	55.0	52.9	53.3		
Employment rate (% population aged 15-64)	59.6			60.6	60.9	61.4	60.8	59.1	55.1	50.8	48.8	49.4		
Employment rate (% population aged 15-24)	25.0			24.2	24.0	23.5	22.8	20.1	16.1	13.0	11.8	13.3		
Employment rate (% population aged 25-54)	74.0			75.2	75.4	76.0	75.3	73.2	68.8	63.9	61.3	62.4		
Employment rate (% population aged 55-64)	42.0			42.5	42.7	43.0	42.4	42.4	39.5	36.5	35.6	34.0		
FTE employment rate (% population aged 20-64)	63.6 b			64.4	64.7	65.3	64.5 b	62.4	58.0	53.1	50.8	51.1		
Self-employed (% total employment)	36.4			35.1	34.3	33.8	33.9	33.1	33.3 p	33.3 p	33.3 p	32.1 p		
Part-time employment (% total employment)	5.0			5.8	5.7	5.7	6.1	6.5	6.9	7.8	8.5	9.5		
Fixed-term contracts (% total employees)	11.9			10.8	11.0	11.6	12.3	12.6	11.8	10.2	10.1	11.7		
Employment in Services (% total employment)	68.7			69.3	69.5	69.7	70.0	71.5	72.8 p	72.6 p	73.0 p	73.6 p		
Employment in Industry (% total employment)	19.5			19.2	19.4	19.4	18.8	17.1	15.8 p	15.2 p	14.4 p	13.9 p		
Employment in Agriculture (% total employment)	11.8			11.5	11.1	10.9	11.2	11.4	11.4 p	12.1 p	12.6 p	12.5 p		
Activity rate (% population aged 15-64)	66.4			66.7	66.5	66.7	67.4	67.8	67.3	67.5	67.5	67.4		
Activity rate (% population aged 15-24)	33.7			32.2	31.0	30.1	30.7	30.0	29.1	29.1	28.4	28.0		
Activity rate (% population aged 25-54)	81.5			82.0	81.8	81.9	82.8	83.2	83.1	83.7	83.9	84.3		
Activity rate (% population aged 55-64)	43.6			44.2	44.2	44.4	44.4	45.2	43.1	42.1	42.4	41.1		
Total unemployment (000)	493			448	418	388	485	639	882	1195	1330	1274		
Unemployment rate (% labour force)	10.0			9.0	8.4	7.8	9.6	12.7	17.9	24.5	27.5	26.5		
Youth unemployment rate (% labour force 15-24)	25.8			25.0	22.7	21.9	25.7	33.0	44.7	55.3	58.3	52.4		
Long-term unemployment rate (% labour force)	5.2			4.9	4.2	3.7	3.9	5.7	8.8	14.5	18.5	19.5		
Share of long-term unemployment (% of total unemployment)	51.9			54.1	49.7	47.1	40.4	44.6	49.3	59.1	67.1	73.5		
Youth unemployment ratio (% population aged 15-24)	8.7			8.0	7.0	6.6	7.9	9.9	13.0	16.1	16.5	14.7		
Employment rate for low skilled 25-64 (ISCED 0-2)	57.7 b			59.5	59.9	60.2	59.8 b	58.1	53.9	48.4	46.3	46.9 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	69.6 b			69.8	69.5	69.9	68.5 b	66.5	62.0	57.2	54.1	54.5 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	82.2 b			83.4	83.0	83.0	82.5 b	80.0	75.1	71.4	69.1	68.5 b		
Employment rate (Nationals aged 15-64)	59.1 b			60.1	60.4	60.8	60.3 b	58.6	54.7	51.0	49.0	49.3		
Employment rate (Other EU-28 aged 15-64)				64.0	62.2	61.6	63.0 b	64.3	61.7	53.7	49.7	51.9		
Employment rate (Other than EU-28 aged 15-64)				68.8	68.4	69.9	67.2 b	63.9	58.0	47.9	45.4	50.0		
Employment rate (Born in the same country aged 15-64)	59.1 b			60.1	60.4	60.8	60.3 b	58.5	54.8	50.9	48.9	49.3		
Employment rate (Born in other EU-28 aged 15-64)				63.7	62.7	62.4	62.6 b	64.3	60.6	53.3	50.6	53.3		
Employment rate (Born outside EU-28 aged 15-64)		67.4	67.0	68.4	66.2 b	63.4	57.5	48.7	46.6	49.5				
Underemployment (% of labour force aged 15-74)				2.0	2.4 b	2.7	3.2	3.9	4.4	5.0				
Seeking but not available (% of labour force aged 15-74)	0.4 b	0.5	0.5	0.4	0.4 b	0.3	0.5	0.7	0.9	0.9				
Discouraged, available but not seeking (% of labour force aged 15-74)	0.8 b	0.9	0.8	0.9	1.1 b	1.1	1.3	1.9	2.0	1.9				

Greece		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	5365	5380	5396	5405	5402	5380	5360	5340	5314	5294
		Population aged 15-64 (000)	3640	3648	3658	3661	3647	3613	3577	3538	3503	3480
		Total employment (000)	2734	2762	2777	2787	2722	2601	2390	2168	2065	2056
		Employment aged 15-64 (000)	2672	2697	2713	2722	2660	2542	2338	2126	2027	2017
		Employment rate (% population aged 20-64)	79.3	79.9	80.1	80.1	78.5	76.0	70.8	65.0	62.7	62.6
		Employment rate (% population aged 15-64)	73.4	73.9	74.2	74.4	73.0	70.3	65.4	60.1	57.9	58.0
		Employment rate (% population aged 15-24)	29.9	29.5	29.1	28.3	27.3	24.2	19.4	16.1	14.6	15.8
		Employment rate (% population aged 25-54)	89.5	90.0	90.1	90.1	88.3	85.3	79.9	73.9	71.4	71.8
		Employment rate (% population aged 55-64)	58.8	59.2	59.1	59.2	57.8	56.5	52.3	47.7	46.0	44.0
		FTE employment rate (% population aged 20-64)	79.6 b	80.0	80.2	80.4	78.6 b	75.7	70.0	63.9	61.3	60.9
		Self-employed (% total employment)	39.0	37.9	37.2	36.5	37.0	36.0	36.4	36.7	36.5	35.6
		Part-time employment (% total employment)	2.3	2.9	2.8	2.9	3.2	3.8	4.5	5.0	5.6	6.8
		Fixed-term contracts (% total employees)	10.2	9.1	9.3	10.0	10.7	11.0	10.7	8.9	9.2	11.1
		Employment in Services (% total employment)	62.2	62.8	62.5	62.1	62.1	64.0	66.3	66.4	67.4	68.0
		Employment in Industry (% total employment)	26.6	26.3	26.8	27.2	26.6	24.6	22.4	21.3	19.8	19.0
		Employment in Agriculture (% total employment)	11.2	10.9	10.7	10.7	11.3	11.4	11.3	12.3	12.8	13.0
		Activity rate (% population aged 15-64)	78.4	78.5	78.4	78.4	78.5	78.3	77.2	76.9	76.9	76.0
		Activity rate (% population aged 15-24)	36.9	35.8	34.4	34.0	33.9	33.0	31.7	31.2	31.6	30.0
		Activity rate (% population aged 25-54)	94.6	94.7	94.6	94.4	94.4	94.2	93.5	93.6	93.6	93.1
		Activity rate (% population aged 55-64)	60.8	61.1	60.9	61.0	60.2	60.2	57.3	55.2	55.0	53.4
	Total unemployment (000)	181	167	154	151	204	290	426	595	669	635	
	Unemployment rate (% labour force)	6.2	5.7	5.3	5.1	7.0	10.1	15.2	21.6	24.5	23.7	
	Youth unemployment rate (% labour force 15-24)	18.9	17.6	15.5	16.9	19.5	26.8	38.8	48.5	53.8	47.4	
	Long-term unemployment rate (% labour force)	2.6	2.6	2.2	2.1	2.4	3.9	6.8	12.2	16.2	17.2	
	Share of long-term unemployment (% of total unemployment)	42.2	46.2	41.6	40.0	33.9	38.3	44.7	56.4	66.0	72.8	
	Youth unemployment ratio (% population aged 15-24)	7.0	6.3	5.3	5.7	6.6	8.9	12.3	15.1	17.0	14.2	
	Employment rate for low skilled 25-64 (ISCED 0-2)	78.7 b	79.7	79.9	80.0	78.1 b	74.7	68.5	61.5	58.2	58.6 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	85.5 b	85.7	85.6	85.5	83.0 b	80.6	75.6	69.5	66.8	67.0 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	87.7 b	88.3	87.9	87.7	87.3 b	84.8	80.1	76.4	74.5	72.5 b	
	Employment rate (Nationals aged 15-64)	72.6 b	73.2	73.4	73.3	72.1 b	69.7	64.9	60.3	58.1	57.8	
	Employment rate (Other EU-28 aged 15-64)		79.4	77.2	77.5	74.8 b	77.6	71.2	61.1	57.3	59.5	
	Employment rate (Other than EU-28 aged 15-64)		86.4	86.8	88.3	82.7 b	76.7	70.3	56.8	55.1	59.3	
	Employment rate (Born in the same country aged 15-64)	72.6 b	73.2	73.3	73.3	72.1 b	69.6	64.9	60.3	58.0	57.9	
	Employment rate (Born in other EU-28 aged 15-64)		80.2	78.8	77.1	74.5 b	78.0	71.2	61.6	56.7	61.8	
	Employment rate (Born outside EU-28 aged 15-64)		83.9	85.2	86.4	81.2 b	76.0	69.5	57.4	55.9	58.2	
	Underemployment (% of labour force aged 15-74)				1.2	1.4 b	1.9	2.6	2.8	3.3	4.0	
	Seeking but not available (% of labour force aged 15-74)	0.3 b	0.3	0.3	0.3	0.3 b	0.3	0.3	0.5	0.6	0.6	
	Discouraged, available but not seeking (% of labour force aged 15-74)	0.4 b	0.4	0.4	0.3	0.4 b	0.5	0.6	1.0	1.1	0.9	



Greece		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	5598	5619	5639	5654	5660	5649	5638	5627	5607	5586
		Population aged 15-64 (000)	3673	3684	3697	3705	3700	3676	3648	3619	3588	3561
		Total employment (000)	1710	1765	1787	1824	1834	1789	1664	1527	1448	1480
		Employment aged 15-64 (000)	1689	1743	1763	1801	1809	1765	1641	1510	1432	1463
		Employment rate (% population aged 20-64)	49.7	51.3	51.7	52.6	52.9	51.8	48.7	45.2	43.3	44.3
		Employment rate (% population aged 15-64)	46.0	47.3	47.7	48.6	48.9	48.0	45.0	41.7	39.9	41.1
		Employment rate (% population aged 15-24)	20.0	18.8	18.8	18.7	18.3	16.1	12.9	10.0	9.1	10.9
		Employment rate (% population aged 25-54)	58.6	60.6	60.9	62.0	62.3	61.1	57.8	53.9	51.4	53.1
		Employment rate (% population aged 55-64)	25.9	26.6	27.0	27.5	27.8	29.1	27.5	26.1	26.0	25.0
		FTE employment rate (% population aged 20-64)	47.9 b	49.1	49.4	50.4	50.5 b	49.5	46.4	42.7	40.7	41.6
		Self-employed (% total employment)	32.1	30.8	29.7	29.6	29.4	28.9	28.9	28.6	28.8	27.1
		Part-time employment (% total employment)	9.3	10.2	10.1	10.0	10.4	10.5	10.2	11.9	12.7	13.2
		Fixed-term contracts (% total employees)	14.5	13.1	13.3	13.9	14.3	14.6	13.2	11.8	11.3	12.4
		Employment in Services (% total employment)	78.6	79.2	80.1	80.8	81.3	82.0	81.9	81.2	80.8	81.2
		Employment in Industry (% total employment)	8.5	8.4	8.3	8.0	7.6	6.7	6.6	6.8	6.9	7.0
		Employment in Agriculture (% total employment)	12.9	12.3	11.6	11.1	11.2	11.3	11.5	12.0	12.3	11.9
		Activity rate (% population aged 15-64)	54.5	55.0	54.8	55.0	56.5	57.5	57.5	58.3	58.3	59.0
		Activity rate (% population aged 15-24)	30.4	28.6	27.5	26.1	27.4	27.1	26.6	27.0	25.3	26.1
		Activity rate (% population aged 25-54)	68.4	69.2	69.2	69.5	71.1	72.4	72.8	74.0	74.3	75.6
		Activity rate (% population aged 55-64)	27.1	28.0	28.2	28.7	29.5	31.1	29.9	30.0	31.0	29.9
	Total unemployment (000)	312	282	265	237	281	349	456	600	661	639	
	Unemployment rate (% labour force)	15.4	13.8	12.9	11.5	13.3	16.4	21.5	28.2	31.4	30.2	
	Youth unemployment rate (% labour force 15-24)	34.2	34.2	31.7	28.3	33.3	40.3	51.6	63.1	63.8	58.1	
	Long-term unemployment rate (% labour force)	8.9	8.1	7.0	5.9	6.0	8.2	11.6	17.4	21.4	22.4	
	Share of long-term unemployment (% of total unemployment)	57.6	58.8	54.4	51.6	45.1	49.8	53.7	61.7	68.2	74.2	
	Youth unemployment ratio (% population aged 15-24)	10.4	9.8	8.7	7.4	9.1	10.9	13.7	17.0	16.1	15.2	
	Employment rate for low skilled 25-64 (ISCED 0-2)	38.0 b	38.7	39.2	39.5	40.3 b	40.1	38.0	34.4	33.6	34.4 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	53.7 b	55.4	55.1	55.7	55.2 b	53.7	49.8	46.0	42.5	42.9 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	76.3 b	78.2	77.9	78.2	77.9 b	75.4	70.3	66.7	63.9	64.8 b	
	Employment rate (Nationals aged 15-64)	45.7 b	47.1	47.6	48.6	48.8 b	47.8	44.8	41.8	40.1	41.0	
	Employment rate (Other EU-28 aged 15-64)		54.8	52.7	51.4	55.5 b	56.8	56.1	48.9	44.3	46.8	
	Employment rate (Other than EU-28 aged 15-64)		48.8	46.8	47.3	48.7 b	48.6	44.0	38.1	35.2	40.0	
	Employment rate (Born in the same country aged 15-64)	45.7 b	47.0	47.6	48.5	48.7 b	47.7	44.8	41.8	40.0	40.9	
	Employment rate (Born in other EU-28 aged 15-64)		54.8	52.8	53.0	55.0 b	56.4	54.3	48.3	46.9	48.1	
	Employment rate (Born outside EU-28 aged 15-64)		49.5	47.3	47.4	49.1 b	49.2	44.4	39.5	37.0	40.8	
	Underemployment (% of labour force aged 15-74)				3.2	3.7 b	3.8	4.1	5.3	5.8	6.2	
	Seeking but not available (% of labour force aged 15-74)	0.6 b	0.7	0.7	0.6	0.6 b	0.5	0.6	1.0	1.3	1.2	
	Discouraged, available but not seeking (% of labour force aged 15-74)	1.3 b	1.6	1.5	1.7	2.0 b	2.0	2.3	2.9	3.3	3.2	

Greece		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	29.4	29.3	28.3	28.1	27.6	27.7	31.0	34.6	35.7	36.0
		At-risk-of-poverty (% of total population)	19.6	20.5	20.3	20.1	19.7	20.1	21.4	23.1	23.1	22.1
		At-risk-of-poverty threshold (PPS single person)	6450	6697	6873	7219	7521	7559	6976	6038	5427	5166
		Poverty gap (%)	23.9	25.8	26.0	24.7	24.1	23.4	26.1	29.9	32.7	31.3
		Persistent at-risk-of-poverty (% of total population)			13.1	13.0	16.1	17.6	10.5	13.8	12.4	
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	22.6	23.4	23.7	23.3	22.7	23.8	24.8	26.8	28.0	26.0
		Impact of social transfers (excl. pensions) in reducing poverty (%)	13.3	12.4	14.4	13.7	13.2	15.6	13.7	13.8	17.5	15.0
		Severe Material Deprivation (% of total population)	12.8	11.5	11.5	11.2	11.0	11.6	15.2	19.5	20.3	21.5
		Share of people living in low work intensity households (% of people aged 0-59)	7.6	8.1	8.1	7.5	6.6	7.6	12.0	14.2	18.2	17.2
		Gross Household Disposable income adjusted for consumer prices (growth %)			3.3	1.5	0.1	-10.8	-9.2	-7.4	-8.3	
	Income quintile share ratio S80/S20	5.8	6.1	6.0	5.9	5.8	5.6	6.0	6.6	6.6	6.5	
	GINI coefficient	33.2	34.3	34.3	33.4	33.1	32.9	33.5	34.3	34.4	34.5	
	Early leavers from education and training (% of population aged 18-24)	13.3	15.1 b	14.3	14.4 b	14.2 b	13.5	12.9	11.3	10.1	9.0 b	
	NEET: Young people not in employment, education or training (% of total population aged 15-24)	15.9	12.0 b	11.3	11.4 b	12.4 b	14.8	17.4	20.2	20.4	19.1	
	Male	At-risk-of-poverty or exclusion (% of male population)	27.1	27.5	26.8	26.3	26.1	26.0	29.6	33.9	34.6	35.3
		At-risk-of-poverty (% of male population)	18.3	19.5	19.6	19.6	19.1	19.3	20.9	22.5	22.4	22.2
		Poverty gap (%)	23.7	25.8	25.6	24.4	24.4	23.4	27.2	29.9	32.9	32.1
		Persistent at-risk-of-poverty (% of male population)			12.4	11.3	15.6	16.3	10.4	14.0	11.7	
		Severe Material Deprivation (% of male population)	11.8	11.0	10.6	10.1	10.2	10.9	14.9	19.9	20.3	21.2
		Share of people living in low work intensity households (% of males aged 0-59)	6.2	6.6	6.5	6.0	5.3	6.5	11.0	12.9	17.5	16.0
Life expectancy at birth (years)		76.8	77.2	76.9	77.5 b	77.8	78.0	78.0	78.0	78.7		
Healthy life years at birth (years) - men		65.9	66.5	66.0	65.6 b	66.1	66.1	66.2	64.8	64.7		
Early leavers from education and training (% of males aged 18-24)		17.1	19.6 b	18.2	18.0 b	17.9 b	16.4	15.9	13.7	12.7	11.5 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)		12.5	8.7 b	8.1	8.8 b	9.5 b	12.7	16.1	19.0	20.9	18.7	
Female	At-risk-of-poverty or exclusion (% of female population)	31.6	31.1	29.9	29.8	29.0	29.3	32.3	35.2	36.8	36.7	
	At-risk-of-poverty (% of female population)	20.9	21.4	20.9	20.7	20.2	20.9	21.9	23.6	23.8	22.0	
	Poverty gap (%)	23.9	25.7	26.3	25.0	24.1	23.4	25.6	29.1	32.6	30.8	
	Persistent at-risk-of-poverty (% of female population)			13.8	14.7	16.6	18.7	10.6	13.5	13.0		
	Severe Material Deprivation (% of female population)	13.8	11.9	12.3	12.2	11.7	12.2	15.4	19.1	20.3	21.8	
	Share of people living in low work intensity households (% of females aged 0-59)	9.0	9.7	9.8	9.0	8.0	8.6	13.0	15.6	18.9	18.4	
	Life expectancy at birth (years)	81.6	81.9	82.5	83.0 b	82.7	83.3	83.6	83.4	84.0		
	Healthy life years at birth (years) - women	67.4	68.1	67.6	66.2 b	66.8	67.7	66.9	64.9	65.1		
	Early leavers from education and training (% of females aged 18-24)	9.5	10.6 b	10.3	10.6 b	10.5 b	10.6	10.0	8.9	7.5	6.6 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	19.4	15.3 b	14.5	14.1 b	15.2 b	16.9	18.7	21.3	20.0	19.6	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	26.0	27.9	28.2	28.7	30.0	28.7	30.4	35.4	38.1	36.7	
	At-risk-of-poverty (% of Children population)	20.4	22.6	23.3	23.0	23.7	23.0	23.7	26.9	28.8	25.5	
	Severe Material Deprivation (% of Children population)	10.1	9.5	9.7	10.4	12.2	12.2	16.4	20.9	23.3	23.8	
	Share of children living in low work intensity households (% of Children population)	4.2	4.3	4.6	3.9	2.7	3.9	7.2	7.6	13.8	10.2	
	Risk of poverty of children in households at work (Working Intensity > 0.2)	17.8	20.5	21.3	21.4	22.8	21.6	19.2	22.1	20.4	20.6	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	9.7	9.2	14.0	10.9	6.0	10.9	10.6	9.7	18.2	17.7	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	27.9	28.4	27.8	27.9	27.1	27.7	31.6	37.7	39.1	40.1	
	At-risk-of-poverty (% of Working age population)	17.1	18.4	18.7	18.7	18.1	19.0	20.0	23.8	24.1	23.5	
	Severe Material Deprivation (% of Working age population)	11.7	10.6	10.2	10.4	10.3	11.2	15.4	20.7	21.6	22.9	
	Very low work intensity (18-59)	8.6	9.3	9.2	8.6	7.8	8.7	13.5	16.3	19.6	19.4	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	12.7	13.7	14.1	14.2	13.7	13.9	11.9	15.1	13.0	13.2	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	13.6	12.8	13.4	13.8	13.0	14.4	13.0	14.4	16.3	14.5	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	37.9	33.8	30.6	28.1	26.8	26.7	29.3	23.5	23.1	23.0	
	At-risk-of-poverty (% of Elderly population)	27.9	25.6	22.9	22.3	21.4	21.3	23.6	17.2	15.1	14.9	
	Severe Material Deprivation (% of Elderly population)	19.4	16.4	17.4	14.8	12.1	12.4	13.1	14.3	13.7	15.5	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.79	0.82	0.83	0.86	0.86	0.84	0.81	1.01	1.04	1.0	
	Aggregate replacement ratio (ratio)	0.49	0.49	0.40	0.41	0.41	0.42	0.45	0.52	0.60	0.60	
Expenditure in social protection (% of GDP)	Sickness/Health care	6.7 p	6.9 p	6.8 p	7.4 p	8.0 p	8.2 p	7.5 p	6.4 p			
	Disability	1.2 p	1.1 p	1.2 p	1.2 p	1.3 p	1.3 p	1.4 p	1.3 p			
	Old age and survivors	12.4 p	12.4 p	12.5 p	12.9 p	13.6 p	14.1 p	15.0 p	17.8 p			
	Family/Children	1.6 p	1.5 p	1.5 p	1.6 p	1.8 p	1.8 p	1.8 p	1.6 p			
	Unemployment	1.2 p	1.1 p	1.1 p	1.3 p	1.6 p	1.7 p	2.1 p	1.9 p			
	Housing and Social exclusion n.e.c.	1.1 p	1.1 p	1.1 p	1.1 p	1.1 p	1.0 p	1.0 p	0.9 p			
	Total (including Admin and Other expenditures)	24.9 p	24.8 p	24.8 p	26.2 p	28.0 p	29.1 p	30.2 p	31.2 p			
	of which: Means tested benefits	1.9 p	1.8 p	1.8 p	1.9 p	2.0 p	1.9 p	1.8 p	1.7 p			

## Macro economic indicators: Spain

Spain		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Macro Economic Indicators	Annual percentage growth	Real GDP	3.7	4.2	3.8	1.1	-3.6	0.0	-1.0	-2.6 p	-1.7 p	1.4 p
		Total employment	4.3	4.2	3.3	0.2	-6.3	-1.7	-2.7	-4.1 p	-2.9 p	0.9 p
		Labour productivity	-0.5	0.0	0.5	0.9	2.9	1.8	1.7	1.5 p	1.3 p	0.4 p
		Annual average hours worked	-0.9	-0.6	-0.7	0.5	0.4	-0.5	0.3	-0.9 p	-0.3 p	0.2 p
		Productivity per hour worked	0.4	0.6	1.2	0.4	2.5	2.3	1.4	2.4 p	1.6 p	0.3 p
		Harmonized CPI	3.4	3.6	2.8	4.1	-0.2	2.0	3.1	2.4	1.5	-0.2
		Price deflator GDP	4.1	4.0	3.3	2.1	0.3	0.2	0.0	0.0 p	0.6 p	-0.4 p
		Nominal compensation per employee	2.9	3.3	4.6	6.7	4.5	0.2	0.7	-1.5 p	0.9 p	-0.4 p
		Real compensation per employee (GDP deflator)	-1.2	-0.7	1.3	4.5	4.3	0.0	0.7	-1.5 p	0.3 p	0.0 p
		Real compensation per employee (private consumption deflator)	-0.4	-0.3	1.7	2.5	4.8	-1.9	-2.3	-3.8 p	-0.6 p	-0.2 p
		Nominal unit labour costs	3.5	3.3	4.1	5.7	1.6	-1.6	-1.0	-2.9 p	-0.4 p	-0.9 p
		Real unit labour costs	-0.6	-0.7	0.7	3.5	1.3	-1.7	-1.0	-3.0 p	-1.0 p	-0.4 p
		Labour Market Indicators	Total	Total population (000)	43330 b	44025	44874	45589	45965	46149	46307	46325
Population aged 15-64 (000)	29991 b			30433	31053	31507	31617	31567	31496	31348	31024	30750
Total employment (000)	19207 b			19939	20580	20470	19107	18725	18421	17633	17139	17344
Employment aged 15-64 (000)	19068 b			19792	20437	20317	18958	18574	18271	17477	17002	17211
Employment rate (% population aged 20-64)	67.5 b			69.0	69.7	68.5	64.0	62.8	62.0	59.6	58.6	59.9
Employment rate (% population aged 15-64)	63.6 b			65.0	65.8	64.5	60.0	58.8	58.0	55.8	54.8	56.0
Employment rate (% population aged 15-24)	38.5 b			39.6	39.2	36.0	28.0	25.0	22.0	18.4	16.8	16.7
Employment rate (% population aged 25-54)	74.8 b			76.1	77.1	75.6	71.0	70.0	69.1	66.7	65.8	67.4
Employment rate (% population aged 55-64)	43.1 b			44.1	44.5	45.5	44.0	43.5	44.5	43.9	43.2	44.3
FTE employment rate (% population aged 20-64)	64.2 b			65.6	66.5	65.2	60.5	59.2	58.2	55.6	54.2	55.4
Self-employed (% total employment)	14.7 p			14.1 p	13.7 p	13.5 p	13.4 p	13.2 p	13.2 p	13.8 p	14.3 p	13.9 p
Part-time employment (% total employment)	12.2 b			11.8	11.6	11.8	12.5	13.0	13.6	14.5	15.8	15.9
Fixed-term contracts (% total employees)	33.4 b			34.0	31.6	29.1	25.2	24.7	25.1	23.4	23.1	24.0
Employment in Services (% total employment)	67.4 p			68.3 p	69.0 p	70.8 p	73.5 p	74.6 p	75.9 p	77.1 p	77.8 p	78.2 p
Employment in Industry (% total employment)	27.9 p			27.4 p	27.0 p	25.4 p	22.6 p	21.3 p	20.2 p	18.9 p	18.1 p	17.8 p
Employment in Agriculture (% total employment)	4.7 p			4.2 p	4.0 p	3.8 p	3.9 p	4.0 p	4.0 p	4.0 p	4.1 p	4.0 p
Activity rate (% population aged 15-64)	70.0 b			71.1	71.8	72.7	73.1	73.5	73.9	74.3	74.3	74.2
Activity rate (% population aged 15-24)	47.9 b			48.2	47.9	47.7	45.0	42.7	40.9	39.0	37.8	35.7
Activity rate (% population aged 25-54)	81.2 b			82.3	83.1	84.0	84.8	85.7	86.2	86.9	87.2	87.3
Activity rate (% population aged 55-64)	46.0 b			46.8	47.4	49.1	50.0	50.7	52.4	53.5	54.1	55.4
Total unemployment (000)	1934			1841	1846	2596	4154	4640	5013	5811	6051	5610
Unemployment rate (% labour force)	9.2			8.5	8.2	11.3	17.9	19.9	21.4	24.8	26.1	24.5
Youth unemployment rate (% labour force 15-24)	19.6			17.9	18.1	24.5	37.7	41.5	46.2	52.9	55.5	53.2
Long-term unemployment rate (% labour force)	2.2 b			1.8	1.7	2.0	4.3	7.3	8.9	11.0	13.0	12.9
Share of long-term unemployment (% of total unemployment)	24.4 b			21.7	20.4	18.0	23.8	36.6	41.6	44.4	49.7	52.8
Youth unemployment ratio (% population aged 15-24)	9.4 b			8.6	8.7	11.7	17.0	17.7	18.9	20.6	21.0	19.0
Employment rate for low skilled 25-64 (ISCED 0-2)	58.8 b			60.0	60.6	59.1	54.1	53.0	52.3	49.3	48.3	49.4 b
Employment rate for medium skilled 25-64 (ISCED 3-4)	75.1 b			76.3	76.6	75.5	71.0	69.3	67.9	66.3	64.5	65.9 b
Employment rate for high skilled 25-64 (ISCED 5-8)	82.7 b			83.7	84.7	83.9	81.4	80.1	79.2	77.5	76.4	77.2 b
Employment rate (Nationals aged 15-64)	62.9 b			64.3	65.3	64.3	60.5	59.3	58.7	56.5	55.6	56.6
Employment rate (Other EU-28 aged 15-64)				71.0	69.2	65.9	60.8	58.0	55.6	54.7	55.2	55.6
Employment rate (Other than EU-28 aged 15-64)				70.5	69.1	65.3	55.1	55.4	52.8	48.7	46.4	48.1
Employment rate (Born in the same country aged 15-64)	62.8 b			64.1	65.1	64.1	60.3	59.2	58.7	56.5	55.6	56.6
Employment rate (Born in other EU-28 aged 15-64)				71.1	70.0	67.0	62.2	58.7	56.5	56.0	56.1	56.6
Employment rate (Born outside EU-28 aged 15-64)				70.8	69.6	66.1	56.8	56.7	54.2	50.6	48.5	50.5
Underemployment (% of labour force aged 15-74)						3.5	4.3	4.8	5.3	6.0	6.7	6.9
Seeking but not available (% of labour force aged 15-74)	1.4 b	1.3	1.3	1.1	1.0	1.0	1.0	1.0	1.0	1.0		
Discouraged, available but not seeking (% of labour force aged 15-74)	5.0 b	4.2	3.3	3.3	4.0	4.2	4.1	4.6	5.0	4.7		

Spain		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	21 394 b	21 753	22 198	22 575	22 749	22 819	22 876	22 853	22 729	22 628
		Population aged 15-64 (000)	15 165 b	15 393	15 726	15 964	16 005	15 962	15 890	15 794	15 593	15 436
		Total employment (000)	11 485 b	11 809	12 067	11 805	10 733	10 424	10 153	9 608	9 316	9 443
		Employment aged 15-64 (000)	11 391 b	11 707	11 968	11 708	10 643	10 338	10 068	9 520	9 237	9 364
		Employment rate (% population aged 20-64)	79.8 b	80.7	80.6	77.9	71.0	69.2	67.7	64.6	63.4	65.0
		Employment rate (% population aged 15-64)	75.1 b	76.1	76.1	73.3	66.5	64.8	63.4	60.3	59.2	60.7
		Employment rate (% population aged 15-24)	43.8 b	44.4	44.2	39.3	29.4	25.6	22.1	18.5	17.3	17.4
		Employment rate (% population aged 25-54)	86.8 b	87.5	87.5	84.2	77.3	75.9	74.6	71.3	70.4	72.5
		Employment rate (% population aged 55-64)	59.4 b	60.2	59.6	60.5	56.4	54.5	53.8	52.1	50.5	51.2
		FTE employment rate (% population aged 20-64)	79.1 b	80.0	80.1	77.2	70.0	68.0	66.3	62.9	61.4	63.0
		Self-employed (% total employment)	16.8 b	16.4	16.0	16.0	16.0	16.0	16.0	16.9	17.5	17.0
		Part-time employment (% total employment)	4.6 b	4.4	4.1	4.2	4.9	5.3	5.9	6.6	7.8	7.8
		Fixed-term contracts (% total employees)	31.8 b	32.0	30.5	27.4	23.6	23.6	24.0	22.0	22.2	23.5
		Employment in Services (% total employment)	54.9 b	55.3	55.9	58.0	61.4	63.0	64.5	66.4	67.1	67.8
		Employment in Industry (% total employment)	39.3 b	39.4	39.1	37.1	33.4	31.6	30.2	28.1	27.1	26.5
		Employment in Agriculture (% total employment)	5.8 b	5.2	5.1	5.0	5.2	5.4	5.4	5.5	5.8	5.7
		Activity rate (% population aged 15-64)	80.9 b	81.2	81.4	81.6	80.8	80.6	80.4	80.1	79.8	79.5
		Activity rate (% population aged 15-24)	52.5 b	52.2	52.2	51.5	48.2	45.0	42.6	40.3	39.6	37.3
		Activity rate (% population aged 25-54)	92.3 b	92.4	92.5	92.4	92.2	92.4	92.5	92.6	92.4	92.6
		Activity rate (% population aged 55-64)	62.9 b	63.3	62.8	64.7	63.6	63.7	63.5	63.6	63.3	64.3
		Total unemployment (000)	882	801	826	1 320	2 300	2 536	2 706	3 131	3 206	2 916
		Unemployment rate (% labour force)	7.1	6.4	6.4	10.1	17.7	19.6	21.1	24.6	25.6	23.6
		Youth unemployment rate (% labour force 15-24)	16.7	15.0	15.2	23.6	39.1	43.1	48.2	54.1	56.2	53.4
		Long-term unemployment rate (% labour force)	1.5 b	1.2	1.1	1.4	3.7	7.1	8.6	10.7	12.5	12.3
		Share of long-term unemployment (% of total unemployment)	20.5 b	18.4	17.4	14.1	21.1	36.0	40.8	43.5	48.9	52.0
		Youth unemployment ratio (% population aged 15-24)	8.8 b	7.8	7.9	12.1	18.8	19.4	20.5	21.8	22.3	20.0
		Employment rate for low skilled 25-64 (ISCED 0-2)	77.6 b	77.9	77.4	73.8	65.5	63.2	61.6	57.0	55.8	57.4 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	85.5 b	86.6	85.4	83.6	77.1	75.9	74.4	71.9	69.9	71.6 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	87.3 b	88.2	89.2	87.9	84.6	83.3	82.3	80.7	79.9	80.8 b
		Employment rate (Nationals aged 15-64)	74.7 b	75.5	75.8	73.5	67.7	65.7	64.4	61.3	60.2	61.4
		Employment rate (Other EU-28 aged 15-64)		79.8	79.0	75.7	65.4	63.1	60.4	58.7	58.3	60.3
		Employment rate (Other than EU-28 aged 15-64)		80.5	78.2	70.9	56.9	57.1	54.8	50.4	48.7	51.4
		Employment rate (Born in the same country aged 15-64)	74.5 b	75.4	75.6	73.4	67.6	65.6	64.4	61.4	60.3	61.5
Employment rate (Born in other EU-28 aged 15-64)		80.6	79.7	76.6	67.4	64.7	62.3	60.2	59.7	61.6		
Employment rate (Born outside EU-28 aged 15-64)		80.4	78.6	71.6	58.7	58.5	56.4	52.4	50.6	53.5		
Underemployment (% of labour force aged 15-74)				1.4	2.0	2.4	2.8	3.2	3.9	4.0		
Seeking but not available (% of labour force aged 15-74)	1.0 b	0.9	0.9	0.7	0.8	0.7	0.8	0.8	0.8	0.8		
Discouraged, available but not seeking (% of labour force aged 15-74)	2.3 b	1.8	1.5	1.7	2.3	2.5	2.4	2.8	3.0	3.0		

Spain		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	21937 b	22272	22675	23015	23216	23330	23431	23471	23417	23367
		Population aged 15-64 (000)	14826 b	15040	15327	15543	15611	15606	15606	15554	15431	15314
		Total employment (000)	7722 b	8131	8513	8665	8374	8301	8269	8025	7823	7902
		Employment aged 15-64 (000)	7677 b	8085	8469	8608	8314	8236	8203	7957	7765	7847
		Employment rate (% population aged 20-64)	55.1 b	57.1	58.6	58.9	56.8	56.3	56.1	54.6	53.8	54.8
		Employment rate (% population aged 15-64)	51.8 b	53.8	55.3	55.4	53.3	52.8	52.6	51.2	50.3	51.2
		Employment rate (% population aged 15-24)	33.0 b	34.5	34.0	32.6	26.7	24.3	22.0	18.3	16.3	16.0
		Employment rate (% population aged 25-54)	62.3 b	64.4	66.3	66.5	64.4	63.9	63.4	62.0	61.2	62.3
		Employment rate (% population aged 55-64)	27.7 b	28.9	30.2	31.2	32.1	33.1	35.6	36.0	36.3	37.8
		FTE employment rate (% population aged 20-64)	49.4 b	51.3	52.9	53.1	51.0	50.5	50.2	48.3	47.2	48.1
		Self-employed (% total employment)	11.6 b	10.8	10.4	10.1	10.0	9.7	9.8	10.2	10.4	10.2
		Part-time employment (% total employment)	23.5 b	22.6	22.2	22.0	22.4	22.7	22.9	23.9	25.3	25.6
		Fixed-term contracts (% total employees)	35.6 b	36.6	32.9	31.2	27.2	26.1	26.5	24.9	24.1	24.5
		Employment in Services (% total employment)	85.4 b	86.5	86.9	87.6	88.6	88.9	89.6	89.5	90.2	90.3
		Employment in Industry (% total employment)	11.5 b	10.6	10.6	10.0	9.1	8.8	8.2	8.2	7.7	7.6
		Employment in Agriculture (% total employment)	3.1 b	2.8	2.6	2.4	2.3	2.3	2.3	2.3	2.1	2.1
		Activity rate (% population aged 15-64)	58.9 b	60.7	61.9	63.6	65.1	66.3	67.3	68.4	68.7	68.8
		Activity rate (% population aged 15-24)	43.0 b	44.0	43.4	43.7	41.7	40.2	39.2	37.6	35.9	34.0
		Activity rate (% population aged 25-54)	69.8 b	71.8	73.3	75.3	77.2	78.8	79.7	81.1	81.8	82.0
		Activity rate (% population aged 55-64)	29.9 b	31.2	32.7	34.2	37.1	38.4	41.8	43.9	45.2	46.9
		Total unemployment (000)	1052	1040	1020	1276	1854	2104	2307	2680	2846	2694
		Unemployment rate (% labour force)	12.0	11.4	10.7	12.8	18.1	20.2	21.8	25.1	26.7	25.4
		Youth unemployment rate (% labour force 15-24)	23.4	21.5	21.7	25.5	36.1	39.6	44.0	51.4	54.6	52.9
		Long-term unemployment rate (% labour force)	3.3 b	2.7	2.4	2.8	4.9	7.6	9.3	11.4	13.5	13.7
		Share of long-term unemployment (% of total unemployment)	27.7 b	24.2	22.8	22.0	27.1	37.3	42.6	45.3	50.5	53.8
		Youth unemployment ratio (% population aged 15-24)	10.1 b	9.5	9.4	11.2	15.1	15.9	17.2	19.4	19.6	18.0
		Employment rate for low skilled 25-64 (ISCED 0-2)	39.6 b	41.4	43.2	43.8	41.9	42.1	42.3	40.8	40.1	40.7 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	64.3 b	65.7	67.2	67.1	64.7	62.5	61.4	60.8	59.2	60.1 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	78.2 b	79.4	80.4	79.9	78.4	77.1	76.4	74.5	73.2	74.0 b
		Employment rate (Nationals aged 15-64)	50.9 b	52.9	54.6	54.9	53.1	52.7	52.8	51.6	50.8	51.8
		Employment rate (Other EU-28 aged 15-64)		62.1	59.4	56.1	56.1	52.9	51.2	51.1	52.3	51.2
		Employment rate (Other than EU-28 aged 15-64)		60.4	60.2	59.5	53.4	53.7	50.8	47.2	44.3	45.1
		Employment rate (Born in the same country aged 15-64)	50.7 b	52.6	54.3	54.5	52.8	52.5	52.7	51.4	50.7	51.7
Employment rate (Born in other EU-28 aged 15-64)		62.1	60.4	57.6	57.0	52.9	51.4	52.3	52.8	51.8		
Employment rate (Born outside EU-28 aged 15-64)		61.0	60.8	60.6	55.0	54.9	52.1	49.0	46.7	47.9		
Underemployment (% of labour force aged 15-74)				6.4	7.4	7.8	8.3	9.3	10.0	10.3		
Seeking but not available (% of labour force aged 15-74)	1.9 b	1.8	1.8	1.5	1.4	1.3	1.3	1.3	1.2	1.2		
Discouraged, available but not seeking (% of labour force aged 15-74)	8.8 b	7.4	5.7	5.6	6.2	6.3	6.1	6.7	7.2	6.8		



Spain		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	24.3	24.0	23.3	23.8	24.7 b	26.1	26.7	27.2	27.3	29.2
		At-risk-of-poverty (% of total population)	20.1	20.3	19.7	19.8	20.4 b	20.7	20.6	20.8	20.4	22.2
		At-risk-of-poverty threshold (PPS single person)	6896	7335	7614	9026	9338 b	8967	8655	8582	8550	8517
		Poverty gap (%)	25.6	26.4	25.9	25.6	25.7 b	26.8	27.4	30.6	30.9	31.6
		Persistent at-risk-of-poverty (% of total population)			10.2	11.0	12.5	11.6	11.4	13.3 b	12.1	14.3
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	24.5	24.6	23.7	25.7	26.9 b	28.8	30.0	29.1	30.0	31.1
		Impact of social transfers (excl. pensions) in reducing poverty (%)	18.0	17.5	16.9	23.0	24.2 b	28.1	31.3	28.5	32.0	28.6
		Severe Material Deprivation (% of total population)	4.1	4.1	3.5	3.6	4.5 b	4.9	4.5	5.8	6.2	7.1
		Share of people living in low work intensity households (% of people aged 0-59)	6.9	6.4	6.8	6.6	7.6 b	10.8	13.4	14.3	15.7	17.1
		Gross Household Disposable income adjusted for consumer prices (growth %)	2.7	2.1	0.7	1.8	2.8	-3.4	-1.5	-5.4	-1.8	0.6
		Income quintile share ratio S80/S20	5.5	5.5	5.5	5.6	5.9 b	6.2	6.3	6.5	6.3	6.8
		GINI coefficient	32.2	31.9	31.9	32.4	32.9 b	33.5	34.0	34.2	33.7	34.7
		Early leavers from education and training (% of population aged 18-24)	31.0 b	30.3 b	30.8	31.7	30.9	28.2	26.3	24.7	23.6	21.9 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	13.0 b	11.8 b	12.0	14.3	18.1	17.8	18.2	18.6	18.6	17.1 b
		Male	At-risk-of-poverty or exclusion (% of male population)	23.1	22.6	21.9	22.4	23.8 b	25.5	26.1	27.3	27.9
	At-risk-of-poverty (% of male population)		18.9	18.8	18.6	18.4	19.4 b	20.1	19.9	20.7	20.9	22.4
	Poverty gap (%)		28.0	27.2	26.0	27.1	26.1 b	27.4	27.9	30.7	31.4	31.7
	Persistent at-risk-of-poverty (% of male population)				9.6	10.1	11.7	11.1	10.4	12.9 b	12.6	14.2
	Severe Material Deprivation (% of male population)		4.0	4.2	3.5	3.7	4.6 b	4.7	4.5	6.2	6.3	7.0
	Share of people living in low work intensity households (% of males aged 0-59)		6.1	5.9	6.5	6.1	7.2 b	10.6	12.9	13.8	15.9	17.0
Life expectancy at birth (years)	77.0		77.7	77.9	78.3 b	78.7	79.2	79.5	79.5	80.2		
Healthy life years at birth (years) - men	63.3		63.9	63.5	64.0 b	63.1	64.5	65.4	64.8	64.7		
Early leavers from education and training (% of males aged 18-24)	37.0 b		36.7 b	36.6	38.0	37.4	33.6	31.0	28.9	27.2	25.6 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)	11.1 b		10.3 b	10.4	13.9	19.4	18.8	19.2	19.6	19.4	18.0 b	
Female	At-risk-of-poverty or exclusion (% of female population)		25.6	25.5	24.6	25.1	25.6 b	26.7	27.4	27.2	26.7	28.9
	At-risk-of-poverty (% of female population)		21.3	21.8	20.8	21.2	21.3 b	21.3	21.4	20.9	19.9	22.1
	Poverty gap (%)		24.3	25.4	25.1	24.2	25.0 b	26.4	26.7	30.3	30.3	31.4
	Persistent at-risk-of-poverty (% of female population)				10.9	11.9	13.3	12.2	12.5	13.7 b	11.6	14.4
	Severe Material Deprivation (% of female population)		4.2	4.0	3.6	3.5	4.4 b	5.1	4.6	5.5	6.1	7.1
	Share of people living in low work intensity households (% of females aged 0-59)	7.6	6.9	7.1	7.0	8.0 b	11.0	13.8	14.8	15.4	17.2	
	Life expectancy at birth (years)	83.7	84.4	84.4	84.6 b	84.9	85.5	85.6	85.5	86.1		
	Healthy life years at birth (years) - women	63.4	63.5	63.2	63.7 b	62.1	63.8	65.6	65.8	63.9		
	Early leavers from education and training (% of females aged 18-24)	24.7 b	23.6 b	24.7	25.1	24.1	22.6	21.5	20.5	19.8	18.1 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	14.9 b	13.5 b	13.7	14.6	16.7	16.8	17.3	17.6	17.8	16.2 b	
	Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	29.0	29.5	28.6	30.1	32.0 b	33.3	32.2	32.4	32.6	35.8
		At-risk-of-poverty (% of Children population)	26.0	27.1	26.2	27.3	29.0 b	29.3	27.5	27.9	27.5	30.5
		Severe Material Deprivation (% of Children population)	5.7	5.6	4.4	5.5	6.7 b	7.4	5.2	7.6	8.3	9.5
		Share of children living in low work intensity households (% of Children population)	5.4	4.5	5.0	4.2	6.2 b	9.5	11.6	12.3	13.8	14.2
		Risk of poverty of children in households at work (Working Intensity > 0.2)	23.0	24.5	23.7	25.4	25.8 b	24.1	21.3	20.4	19.3	22.6
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)		15.0	14.8	14.1	18.3	18.1 b	21.9	25.9	23.4	27.6	22.4	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	21.7	20.8	20.8	21.5	22.7 b	24.9	26.7	28.6	29.2	31.8	
	At-risk-of-poverty (% of Working age population)	16.4	16.3	16.4	16.5	17.2 b	18.1	19.0	20.4	20.4	22.9	
	Severe Material Deprivation (% of Working age population)	3.9	3.8	3.3	3.5	4.5 b	4.9	4.8	6.1	6.5	7.6	
	Very low work intensity (18-59)	7.3	7.0	7.3	7.3	8.0 b	11.2	13.9	14.9	16.3	18.0	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	10.6	10.1	10.2	11.3	11.7 b	10.8	10.9	10.8	10.6	12.6	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	23.0	21.6	20.8	28.3	30.1 b	33.2	35.8	31.8	34.6	30.8	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	30.1	31.1	27.8	26.2	24.9 b	22.9	21.2	16.5	14.5	12.9	
	At-risk-of-poverty (% of Elderly population)	28.8	29.3	26.1	25.5	23.8 b	21.8	19.8	14.8	12.7	11.4	
	Severe Material Deprivation (% of Elderly population)	3.3	3.9	3.6	1.9	2.3 b	2.2	2.7	2.9	2.7	2.4	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.77	0.75	0.79	0.83	0.87 b	0.88	0.91	0.96	1.0	1.03	
	Aggregate replacement ratio (ratio)	0.57	0.48	0.48	0.42	0.45 b	0.47	0.51	0.55	0.60	0.60	
Expenditure in social protection (% of GDP)	Sickness/Health care	6.3	6.3	6.4	6.8	7.3	7.2 p	7.1 p	6.7 p	6.5 p		
	Disability	1.5	1.5	1.5	1.6	1.7	1.7 p	1.8 p	1.8 p	1.9 p		
	Old age and survivors	8.5	8.4	8.7	9.1	10.1	10.7 p	11.1 p	11.6 p	12.1 p		
	Family/Children	1.2	1.2	1.3	1.4	1.5	1.5 p	1.4 p	1.4 p	1.3 p		
	Unemployment	2.2	2.1	2.0	2.3	3.6	3.4 p	3.7 p	3.6 p	3.3 p		
	Housing and Social exclusion n.e.c.	0.4 e	0.4 e	0.4 e	0.4 e	0.4 e	0.5 e	0.4 e	0.4 e	0.3 p		
	Total (including Admin and Other expenditures)	20.6	20.5	20.8	22.0	25.2	25.5 p	26.0 p	25.9 p	25.9 p		
of which: Means tested benefits	2.7	2.7	2.7	2.9	3.4	3.7 p	4.1 p	3.7 p	3.6 p			

## Macro economic indicators: France

France		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	1.6	2.4	2.4	0.2	-2.9	2.0	2.1	0.2	0.7	0.2		
		Total employment	0.7	1.1	1.4	0.5	-1.1	0.1	0.8	0.3	0.0	0.3		
		Labour productivity	0.9	1.3	0.9	-0.3	-1.8	1.8	1.3	-0.1	0.7	-0.1		
		Annual average hours worked	-0.4	-1.6	1.1	0.5	-1.2	0.3	0.2	-0.4	-1.1	-0.1		
		Productivity per hour worked	1.3	2.9	-0.2	-0.7	-0.6	1.5	1.1	0.3	1.7	-0.1		
		Harmonized CPI	1.9	1.9	1.6	3.2	0.1	1.7	2.3	2.2	1.0	0.6		
		Price deflator GDP	1.9	2.2	2.6	2.4	0.1	1.1	0.9	1.2	0.8	0.6		
		Nominal compensation per employee	3.1	3.2	2.5	2.6	1.6	2.8	2.3	2.2	1.6	1.4		
		Real compensation per employee (GDP deflator)	1.1	1.0	0.0	0.3	1.5	1.7	1.3	1.0	0.8	0.8		
		Real compensation per employee (private consumption deflator)	1.1	1.2	0.9	-0.5	1.5	1.1	0.0	0.0	0.6	0.8		
		Nominal unit labour costs	2.1	1.9	1.6	2.9	3.5	1.0	1.0	2.3	0.9	1.5		
		Real unit labour costs	0.1	-0.3	-0.9	0.5	3.4	-0.1	0.1	1.1	0.2	1.0		
		Labour Market Indicators	Total	Total population (000)	59711	60123	60493	60830	61143	61451	61762	62034	62297 b	62559
				Population aged 15-64 (000)	39011	39314	39564	39732	39849	39973	40010	39922	39837 b	39745
Total employment (000)	24984			25150	25587	25926	25674	25731	25759	25800	25764 b	25802		
Employment aged 15-64 (000)	24873			25050	25459	25793	25545	25581	25564	25564	25526 b	25543		
Employment rate (% population aged 20-64)	69.4			69.4	69.9	70.5	69.5	69.3	69.2	69.4	69.5 b	69.9		
Employment rate (% population aged 15-64)	63.8			63.7	64.3	64.9	64.1	64.0	63.9	64.0	64.1 b	64.3		
Employment rate (% population aged 15-24)	30.4			30.0	31.2	31.4	30.5	30.1	29.6	28.6	28.3 b	28.4		
Employment rate (% population aged 25-54)	80.8			81.3	82.1	83.2	82.1	82.0	81.5	80.9	80.6 b	80.4		
Employment rate (% population aged 55-64)	38.5			38.1	38.2	38.2	38.9	39.7	41.4	44.5	45.6 b	47.0		
FTE employment rate (% population aged 20-64)	65.0 b			64.9	65.4	66.0	65.0	64.6	64.6	64.7	64.8 b	65.0		
Self-employed (% total employment)	8.9			8.9	8.8	8.9	9.0	9.3	9.6	9.9	10.1 b	10.1		
Part-time employment (% total employment)	17.2			17.2	17.3	17.0	17.4	17.8	17.9	18.0	18.4 b	18.9		
Fixed-term contracts (% total employees)	13.9			14.8	15.1	15.1	14.5	15.1	15.4	15.3	16.0 b	15.8		
Employment in Services (% total employment)	77.1			77.4	77.6	77.7	78.0	78.6	78.9	79.1	79.3	79.6		
Employment in Industry (% total employment)	19.6			19.5	19.4	19.3	19.1	18.5	18.3	18.1	17.9	17.6		
Employment in Agriculture (% total employment)	3.3			3.2	3.1	2.9	2.9	2.8	2.8	2.8	2.8	2.8		
Activity rate (% population aged 15-64)	69.7			69.6	69.7	69.9	70.3	70.3	70.1	70.7	71.1 b	71.4		
Activity rate (% population aged 15-24)	38.1			38.1	38.4	38.5	39.6	38.9	37.9	37.4	37.3 b	37.0		
Activity rate (% population aged 25-54)	87.3			87.6	87.9	88.5	88.6	88.7	88.2	88.2	88.3 b	88.2		
Activity rate (% population aged 55-64)	40.4			40.1	40.0	39.8	41.2	42.2	43.9	47.4	49.0 b	50.7		
Total unemployment (000)	2478			2482	2268	2121	2622	2680	2665	2852	3014	3026		
Unemployment rate (% labour force)	8.9			8.8	8.0	7.4	9.1	9.3	9.2	9.8	10.3	10.3		
Youth unemployment rate (% labour force 15-24)	21.0			22.0	19.5	19.0	23.6	23.3	22.7	24.4	24.9	24.2		
Long-term unemployment rate (% labour force)	3.6			3.7	3.2	2.8	3.2	3.7	3.8	3.9	4.2	4.4		
Share of long-term unemployment (% of total unemployment)	40.6			41.5	39.7	37.1	34.9	39.9	41.1	40.0	40.5 b	42.8		
Youth unemployment ratio (% population aged 15-24)	7.7			8.1	7.2	7.1	9.1	8.8	8.3	8.8	9.0 b	8.7		
Employment rate for low skilled 25-64 (ISCED 0-2)	58.6 b			58.1	57.9	57.7	56.4	55.8	55.9	55.7	54.3	53.3 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	75.6 b			75.5	75.7	75.8	74.9	74.6	73.7	73.6	73.2	72.5 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	82.9 b			82.9	83.4	84.6	83.5	83.6	83.8	84.4	84.3	83.8 b		
Employment rate (Nationals aged 15-64)	64.4 b			64.4	65.0	65.5	64.8	64.7	64.6	64.8	64.8	64.6 b		
Employment rate (Other EU-28 aged 15-64)				67.0	66.1	66.0	64.8	67.0	68.0	65.1	67.6	66.8 b		
Employment rate (Other than EU-28 aged 15-64)				44.8	46.1	50.2	46.3	46.3	45.7	46.5	46.1	45.0 b		
Employment rate (Born in the same country aged 15-64)	64.6 b			64.5	65.2	65.6	65.0	64.8	64.8	65.0	65.1	64.9 b		
Employment rate (Born in other EU-28 aged 15-64)				64.7	64.4	64.4	64.8	67.1	67.6	65.8	67.7	67.0 b		
Employment rate (Born outside EU-28 aged 15-64)				54.2	55.7	58.3	55.3	54.8	54.1	54.8	53.4	53.0 b		
Underemployment (% of labour force aged 15-74)						4.5 b	4.7	5.0	4.7	4.7	5.4	5.5 b		
Seeking but not available (% of labour force aged 15-74)	1.8 b	1.7	1.6	1.5 b	1.6	1.7	1.9	1.9	1.0	1.1 b				
Discouraged, available but not seeking (% of labour force aged 15-74)	1.3 b	1.4	1.3	1.3 b	1.4	1.4	1.4	1.2		2.3 b				

France		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	28870	29067	29258	29427	29585	29745	29904	30048	30180 b	30317
		Population aged 15-64 (000)	19192	19335	19459	19538	19590	19652	19665	19621	19572 b	19532
		Total employment (000)	13360	13397	13545	13692	13485	13520	13531	13504	13424 b	13378
		Employment aged 15-64 (000)	13294	13336	13468	13612	13406	13427	13415	13366	13285 b	13224
		Employment rate (% population aged 20-64)	75.4	75.1	75.1	75.6	74.3	74.0	74.0	73.9	73.7 b	73.7
		Employment rate (% population aged 15-64)	69.3	69.0	69.2	69.7	68.4	68.3	68.2	68.1	67.9 b	67.7
		Employment rate (% population aged 15-24)	33.8	33.5	34.2	34.4	32.6	33.2	32.5	31.0	31.0 b	30.5
		Employment rate (% population aged 25-54)	87.7	88.0	88.4	89.3	87.7	87.4	86.8	86.0	85.2 b	84.9
		Employment rate (% population aged 55-64)	41.5	40.5	40.5	40.6	41.5	42.3	44.1	47.5	48.4 b	48.9
		FTE employment rate (% population aged 20-64)	74.0 b	73.7	73.7	74.1	72.8	72.3	72.4	72.2	72.0 b	71.9
		Self-employed (% total employment)	11.3	11.4	11.4	11.3	11.7	12.1	12.4	12.8	13.0 b	12.8
		Part-time employment (% total employment)	5.8	5.8	5.7	5.7	6.0	6.7	6.8	6.9	7.2 b	7.8
		Fixed-term contracts (% total employees)	13.0	14.0	14.0	13.8	13.0	14.1	14.7	14.4	15.3 b	14.9
		Employment in Services (% total employment)	66.8	66.6	67.0	67.0	66.9	67.8	68.6	68.7	68.9 b	69.3
		Employment in Industry (% total employment)	28.7	28.9	28.8	29.1	29.1	28.3	27.6	27.5	27.2 b	26.7
		Employment in Agriculture (% total employment)	4.5	4.4	4.2	3.9	3.9	3.9	3.8	3.8	3.9 b	3.9
		Activity rate (% population aged 15-64)	75.2	74.9	74.7	74.7	75.0	74.9	74.6	75.3	75.5 b	75.5
		Activity rate (% population aged 15-24)	41.9	42.0	41.9	42.2	42.9	42.6	41.3	40.8	40.7 b	40.4
		Activity rate (% population aged 25-54)	94.0	94.1	94.1	94.4	94.3	94.2	93.7	93.6	93.4 b	93.2
		Activity rate (% population aged 55-64)	43.6	42.7	42.5	42.4	44.0	45.0	46.8	50.8	52.3 b	53.0
	Total unemployment (000)	1209	1223	1132	1057	1360	1372	1344	1490	1583	1610	
	Unemployment rate (% labour force)	8.1	8.2	7.6	7.0	9.0	9.0	8.9	9.8	10.4	10.5	
	Youth unemployment rate (% labour force 15-24)	20.1	21.1	19.0	19.2	24.7	22.9	22.1	24.8	24.6	25.1	
	Long-term unemployment rate (% labour force)	3.2	3.5	3.0	2.7	3.2	3.7	3.7	4.0	4.2 b	4.7	
	Share of long-term unemployment (% of total unemployment)	39.5	42.1	39.9	38.4	35.1	41.4	41.9	40.7	40.9 b	44.2	
	Youth unemployment ratio (% population aged 15-24)	8.2	8.6	7.7	7.8	10.3	9.4	8.8	9.8	9.7 b	9.9	
	Employment rate for low skilled 25-64 (ISCED 0-2)	67.0 b	65.8	65.3	65.9	64.1	62.9	63.0	63.3	61.9	60.5 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	81.1 b	80.7	80.5	80.3	79.1	78.8	78.1	77.6	76.7	76.1 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	86.5 b	86.8	86.9	88.1	86.9	87.0	87.2	87.6	87.3	86.4 b	
	Employment rate (Nationals aged 15-64)	69.5 b	69.2	69.5	69.9	68.8	68.5	68.4	68.4	68.1	67.6 b	
	Employment rate (Other EU-28 aged 15-64)		75.1	73.0	72.5	71.7	74.8	74.2	70.7	73.3	71.5 b	
	Employment rate (Other than EU-28 aged 15-64)		57.4	59.5	62.8	56.8	60.6	58.9	60.3	60.1	56.5 b	
	Employment rate (Born in the same country aged 15-64)	69.5 b	69.2	69.4	69.8	68.8	68.5	68.6	68.4	68.1	67.8 b	
	Employment rate (Born in other EU-28 aged 15-64)		72.6	71.1	70.4	70.6	73.1	72.9	71.0	73.3	70.9 b	
	Employment rate (Born outside EU-28 aged 15-64)		64.9	66.2	68.3	63.8	64.5	63.4	64.6	64.0	61.6 b	
	Underemployment (% of labour force aged 15-74)				1.8 b	1.9	2.2	2.2	2.2	2.5	2.7 b	
	Seeking but not available (% of labour force aged 15-74)	1.4 b	1.2	1.1	1.1 b	1.2	1.3	1.4	1.5	0.9	0.9 b	
	Discouraged, available but not seeking (% of labour force aged 15-74)	0.9 b	1.0	1.0	1.0 b	1.0	1.1	1.1	1.0		2.0 b	

France		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	30842	31057	31236	31403	31558	31706	31857	31986	32117 b	32242
		Population aged 15-64 (000)	19819	19979	20106	20194	20260	20321	20345	20301	20265 b	20214
		Total employment (000)	11625	11753	12042	12234	12189	12211	12228	12296	12340 b	12424
		Employment aged 15-64 (000)	11580	11713	11992	12181	12139	12154	12149	12198	12241 b	12319
		Employment rate (% population aged 20-64)	63.7	63.9	64.9	65.5	65.0	64.9	64.7	65.1	65.5 b	66.2
		Employment rate (% population aged 15-64)	58.4	58.6	59.6	60.3	59.9	59.8	59.7	60.1	60.4 b	60.9
		Employment rate (% population aged 15-24)	26.9	26.4	28.1	28.5	28.3	27.1	26.7	26.1	25.6 b	26.2
		Employment rate (% population aged 25-54)	74.1	74.8	76.0	77.3	76.7	76.8	76.2	76.1	76.2 b	76.1
		Employment rate (% population aged 55-64)	35.7	35.8	36.0	35.9	36.5	37.3	38.9	41.6	43.0 b	45.3
		FTE employment rate (% population aged 20-64)	57.1 b	57.2	58.1	58.8	58.2	57.9	57.8	58.3	58.7 b	59.1
		Self-employed (% total employment)	6.1	6.1	5.9	6.2	6.0	6.1	6.4	6.6	6.9 b	7.1
		Part-time employment (% total employment)	30.3	30.3	30.4	29.5	30.0	30.1	30.1	30.2	30.7 b	30.8
		Fixed-term contracts (% total employees)	14.8	15.7	16.2	16.3	16.0	16.1	16.0	16.1	16.7 b	16.8
		Employment in Services (% total employment)	88.3	88.8	88.8	89.2	89.7	90.0	89.7	89.9	90.0 b	90.2
		Employment in Industry (% total employment)	9.7	9.3	9.3	8.9	8.5	8.3	8.5	8.4	8.4 b	8.2
		Employment in Agriculture (% total employment)	2.0	1.9	1.9	1.9	1.8	1.7	1.8	1.7	1.6 b	1.6
		Activity rate (% population aged 15-64)	64.4	64.5	64.9	65.2	65.7	65.8	65.7	66.3	67.0 b	67.5
		Activity rate (% population aged 15-24)	34.2	34.1	34.9	34.7	36.2	35.2	34.5	34.0	33.9 b	33.7
		Activity rate (% population aged 25-54)	80.9	81.3	82.0	82.8	83.1	83.4	83.0	83.0	83.5 b	83.4
		Activity rate (% population aged 55-64)	37.4	37.6	37.6	37.3	38.5	39.5	41.2	44.3	46.0 b	48.6
		Total unemployment (000)	1269	1259	1135	1064	1262	1308	1321	1362	1431	1416
		Unemployment rate (% labour force)	9.7	9.5	8.5	7.9	9.2	9.5	9.6	9.8	10.2	10.0
		Youth unemployment rate (% labour force 15-24)	22.0	23.2	20.1	18.8	22.3	23.8	23.4	23.9	25.2	23.1
		Long-term unemployment rate (% labour force)	4.0	3.9	3.3	2.8	3.2	3.6	3.9	3.8	4.1 b	4.1
		Share of long-term unemployment (% of total unemployment)	41.6	40.9	39.5	35.7	34.7	38.2	40.3	39.2	40.0 b	41.3
		Youth unemployment ratio (% population aged 15-24)	7.3	7.7	6.8	6.3	7.8	8.1	7.8	7.9	8.2 b	7.5
		Employment rate for low skilled 25-64 (ISCED 0-2)	51.4 b	51.4	51.5	50.4	49.6	49.7	49.6	48.9	47.6	47.1 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	69.5 b	69.7	70.4	70.9	70.2	70.0	69.0	69.3	69.4	68.5 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	79.8 b	79.6	80.3	81.7	80.6	80.8	80.8	81.6	81.8	81.6 b
		Employment rate (Nationals aged 15-64)	59.5 b	59.6	60.7	61.3	60.9	61.0	60.9	61.4	61.7	61.6 b
		Employment rate (Other EU-28 aged 15-64)		58.5	59.4	59.8	57.8	59.1	61.4	59.0	61.7	62.3 b
		Employment rate (Other than EU-28 aged 15-64)		33.4	33.8	38.0	36.5	33.7	34.2	34.2	33.9	35.5 b
		Employment rate (Born in the same country aged 15-64)	59.8 b	60.0	61.0	61.6	61.2	61.2	61.1	61.7	62.2	62.1 b
Employment rate (Born in other EU-28 aged 15-64)		57.7	58.9	59.2	59.5	61.6	62.7	61.1	62.6	63.7 b		
Employment rate (Born outside EU-28 aged 15-64)		44.2	45.9	48.8	47.4	45.8	45.9	45.9	43.9	45.5 b		
Underemployment (% of labour force aged 15-74)				7.5 b	7.7	8.1	7.5	7.5	8.5	8.4 b		
Seeking but not available (% of labour force aged 15-74)	2.2 b	2.3	2.2	1.9 b	2.1	2.1	2.3	2.3	1.2	1.2 b		
Discouraged, available but not seeking (% of labour force aged 15-74)	1.7 b	1.8	1.7	1.7 b	1.7	1.7	1.7	1.5		2.5 b		

France		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	18.9	18.8	19.0	18.5 b	18.5	19.2	19.3	19.1	18.1	18.6	
		At-risk-of-poverty (% of total population)	13.0	13.2	13.1	12.5 b	12.9	13.3	14.0	14.1	13.7	13.3	
		At-risk-of-poverty threshold (PPS single person)	8702	8989	9089	10496 b	10644	10669	10897	11271	11516	11608	
		Poverty gap (%)	16.5	18.5	17.9	14.5 b	18.2	19.5	17.1	16.2	16.8	16.4	
		Persistent at-risk-of-poverty (% of total population)			6.4					7.0	8.5		
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	26.0	24.9	26.4	23.5 b	24.0	24.9	24.7	23.8	24.4	24.0	
		Impact of social transfers (excl. pensions) in reducing poverty (%)	50.0	47.0	50.4	46.8 b	46.3	46.6	43.3	40.8	43.9	44.6	
		Severe Material Deprivation (% of total population)	5.3	5.0	4.7	5.4	5.6	5.8	5.2	5.3	4.9	4.8	
		Share of people living in low work intensity households (% of people aged 0-59)	8.7	9.1	9.6	8.8	8.4	9.9	9.4	8.4	8.1	9.7	
		Gross Household Disposable income adjusted for consumer prices (growth %)	1.0	2.4	3.0	0.4	1.7	1.3	0.2	-0.8	-0.1	1.2	
		Income quintile share ratio S80/S20	4.0	4.0	3.9	4.4 b	4.4	4.4	4.6	4.5	4.5	4.3	
		GINI coefficient	27.7	27.3	26.6	29.8 b	29.9	29.8	30.8	30.5	30.1	29.2	
		Early leavers from education and training (% of population aged 18-24)	12.5	12.7	12.8	11.8	12.4	12.7	12.3	11.8	9.7 b	9.0 b	
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	11.2	11.3	10.7	10.5	12.7	12.7	12.3	12.5	11.2 b	11.4 b	
		Male	At-risk-of-poverty or exclusion (% of male population)	17.6	17.3	18.0	17.3 b	17.1	18.4	18.6	18.4	17.3	17.5
			At-risk-of-poverty (% of male population)	12.3	12.3	12.8	11.7 b	11.9	12.7	13.5	13.6	13.1	12.6
	Poverty gap (%)		16.6	19.1	18.0	14.7 b	18.8	19.5	17.8	16.3	16.7	17.2	
	Persistent at-risk-of-poverty (% of male population)				5.9					6.3	8.4		
	Severe Material Deprivation (% of male population)		5.0	4.6	4.4	5.1	5.2	5.7	5.1	5.1	4.5	4.5	
	Share of people living in low work intensity households (% of males aged 0-59)		7.8	8.2	8.6	8.1	7.6	9.2	9.0	8.4	7.5	8.9	
	Life expectancy at birth (years)		76.7	77.3	77.6	77.8	78.0	78.2	78.7	78.7	79.0		
	Healthy life years at birth (years) - men		62.3	62.8	62.8	62.8	62.8	61.8	62.7	62.6	63.0		
	Early leavers from education and training (% of males aged 18-24)		14.3	14.6	15.2	13.8	14.5	15.3	14.1	13.7	10.7 b	10.2 b	
	NEET: Young people not in employment, education or training (% of males aged 15-24)		10.4	10.4	10.0	10.4	13.3	12.7	12.0	12.9	11.0 b	11.8 b	
	Female	At-risk-of-poverty or exclusion (% of female population)	20.0	20.3	20.0	19.7 b	19.7	19.9	19.9	19.6	18.9	19.6	
		At-risk-of-poverty (% of female population)	13.7	14.0	13.4	13.3 b	13.8	13.9	14.5	14.6	14.3	14.1	
Poverty gap (%)		16.3	18.4	17.7	14.4 b	18.0	19.7	16.4	16.2	16.8	16.0		
Persistent at-risk-of-poverty (% of female population)				6.9					7.7	8.5			
Severe Material Deprivation (% of female population)		5.5	5.3	5.0	5.7	5.9	5.8	5.4	5.5	5.4	5.1		
Share of people living in low work intensity households (% of females aged 0-59)		9.5	10.0	10.6	9.6	9.1	10.5	9.7	8.5	8.6	10.5		
Life expectancy at birth (years)		83.8	84.5	84.8	84.8	85.0	85.3	85.7	85.4	85.6			
Healthy life years at birth (years) - women		64.6	64.4	64.4	64.5	63.5	63.4	63.6	63.8	64.4			
Early leavers from education and training (% of females aged 18-24)		10.6	10.8	10.5	9.9	10.3	10.2	10.4	10.0	8.6 b	7.9 b		
NEET: Young people not in employment, education or training (% of females aged 15-24)		12.0	12.3	11.3	10.7	12.1	12.6	12.6	12.1	11.4 b	11.0 b		
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	19.4	18.1	19.6	21.2 b	21.2	22.9	23.0	23.2	20.8	21.6		
	At-risk-of-poverty (% of Children population)	14.4	13.9	15.3	15.6 b	16.8	18.1	18.8	19.0	17.6	17.6		
	Severe Material Deprivation (% of Children population)	6.2	5.6	5.4	6.6	6.5	7.0	7.0	7.2	5.6	5.7		
	Share of children living in low work intensity households (% of Children population)	7.0	6.9	7.7	7.4	6.6	8.8	8.2	7.2	6.3	8.2		
	Risk of poverty of children in households at work (Working Intensity > 0.2)	10.5	9.2	10.6	11.5	12.8	12.7	13.6	14.3	13.5	12.5		
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	57.7	54.9	58.5	55.3 b	51.5	50.0	47.5	44.3	48.1	48.5		
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	18.8	19.4	19.7	18.8 b	18.9	19.9	20.1	19.8	19.3	20.0		
	At-risk-of-poverty (% of Working age population)	11.6	12.1	12.3	11.6 b	11.8	12.7	13.5	13.7	13.7	13.2		
	Severe Material Deprivation (% of Working age population)	5.4	5.3	4.8	5.5	5.9	6.0	5.2	5.4	5.4	5.2		
	Very low work intensity (18-59)	9.3	10.0	10.4	9.4	9.1	10.3	9.8	8.9	8.8	10.3		
	In-work at-risk-of poverty rate (% of persons employed 18-64)	6.1	6.0	6.4	6.5 b	6.6	6.5	7.6	8.0	7.8	8.0		
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	52.7	49.6	50.4	47.3 b	47.8	48.0	43.8	41.0	43.9	45.2		
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	18.5	17.5	15.2	14.1 b	13.4	11.8	11.5	11.1	10.8	10.1		
	At-risk-of-poverty (% of Elderly population)	16.4	16.1	13.1	11.9 b	11.9	9.4	9.7	9.4	9.1	8.6		
	Severe Material Deprivation (% of Elderly population)	3.5	2.9	3.4	3.3	3.2	3.4	2.9	2.4	2.6	2.4		
	Relative median income of elderly (ratio with median income of people younger than 65)	0.90	0.88	0.91	0.95 b	0.96	0.98	1.01	1.0	1.03	1.02		
	Aggregate replacement ratio (ratio)	0.57	0.58	0.60	0.65 b	0.66	0.65	0.64	0.65	0.66	0.68		
Expenditure in social protection (% of GDP)	Sickness/Health care	8.8	8.7 b	8.6	8.6	9.2 b	9.3	9.2	9.2	9.4 p			
	Disability	1.8	1.9 b	1.8	1.8	2.0 b	2.0	2.0	2.1	2.1 p			
	Old age and survivors	13.0	13.0 b	13.0	13.4	14.2 b	14.3	14.4	14.7	14.9 p			
	Family/Children	2.5	2.6 b	2.6	2.6	2.6 b	2.5	2.5	2.5	2.5 p			
	Unemployment	2.2	2.1 b	1.9	1.9	1.9 b	2.0	1.9	1.9	2.0 p			
	Housing and Social exclusion n.e.c.	1.3	1.4 b	1.3	1.4	1.6 b	1.6	1.6	1.6	1.7 p			
	Total (including Admin and Other expenditures)	31.5	31.2 b	30.9	31.3	33.5 b	33.8	33.5	34.2	34.6 p			
of which: Means tested benefits	3.5	3.4 b	3.3	3.3	3.4 b	3.4	3.4	3.5	3.6 p				



## Macro economic indicators: Croatia

Croatia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Macro Economic Indicators	Annual percentage growth	Real GDP	4.2	4.8	5.2	2.1	-7.4	-1.7	-0.3	-2.2	-0.9	-0.4
		Total employment	0.7	3.9	9.7 b	3.8 b	-0.7	-3.8	-3.9	-3.6	-2.6	2.7
		Labour productivity	3.4	0.9	-4.1 b	-1.7 b	-6.7	2.1	3.7	1.5	1.7	-3.0
		Annual average hours worked										
		Productivity per hour worked										
		Harmonized CPI	3.0	3.3	2.7	5.8	2.2	1.1	2.2	3.4	2.3	0.2
		Price deflator GDP	3.4	4.0	4.1	5.7	2.8	0.8	1.7	1.6	0.9	0.0
		Nominal compensation per employee	5.6	3.2	9.0 b	3.4 b	-0.2	2.2	4.3	0.2	-0.7	-5.3
		Real compensation per employee (GDP deflator)	2.1	-0.8	4.7 b	-2.2 b	-2.9	1.4	2.6	-1.4	-1.5	-5.3
		Real compensation per employee (private consumption deflator)	2.5	-0.1	6.1 b	-2.3 b	-2.4	1.1	2.1	-3.1	-2.9	-5.5
		Nominal unit labour costs	2.1	2.3	13.6 b	5.2	6.9	0.1	0.6	-1.3	-2.4	-2.4
		Real unit labour costs	-1.2	-1.7	9.2 b	-0.5 b	4.0	-0.7	-1.1	-2.8	-3.1	-2.5
		Labour Market Indicators	Total	Total population (000)	4217	4218	4306	4310	4305	4294	4280	4266
Population aged 15-64 (000)	2746			2744	2870	2874	2874	2873	2870	2857	2844	2826
Total employment (000)	1573			1586	1734	1771	1757	1690	1625	1566	1524	1566
Employment aged 15-64 (000)	1512			1526	1694	1725	1708	1649	1584	1528	1494	1542
Employment rate (% population aged 20-64)	60.0			60.6	63.9	64.9	64.2	62.1	59.8	58.1	57.2	59.2
Employment rate (% population aged 15-64)	55.0			55.6	59.0	60.0	59.4	57.4	55.2	53.5	52.5	54.6
Employment rate (% population aged 15-24)	25.8			25.5	27.4	28.0	27.1	24.2	20.6	17.4	14.9	18.3
Employment rate (% population aged 25-54)	71.8			72.2	74.5	76.0	74.7	72.6	70.6	69.2	68.3	71.2
Employment rate (% population aged 55-64)	32.6			34.3	36.6	37.1	39.4	39.1	38.2	37.5	37.8	36.2
FTE employment rate (% population aged 20-64)	58.7 b			59.2 b	62.6	63.6	62.8	60.5	58.2	56.9	56.0	58.1
Self-employed (% total employment)	15.4			15.3	22.1	21.3	21.3	22.3	22.2	20.2	18.6	16.1
Part-time employment (% total employment)	10.1			9.4	7.7	8.0	8.2	8.6	8.8	7.1	6.5	6.2
Fixed-term contracts (% total employees)	12.4			12.9	13.2	12.3	12.0	12.8	13.5	13.3	14.5	17.0
Employment in Services (% total employment)					57.5	56.5	57.8	58.5	57.7	60.1	61.8	63.7
Employment in Industry (% total employment)					28.9	30.7	28.9	27.3	27.8	27.8	27.5	26.9
Employment in Agriculture (% total employment)					13.6	12.7	13.3	14.2	14.5	12.2	10.7	9.5
Activity rate (% population aged 15-64)	63.3			62.8	65.7	65.8	65.6	65.1	64.1	63.9	63.7	66.1
Activity rate (% population aged 15-24)	38.1			35.9	36.6	36.6	36.3	35.9	32.5	30.1	29.9	33.6
Activity rate (% population aged 25-54)	80.6			80.1	81.6	81.9	81.2	80.8	80.6	80.9	80.8	84.1
Activity rate (% population aged 55-64)	35.1			36.5	39.0	39.3	41.8	41.8	41.4	41.8	41.9	41.0
Total unemployment (000)	240			215 i	191	165	178	222	257	297	318	327
Unemployment rate (% labour force)	13.0			11.6 i	9.9	8.6	9.2	11.7	13.7	16.0	17.3	17.3
Youth unemployment rate (% labour force 15-24)	31.9			28.8 i	25.2	23.7	25.2	32.4	36.7	42.1	50.0	45.5
Long-term unemployment rate (% labour force)	7.6			7.0	6.0	5.3	5.1	6.6	8.4	10.2	11.0	10.1
Share of long-term unemployment (% of total unemployment)	58.4			60.1	60.0	62.3	55.7	56.3	61.3	63.7	63.6	58.4
Youth unemployment ratio (% population aged 15-24)	12.3			10.4	9.2	8.7	9.2	11.6	11.9	12.7	14.9	15.3
Employment rate for low skilled 25-64 (ISCED 0-2)	45.2 b			42.6 b	45.7	47.8	48.9	46.7 b	43.5	41.2	39.3	38.8 b
Employment rate for medium skilled 25-64 (ISCED 3-4)	65.1 b			66.7 b	70.0	70.3	68.4	66.2 b	64.7	62.5	61.4	62.6 b
Employment rate for high skilled 25-64 (ISCED 5-8)	80.6 b			81.3 b	83.0	83.9	82.9	81.0 b	78.9	77.9	77.7	80.5 b
Employment rate (Nationals aged 15-64)				55.7 b	59.0	60.0	59.6	57.5	55.2	53.5	52.5	54.6
Employment rate (Other EU-28 aged 15-64)									76.1 u	71.8 u	63.4 u	
Employment rate (Other than EU-28 aged 15-64)					47.2 u	42.1 u	28.1 u	28.2 u	39.2 u	28.9 u	35.3 u	35.2 u
Employment rate (Born in the same country aged 15-64)				56.2 b	59.4	60.3	59.6	57.7	55.5	54.0	53.1	54.7
Employment rate (Born in other EU-28 aged 15-64)				53.2 bu	61.4	64.8	70.8	63.9	59.5	56.2	52.9	57.1
Employment rate (Born outside EU-28 aged 15-64)				50.8 b	55.4	56.8	56.7	53.6	51.4	47.8	46.6	52.5
Underemployment (% of labour force aged 15-74)						1.7	1.9	2.4	2.4	1.9	1.8	1.8
Seeking but not available (% of labour force aged 15-74)	0.8 bu	0.6 bu	0.7	0.6	0.6	0.8	0.9	0.7	0.6	0.9		
Discouraged, available but not seeking (% of labour force aged 15-74)	4.6 b	6.6 b	5.8	5.2	5.7	5.9	6.9	8.2	10.8	8.7		

Croatia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	2006	2008	2071	2077	2075	2071	2064	2058	2052	2046
		Population aged 15-64 (000)	1354	1353	1429	1436	1436	1435	1434	1428	1422	1414
		Total employment (000)	867	868	970	988	962	920	894	856	821	849
		Employment aged 15-64 (000)	835	839	951	966	937	899	872	835	803	836
		Employment rate (% population aged 20-64)	67.5	67.6	72.1	72.9	70.5	67.9	66.1	63.7	61.6	64.2
		Employment rate (% population aged 15-64)	61.7	62.0	66.5	67.3	65.2	62.7	60.9	58.5	56.5	59.1
		Employment rate (% population aged 15-24)	30.0	29.1	32.4	34.2	32.3	27.9	23.8	20.0	17.4	21.2
		Employment rate (% population aged 25-54)	77.9	78.1	81.0	82.2	79.3	76.4	75.1	73.0	71.6	74.5
		Employment rate (% population aged 55-64)	43.0	44.4	49.5	48.9	49.6	50.5	49.6	48.0	45.0	45.8
		FTE employment rate (% population aged 20-64)	66.9 b	66.7 b	71.3	72.3	69.8	66.9	65.0	62.9	60.7	63.5
		Self-employed (% total employment)	15.7	16.2	23.5	22.6	22.8	22.9	22.9	21.6	20.9	19.0
		Part-time employment (% total employment)	7.3	7.5	5.8	6.1	6.2	6.4	6.9	5.8	5.6	4.9
		Fixed-term contracts (% total employees)	12.4	13.1	12.6	12.1	11.1	11.7	13.1	13.2	14.8	16.7
		Employment in Services (% total employment)			48.8	47.3	48.1	49.0	48.8	50.8	50.6	52.5
		Employment in Industry (% total employment)			38.5	40.9	39.3	37.8	37.3	37.0	38.0	36.7
		Employment in Agriculture (% total employment)			12.6	11.8	12.6	13.1	13.9	12.2	11.5	10.8
		Activity rate (% population aged 15-64)	70.0	68.9	73.0	72.5	71.0	70.6	70.7	69.8	68.9	70.9
		Activity rate (% population aged 15-24)	43.0	39.9	41.6	43.1	42.4	40.7	37.8	34.6	34.7	38.5
		Activity rate (% population aged 25-54)	85.9	84.9	87.4	86.9	84.5	84.1	85.4	85.2	84.7	86.6
		Activity rate (% population aged 55-64)	47.2	47.7	53.2	52.1	52.7	54.4	54.2	53.9	51.0	52.1
		Total unemployment (000)	119	102 i	93	75	83	114	141	162	176	167
	Unemployment rate (% labour force)	11.8	10.2 i	8.8	7.1	7.9	11.1	13.7	16.0	17.7	16.5	
	Youth unemployment rate (% labour force 15-24)	29.6	26.6 i	22.2	20.6	23.7	31.5	37.0	42.1	49.9	44.9	
	Long-term unemployment rate (% labour force)	6.6	6.0	5.0	4.2	3.9	5.9	8.4	10.2	11.3	9.6	
	Share of long-term unemployment (% of total unemployment)	56.2	59.0	56.5	59.5	49.7	53.4	61.3	63.6	63.8	58.3	
	Youth unemployment ratio (% population aged 15-24)	13.0	10.9	9.2	8.9	10.1	12.8	14.0	14.6	17.3	17.3	
	Employment rate for low skilled 25-64 (ISCED 0-2)	59.0 b	55.6 b	59.2	61.3	60.5	58.1 b	54.2	51.2	49.8	47.6 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	70.6 b	72.1 b	76.4	76.8	73.6	71.1 b	70.6	67.7	65.0	67.7 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	80.6 b	81.9 b	84.6	84.6	83.3	80.7 b	78.4	78.3	78.6	80.9 b	
	Employment rate (Nationals aged 15-64)		62.0 b	66.5	67.3	65.4	62.8	60.8	58.4	56.4	59.1	
	Employment rate (Other EU-28 aged 15-64)							80.1 u	89.1 u	85.8 u		
	Employment rate (Other than EU-28 aged 15-64)			60.1 u						90.0 u	43.3 u	
	Employment rate (Born in the same country aged 15-64)		62.0 b	66.4	67.1	65.1	62.8	61.1	59.1	57.0	59.1	
	Employment rate (Born in other EU-28 aged 15-64)		64.9 bu	74.0 u	71.9 u	71.3 u	70.6 u	59.7 u	59.4	50.3 u	63.8 u	
	Employment rate (Born outside EU-28 aged 15-64)		61.4 b	66.8	68.7	65.6	60.9	58.7	52.3	52.4	59.0	
	Underemployment (% of labour force aged 15-74)				1.7	2.0	2.3	2.2	1.8	1.9	1.4	
	Seeking but not available (% of labour force aged 15-74)	0.4 bu	0.4 bu	0.5 u	0.3 u	0.4 u	0.6 u	0.4 u	0.4 u	0.3 u	0.7 u	
	Discouraged, available but not seeking (% of labour force aged 15-74)	3.4 b	4.4 b	3.7	3.6	4.5	4.5	4.6	6.0	8.2	7.4	

Croatia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	2211	2209	2235	2233	2230	2224	2216	2208	2201	2191
		Population aged 15-64 (000)	1392	1391	1441	1439	1438	1438	1436	1429	1422	1412
		Total employment (000)	706	718	764	783	795	770	731	710	703	717
		Employment aged 15-64 (000)	676	687	743	759	772	749	711	693	690	706
		Employment rate (% population aged 20-64)	52.8	53.7	55.9	57.0	58.0	56.4	53.6	52.6	52.8	54.2
		Employment rate (% population aged 15-64)	48.6	49.4	51.6	52.7	53.7	52.1	49.5	48.5	48.5	50.0
		Employment rate (% population aged 15-24)	21.3	21.8	22.3	21.4	21.7	20.4	17.2	14.7	12.4	15.3
		Employment rate (% population aged 25-54)	65.7	66.3	67.9	69.7	70.1	68.8	66.1	65.2	64.9	67.9
		Employment rate (% population aged 55-64)	23.8	25.7	25.0	26.4	30.0	28.5	27.7	27.7	31.0	27.3
		FTE employment rate (% population aged 20-64)	50.8 b	51.9 b	54.0	55.0	56.0	54.1	51.5	50.9	51.4	52.7
		Self-employed (% total employment)	15.0	14.1	20.2	19.6	19.4	21.6	21.4	18.5	15.9	12.7
		Part-time employment (% total employment)	13.4	11.7	10.0	10.5	10.5	11.3	11.2	8.6	7.6	7.8
		Fixed-term contracts (% total employees)	12.3	12.6	14.0	12.5	13.1	14.1	14.0	13.4	14.1	17.3
		Employment in Services (% total employment)			68.3	68.1	69.6	69.8	68.5	71.3	74.9	76.8
		Employment in Industry (% total employment)			16.9	17.9	16.3	14.8	16.2	16.7	15.3	15.3
		Employment in Agriculture (% total employment)			14.8	13.9	14.1	15.4	15.3	12.1	9.8	7.9
		Activity rate (% population aged 15-64)	56.7	56.9	58.4	59.0	60.3	59.6	57.6	58.0	58.5	61.3
		Activity rate (% population aged 15-24)	32.9	31.6	31.5	29.9	30.0	30.7	26.9	25.3	24.8	28.5
		Activity rate (% population aged 25-54)	75.3	75.2	75.7	76.9	77.8	77.4	75.8	76.6	76.8	81.5
		Activity rate (% population aged 55-64)	24.9	26.9	26.1	27.6	31.8	30.2	29.6	30.6	33.4	30.6
		Total unemployment (000)	121	113 i	98	90	95	108	116	135	142	160
		Unemployment rate (% labour force)	14.4	13.3 i	11.4	10.4	10.7	12.4	13.8	16.1	16.8	18.3
		Youth unemployment rate (% labour force 15-24)	35.0	31.8 i	29.3	28.3	27.5	33.6	36.1	42.0	50.2	46.4
		Long-term unemployment rate (% labour force)	8.7	8.1	7.2	6.7	6.5	7.3	8.5	10.2	10.6	10.7
		Share of long-term unemployment (% of total unemployment)	60.5	61.1	63.5	64.7	60.9	59.3	61.4	63.7	63.2	58.6
		Youth unemployment ratio (% population aged 15-24)	11.6	9.8	9.2	8.5	8.2	10.3	9.7	10.6	12.4	13.2
		Employment rate for low skilled 25-64 (ISCED 0-2)	37.2 b	34.6 b	37.0	38.5	40.7	39.0 b	36.5	34.5	32.0	32.7 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	58.4 b	60.2 b	62.4	62.6	62.2	60.3 b	57.6	56.4	57.2	56.6 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	80.5 b	80.7 b	81.6	83.2	82.6	81.3 b	79.3	77.5	77.0	80.2 b
		Employment rate (Nationals aged 15-64)		49.5 b	51.6	52.8	53.7	52.2	49.6	48.6	48.6	50.0
		Employment rate (Other EU-28 aged 15-64)										
		Employment rate (Other than EU-28 aged 15-64)					33.8 u	39.2 u				
		Employment rate (Born in the same country aged 15-64)		50.6 b	52.4	53.4	54.1	52.6	49.9	49.0	49.2	50.3
		Employment rate (Born in other EU-28 aged 15-64)		46.2 bu	51.0 u	59.8	70.5	60.5	59.3	52.7 u	55.7 u	51.8 u
Employment rate (Born outside EU-28 aged 15-64)		40.9 b	43.8	45.7	48.6	46.9	44.4	43.4	41.0	46.7		
Underemployment (% of labour force aged 15-74)				1.8	1.9	2.4	2.6	1.9	1.7	2.3		
Seeking but not available (% of labour force aged 15-74)	1.3 bu	0.9 bu	1.0 u	1.0 u	0.8 u	1.0 u	1.4	1.0 u	0.8 u	1.2		
Discouraged, available but not seeking (% of labour force aged 15-74)	6.0 b	9.2 b	8.3	7.2	7.1	7.6	9.6	10.9	13.8	10.2		

Croatia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)					31.1	32.6	32.6	29.9	29.3		
		At-risk-of-poverty (% of total population)					20.6 b	20.9	20.4	19.5	19.4		
		At-risk-of-poverty threshold (PPS single person)					4567 b	4454	4417	4448	4644		
		Poverty gap (%)					27.6	27.9	31.0	28.1	27.9		
		Persistent at-risk-of-poverty (% of total population)									13.2		
		At-risk-of-poverty before social transfers excl. pensions (% of total population)						30.0 b	30.7	30.6	29.7	29.9	
		Impact of social transfers (excl. pensions) in reducing poverty (%)						31.3 b	31.9	33.3	34.3	35.1	
		Severe Material Deprivation (% of total population)						14.3	15.2	15.9	14.7	13.9	
		Share of people living in low work intensity households (% of people aged 0-59)						13.9	15.9	16.8	14.8	14.7	
		Gross Household Disposable income adjusted for consumer prices (growth %)	1.5	2.7	3.0	2.7	-2.0	-0.7	-0.1	-2.7	-3.8	0.9	
		Income quintile share ratio S80/S20						5.5 b	5.6	5.4	5.3	5.1	
		GINI coefficient						31.6	31.2	30.9	30.9	30.2	
		Early leavers from education and training (% of population aged 18-24)	5.1 bu	4.7 bu	4.5	4.4	5.2	5.2 b	5.0	5.1	4.5	2.7 bu	
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	16.7 b	14.2 b	12.9	11.6	13.4	15.7	16.2	16.6	19.6	19.3	
		Male	At-risk-of-poverty or exclusion (% of male population)						30.1	31.7	31.8	29.6	28.6
			At-risk-of-poverty (% of male population)						19.7 b	19.7	19.4	18.8	18.7
	Poverty gap (%)							28.6	28.2	32.3	28.8	28.0	
	Persistent at-risk-of-poverty (% of male population)										13.1		
	Severe Material Deprivation (% of male population)							14.5	15.4	15.7	14.9	13.6	
	Share of people living in low work intensity households (% of males aged 0-59)							13.8	16.0	16.9	14.9	14.4	
	Life expectancy at birth (years)		71.8	72.5	72.2	72.3	73.0	73.4	73.8	73.9 b	74.5 b		
	Healthy life years at birth (years) - men							57.4	59.8	61.9 b	57.6 b		
	Early leavers from education and training (% of males aged 18-24)		6.0 bu	5.3 bu	6.1	5.1 u	5.5	6.5 b	5.9	5.7	5.5 u	3.1 bu	
	NEET: Young people not in employment, education or training (% of males aged 15-24)		17.4 b	13.9 b	12.4	11.2	13.4	17.1	17.8	17.9	20.6	21.9	
	Female		At-risk-of-poverty or exclusion (% of female population)						32.1	33.4	33.3	30.2	29.9
			At-risk-of-poverty (% of female population)						21.4 b	22.1	21.3	20.3	20.1
		Poverty gap (%)						26.9	26.2	30.0	27.3	27.6	
		Persistent at-risk-of-poverty (% of female population)									13.4		
Severe Material Deprivation (% of female population)							14.2	15.0	16.1	14.5	14.3		
Share of people living in low work intensity households (% of females aged 0-59)							14.0	15.8	16.6	14.7	15.0		
Life expectancy at birth (years)		78.8	79.3	79.2	79.7	79.7	79.9	80.4	80.6 b	81.0 b			
Healthy life years at birth (years) - women							60.4	61.7	64.2 b	60.4 b			
Early leavers from education and training (% of females aged 18-24)		4.2 bu	4.1 bu	2.9 u	3.7 u	4.8 u	3.8 bu	4.0 u	4.4 u	3.4 u	2.3 bu		
NEET: Young people not in employment, education or training (% of females aged 15-24)		16.0 b	14.5 b	13.3	12.0	13.5	14.1	14.6	15.2	18.6	16.7		
Children (0-17)		At-Risk-of-poverty or exclusion of children (% of people aged 0-17)						29.4	31.1	34.8	29.3	29.0	
		At-risk-of-poverty (% of Children population)						19.6 b	21.1	23.3	21.8	21.1	
	Severe Material Deprivation (% of Children population)						14.8	14.4	18.1	13.7	13.1		
	Share of children living in low work intensity households (% of Children population)						11.5	13.8	15.7	11.4	12.9		
	Risk of poverty of children in households at work (Working Intensity > 0.2)						11.5	13.0	14.0	14.8	13.3		
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)						37.0 b	37.2	34.4	37.2	40.1		
	Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)						29.9	32.0	31.8	29.6	29.3	
At-risk-of-poverty (% of Working age population)							18.2 b	18.6	18.1	17.8	17.9		
Severe Material Deprivation (% of Working age population)							13.8	15.2	15.4	14.4	13.9		
Very low work intensity (18-59)							14.7	16.6	17.1	15.9	15.3		
In-work at-risk-of poverty rate (% of persons employed 18-64)							6.2	6.5	6.1	6.2	5.7		
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)							32.6 b	33.8	35.8	34.8	34.9		
Elderly (65+)		At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)						37.5	36.4	33.1	31.9	29.7	
	At-risk-of-poverty (% of Elderly population)						30.5 b	29.4	25.6	23.4	23.1		
	Severe Material Deprivation (% of Elderly population)						15.7	16.3	15.5	16.9	14.7		
	Relative median income of elderly (ratio with median income of people younger than 65)						0.78 b	0.82	0.84	0.88	0.88		
	Aggregate replacement ratio (ratio)						0.32 b	0.36	0.36	0.37	0.40		
Expenditure in social protection (% of GDP)	Sickness/Health care				6.4	7.2	7.0	6.8	7.2	7.6			
	Disability				3.3	3.6	3.7	3.6	3.6	3.6			
	Old age and survivors				6.9	7.6	7.7	7.7	7.9	8.1			
	Family/Children				1.4	1.5	1.5	1.5	1.5	1.5			
	Unemployment				0.2	0.4	0.5	0.5	0.5	0.5			
	Housing and Social exclusion n.e.c.				0.1	0.1	0.1	0.1	0.1	0.1			
	Total (including Admin and Other expenditures)				18.8	20.8	21.1	20.6	21.1	21.9			
	of which: Means tested benefits				1.2	1.3	1.3	1.4	1.4	1.4			

## Macro economic indicators: Italy

Italy		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Macro Economic Indicators	Annual percentage growth	Real GDP	0.9	2.0	1.5	-1.0	-5.5	1.7	0.6	-2.8	-1.7	-0.4
		Total employment	0.6	2.0	1.2	0.2	-1.7	-0.6	0.3	-0.3	-1.8	0.1
		Labour productivity	0.4	0.0	0.2	-1.3	-3.9	2.4	0.3	-2.5	0.0	-0.5
		Annual average hours worked	-0.2	0.0	0.3	-0.6	-1.7	0.1	-0.2	-2.2	-0.8	0.1
		Productivity per hour worked	0.6	0.0	-0.1	-0.7	-2.2	2.3	0.5	-0.3	0.9	-0.6
		Harmonized CPI	2.2	2.2	2.0	3.5	0.8	1.6	2.9	3.3	1.3	0.2
		Price deflator GDP	1.9	1.9	2.4	2.5	2.0	0.3	1.5	1.4	1.3	0.9
		Nominal compensation per employee	2.6	2.2	2.2	2.8	0.5	2.3	1.0	-1.1	0.9	0.8
		Real compensation per employee (GDP deflator)	0.7	0.3	-0.2	0.4	-1.4	2.0	-0.5	-2.5	-0.4	-0.1
		Real compensation per employee (private consumption deflator)	0.4	0.0	0.2	-0.7	-0.2	0.6	-1.9	-4.2	-0.4	0.5
		Nominal unit labour costs	2.2	2.2	2.0	4.2	4.6	-0.1	0.7	1.4	0.9	1.3
		Real unit labour costs	0.4	0.3	-0.4	1.6	2.6	-0.4	-0.8	0.0	-0.4	0.5
		Labour Market Indicators	Total	Total population (000)	57658	57984	58272	58740	59140	59420	59660	59898
Population aged 15-64 (000)	38313			38377	38452	38713	38912	39028	39115	39108	39172	39161
Total employment (000)	22407			22758	22894	23090	22699	22527	22598	22566	22191	22279
Employment aged 15-64 (000)	22060			22388	22517	22699	22324	22152	22215	22149	21755	21810
Employment rate (% population aged 20-64)	61.5			62.4	62.7	62.9	61.6	61.0	61.0	60.9	59.7	59.9
Employment rate (% population aged 15-64)	57.6			58.3	58.6	58.6	57.4	56.8	56.8	56.6	55.5	55.7
Employment rate (% population aged 15-24)	25.7			25.3	24.5	24.2	21.5	20.2	19.2	18.5	16.3	15.6
Employment rate (% population aged 25-54)	72.3			73.2	73.4	73.4	71.8	71.1	71.1	70.4	68.5	67.9
Employment rate (% population aged 55-64)	31.4			32.4	33.7	34.3	35.6	36.5	37.8	40.3	42.7	46.2
FTE employment rate (% population aged 20-64)	58.1 b			58.9	59.0	59.0	57.9	57.1	57.0	56.4	55.0	55.1
Self-employed (% total employment)	26.7			26.5	26.3	26.0	25.6	25.9	25.8	25.7	25.7	25.6
Part-time employment (% total employment)	12.9			13.3	13.6	14.3	14.3	15.0	15.4	17.0	17.9	18.4
Fixed-term contracts (% total employees)	12.2			13.1	13.2	13.3	12.4	12.7	13.3	13.8	13.2	13.6
Employment in Services (% total employment)	68.6			68.8	69.0	69.3	69.8	70.4	70.8	71.5	72.2	72.5
Employment in Industry (% total employment)	27.3			27.1	27.1	26.9	26.4	25.8	25.4	24.8	24.1	23.7
Employment in Agriculture (% total employment)	4.1			4.1	3.9	3.8	3.8	3.9	3.8	3.7	3.7	3.7
Activity rate (% population aged 15-64)	62.5			62.6	62.4	62.9	62.3	62.0	62.1	63.5	63.4	63.9
Activity rate (% population aged 15-24)	33.8			32.3	30.8	30.7	28.8	28.1	27.1	28.6	27.1	27.1
Activity rate (% population aged 25-54)	77.4			77.8	77.5	78.1	77.2	76.9	76.9	77.8	77.1	77.0
Activity rate (% population aged 55-64)	32.5			33.4	34.5	35.4	36.9	37.9	39.3	42.5	45.3	48.9
Total unemployment (000)	1877			1654	1481	1664	1907	2056	2061	2691	3069	3236
Unemployment rate (% labour force)	7.7			6.8	6.1	6.7	7.7	8.4	8.4	10.7	12.1	12.7
Youth unemployment rate (% labour force 15-24)	24.1			21.8	20.4	21.2	25.3	27.9	29.2	35.3	40.0	42.7
Long-term unemployment rate (% labour force)	3.8			3.4	2.9	3.1	3.5	4.1	4.3	5.7	6.9	7.8
Share of long-term unemployment (% of total unemployment)	49.8			49.6	47.5	45.7	44.6	48.5	52.0	53.2	56.9	61.4
Youth unemployment ratio (% population aged 15-24)	8.2			7.0	6.3	6.5	7.3	7.8	7.9	10.1	10.9	11.6
Employment rate for low skilled 25-64 (ISCED 0-2)	51.6 b			52.3	52.6	52.2	51.0	50.2	50.5	50.6	49.5	49.6 b
Employment rate for medium skilled 25-64 (ISCED 3-4)	73.4 b			74.3	74.4	74.3	73.1	72.5	71.9	71.0	69.7	69.8 b
Employment rate for high skilled 25-64 (ISCED 5-8)	80.5 b			80.6	80.2	80.7	79.4	78.4	79.2	78.8	78.1	77.8 b
Employment rate (Nationals aged 15-64)	57.2 b			57.9	58.1	58.1	56.8	56.2	56.3	56.3	55.2	55.4
Employment rate (Other EU-28 aged 15-64)				68.9	70.2	69.5	68.5	68.1	66.5	65.6	63.3	62.6
Employment rate (Other than EU-28 aged 15-64)				66.7	66.1	66.0	62.6	60.8	60.5	58.5	56.1	56.7
Employment rate (Born in the same country aged 15-64)	57.1 b			57.8	57.9	58.0	56.8	56.2	56.2	56.2	55.2	55.3
Employment rate (Born in other EU-28 aged 15-64)				63.1	65.3	64.5	63.9	63.8	62.7	61.8	60.1	60.1
Employment rate (Born outside EU-28 aged 15-64)				65.9	66.1	65.3	62.1	60.8	60.8	59.2	57.2	57.6
Underemployment (% of labour force aged 15-74)						1.6	1.6	1.7	1.8	2.3	2.5	2.9
Seeking but not available (% of labour force aged 15-74)	0.4 b	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4		
Discouraged, available but not seeking (% of labour force aged 15-74)	8.9 b	9.0	10.3	10.5	10.5	11.1	11.6	11.7	12.1	13.2		



Italy		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	27951	28143	28280	28500	28686	28810	28914	29038	29224	29353
		Population aged 15-64 (000)	19056	19119	19150	19264	19345	19382	19403	19402	19456	19469
		Total employment (000)	13601	13755	13812	13820	13541	13375	13340	13194	12914	12945
		Employment aged 15-64 (000)	13324	13463	13515	13513	13252	13088	13050	12873	12584	12590
		Employment rate (% population aged 20-64)	74.8	75.4	75.7	75.3	73.7	72.7	72.5	71.5	69.7	69.7
		Employment rate (% population aged 15-64)	69.9	70.4	70.6	70.1	68.5	67.5	67.3	66.3	64.7	64.7
		Employment rate (% population aged 15-24)	30.4	30.4	29.4	29.0	25.9	24.0	22.8	21.8	18.7	18.2
		Employment rate (% population aged 25-54)	86.7	87.2	87.4	86.8	84.7	83.6	83.4	81.7	79.2	78.2
		Employment rate (% population aged 55-64)	42.7	43.7	45.0	45.3	46.6	47.6	48.2	50.4	52.8	56.5
		FTE employment rate (% population aged 20-64)	73.7 b	74.3	74.4	74.0	72.5	71.4	70.9	69.6	67.6	67.5
		Self-employed (% total employment)	30.7	30.5	30.3	30.2	30.1	30.7	30.7	30.6	30.5	30.3
		Part-time employment (% total employment)	4.6	4.7	4.9	5.3	5.1	5.5	5.9	7.1	7.9	8.4
		Fixed-term contracts (% total employees)	10.5	11.1	11.1	11.5	10.8	11.3	12.2	12.9	12.4	13.1
		Employment in Services (% total employment)	59.8	59.8	59.8	59.7	59.8	60.1	60.8	61.4	62.3	62.4
		Employment in Industry (% total employment)	35.5	35.5	35.7	35.8	35.6	35.2	34.6	34.1	33.1	32.9
		Employment in Agriculture (% total employment)	4.7	4.7	4.5	4.5	4.6	4.7	4.6	4.6	4.6	4.7
		Activity rate (% population aged 15-64)	74.6	74.5	74.3	74.3	73.5	73.1	72.8	73.7	73.3	73.6
		Activity rate (% population aged 15-24)	38.8	37.6	36.0	35.7	33.8	32.8	31.2	32.9	30.7	31.0
		Activity rate (% population aged 25-54)	91.3	91.3	91.0	91.0	90.0	89.4	89.2	89.4	88.3	87.7
		Activity rate (% population aged 55-64)	44.3	45.0	46.2	46.8	48.4	49.5	50.5	53.6	56.6	60.2
		Total unemployment (000)	894	788	708	804	976	1084	1084	1434	1674	1742
		Unemployment rate (% labour force)	6.2	5.4	4.9	5.5	6.7	7.5	7.5	9.8	11.5	11.9
		Youth unemployment rate (% labour force 15-24)	21.6	19.2	18.4	18.8	23.2	26.9	27.1	33.7	39.0	41.3
		Long-term unemployment rate (% labour force)	2.9	2.6	2.2	2.4	2.8	3.5	3.9	5.1	6.5	7.1
		Share of long-term unemployment (% of total unemployment)	47.7	47.9	45.6	43.9	42.2	47.3	51.5	51.8	56.9	60.3
		Youth unemployment ratio (% population aged 15-24)	8.4	7.2	6.6	6.7	7.8	8.8	8.5	11.1	12.0	12.8
		Employment rate for low skilled 25-64 (ISCED 0-2)	70.7 b	71.3	71.4	70.5	69.0	67.8	67.7	66.5	64.4	64.1 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	83.2 b	83.9	84.2	83.9	82.4	81.8	81.2	80.3	79.1	79.1 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	86.3 b	86.2	86.5	86.6	85.0	84.3	85.0	84.2	83.4	83.2 b
		Employment rate (Nationals aged 15-64)	69.3 b	69.7	69.8	69.4	67.8	66.8	66.6	65.9	64.3	64.3
		Employment rate (Other EU-28 aged 15-64)		87.5	85.9	83.1	81.2	79.5	77.0	74.1	71.4	71.0
		Employment rate (Other than EU-28 aged 15-64)		83.7	83.0	81.7	76.5	74.9	75.0	70.6	66.9	67.0
		Employment rate (Born in the same country aged 15-64)	69.2 b	69.5	69.6	69.2	67.6	66.6	66.3	65.6	64.2	64.1
Employment rate (Born in other EU-28 aged 15-64)		81.0	81.9	80.5	78.2	77.1	75.6	72.5	69.2	69.3		
Employment rate (Born outside EU-28 aged 15-64)		82.5	82.6	81.1	76.9	75.6	75.6	72.2	68.4	68.5		
Underemployment (% of labour force aged 15-74)				0.9	0.9	0.9	1.1	1.4	1.6	2.0		
Seeking but not available (% of labour force aged 15-74)	0.2 b	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.3		
Discouraged, available but not seeking (% of labour force aged 15-74)	4.9 b	5.0	5.9	6.2	6.6	7.3	7.9	7.6	8.3	9.2		

Italy		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	29708	29842	29992	30239	30454	30609	30746	30860	31001	31095
		Population aged 15-64 (000)	19257	19258	19302	19449	19567	19647	19711	19706	19716	19692
		Total employment (000)	8806	9002	9083	9270	9158	9152	9258	9372	9276	9334
		Employment aged 15-64 (000)	8737	8926	9002	9186	9072	9064	9165	9276	9171	9220
		Employment rate (% population aged 20-64)	48.5	49.6	49.9	50.6	49.7	49.5	49.9	50.5	49.9	50.3
		Employment rate (% population aged 15-64)	45.4	46.3	46.6	47.2	46.4	46.1	46.5	47.1	46.5	46.8
		Employment rate (% population aged 15-24)	20.8	20.0	19.5	19.2	16.9	16.3	15.5	15.0	13.7	12.8
		Employment rate (% population aged 25-54)	58.0	59.3	59.6	60.2	59.1	58.8	59.0	59.2	58.0	57.6
		Employment rate (% population aged 55-64)	20.8	21.8	23.0	23.9	25.3	26.1	28.1	30.8	33.2	36.6
		FTE employment rate (% population aged 20-64)	43.3 b	44.4	44.4	44.9	44.1	43.7	44.0	44.1	43.2	43.4
		Self-employed (% total employment)	20.5	20.5	20.2	19.7	19.0	19.0	18.9	18.9	18.9	19.1
		Part-time employment (% total employment)	25.6	26.4	26.8	27.8	27.9	28.9	29.2	30.9	31.8	32.2
		Fixed-term contracts (% total employees)	14.6	15.7	15.8	15.6	14.6	14.4	14.6	14.8	14.2	14.1
		Employment in Services (% total employment)	81.7	82.1	82.5	83.1	84.2	84.8	84.8	85.2	85.6	86.0
		Employment in Industry (% total employment)	15.2	14.8	14.6	14.1	13.2	12.5	12.6	12.2	12.0	11.6
		Employment in Agriculture (% total employment)	3.1	3.1	2.9	2.9	2.7	2.7	2.7	2.5	2.4	2.4
		Activity rate (% population aged 15-64)	50.5	50.8	50.6	51.6	51.1	51.1	51.4	53.4	53.6	54.4
		Activity rate (% population aged 15-24)	28.7	26.9	25.4	25.5	23.7	23.1	22.8	24.0	23.4	23.1
		Activity rate (% population aged 25-54)	63.7	64.4	64.1	65.3	64.6	64.5	64.7	66.5	66.1	66.4
		Activity rate (% population aged 55-64)	21.5	22.5	23.4	24.6	26.0	26.9	28.8	32.2	34.7	38.3
		Total unemployment (000)	983	866	773	861	930	972	977	1257	1394	1494
		Unemployment rate (% labour force)	10.0	8.8	7.8	8.5	9.2	9.6	9.5	11.8	13.1	13.8
		Youth unemployment rate (% labour force 15-24)	27.6	25.4	23.3	24.7	28.5	29.4	32.1	37.6	41.5	44.7
		Long-term unemployment rate (% labour force)	5.2	4.5	3.9	4.0	4.3	4.8	5.0	6.5	7.5	8.7
		Share of long-term unemployment (% of total unemployment)	51.6	51.1	49.2	47.5	47.1	49.9	52.5	54.7	57.0	62.7
		Youth unemployment ratio (% population aged 15-24)	7.9	6.8	5.9	6.3	6.8	6.8	7.3	9.0	9.7	10.3
		Employment rate for low skilled 25-64 (ISCED 0-2)	32.6 b	33.3	33.5	33.5	32.8	32.4	32.9	34.0	34.0	34.1 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	63.6 b	64.7	64.5	64.6	63.6	63.2	62.7	61.9	60.4	60.6 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	75.3 b	75.8	75.0	76.0	74.8	73.6	74.5	74.7	73.9	73.7 b
		Employment rate (Nationals aged 15-64)	45.1 b	46.1	46.3	46.8	45.9	45.7	46.1	46.6	46.1	46.4
		Employment rate (Other EU-28 aged 15-64)		57.1	59.9	59.8	59.5	59.5	59.0	60.0	57.8	56.9
		Employment rate (Other than EU-28 aged 15-64)		48.5	48.7	50.1	48.6	47.2	47.0	47.0	45.8	46.7
		Employment rate (Born in the same country aged 15-64)	45.1 b	46.0	46.2	46.8	45.9	45.7	46.1	46.7	46.1	46.4
Employment rate (Born in other EU-28 aged 15-64)		51.5	54.2	53.7	54.4	54.4	53.8	54.9	54.1	53.9		
Employment rate (Born outside EU-28 aged 15-64)		49.5	50.1	50.2	48.1	47.3	47.5	47.4	46.9	47.4		
Underemployment (% of labour force aged 15-74)				2.6	2.8	2.8	2.8	3.5	3.6	4.2		
Seeking but not available (% of labour force aged 15-74)	0.7 b	0.9	0.9	0.9	0.7	0.7	0.6	0.6	0.6	0.5		
Discouraged, available but not seeking (% of labour force aged 15-74)	14.7 b	14.8	16.8	16.7	15.9	16.6	16.7	17.2	17.4	18.6		

Italy		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	25.6	25.9	26.0	25.5	24.9	25.0	28.1	29.9	28.5	28.1 p	
		At-risk-of-poverty (% of total population)	19.2	19.3	19.5	18.9	18.4	18.7	19.8	19.5	19.3	19.6 p	
		At-risk-of-poverty threshold (PPS single person)	8182	8344	8698	9158	9140	9135	9466	9299	9134	9201 p	
		Poverty gap (%)	24.0	24.1	22.7	23.2	23.1	24.8	26.6	26.0	28.2	28.1 p	
		Persistent at-risk-of-poverty (% of total population)			14.6	12.7	13.0	11.6	11.8	13.1	13.2		
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	23.6	23.7	23.7	23.5	23.3	23.7	24.6	24.5	24.6	25.0 p	
		Impact of social transfers (excl. pensions) in reducing poverty (%)	18.6	18.6	17.7	19.6	21.0	21.1	19.5	20.4	21.6	21.6 p	
		Severe Material Deprivation (% of total population)	6.8	6.4	7.0	7.5	7.3	7.4	11.1	14.5	12.3	11.5 p	
		Share of people living in low work intensity households (% of people aged 0-59)	11.0	11.3	10.2	10.4	9.2	10.6	10.5	10.6	11.3	12.0 p	
		Gross Household Disposable income adjusted for consumer prices (growth %)	0.7	1.1	1.4	-1.2	-2.0	-1.5	-0.3	-5.3	-0.6	-0.3	
		Income quintile share ratio S80/S20	5.6	5.4	5.4	5.2	5.3	5.4	5.7	5.6	5.8	5.9 p	
		GINI coefficient	32.7	32.1	32.0	31.2	31.8	31.7	32.5	32.4	32.8	32.7 p	
		Early leavers from education and training (% of population aged 18-24)	22.1	20.4 b	19.5	19.6	19.1	18.6	17.8	17.3	16.8	15.0 b	
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	17.1	16.8 b	16.1	16.6	17.6	19.0	19.7	21.0	22.2	22.1	
		Male	At-risk-of-poverty or exclusion (% of male population)	23.5	23.8	23.8	23.5	22.9	23.1	26.3	27.8	27.1	26.9 p
			At-risk-of-poverty (% of male population)	17.6	17.7	18.1	17.4	16.9	17.3	18.4	18.1	18.3	18.5 p
	Poverty gap (%)		24.8	24.7	23.3	23.0	22.8	25.2	28.1	27.3	29.3	29.2 p	
	Persistent at-risk-of-poverty (% of male population)				13.4	11.5	11.8	9.9	10.9	11.4	11.7		
	Severe Material Deprivation (% of male population)		6.6	6.1	6.7	7.2	7.0	7.2	10.7	13.9	12.3	11.6 p	
	Share of people living in low work intensity households (% of males aged 0-59)		9.5	9.8	8.8	8.8	7.7	9.1	9.2	9.2	10.3	11.5 p	
	Life expectancy at birth (years)		78.0	78.5	78.8 b	78.9	79.4		80.1	79.8	80.3		
	Healthy life years at birth (years) - men		66.6	65.2 bd	63.4 b	62.9	63.4		63.5	62.1	61.8		
	Early leavers from education and training (% of males aged 18-24)		25.8	23.8 b	22.6	22.4	21.8	21.8	20.6	20.2	20.0	17.7 b	
	NEET: Young people not in employment, education or training (% of males aged 15-24)		15.4	15.4 b	15.2	15.2	17.0	18.9	19.4	21.1	22.8	22.7	
	Female		At-risk-of-poverty or exclusion (% of female population)	27.6	27.9	28.0	27.4	26.7	26.8	29.8	31.9	29.8	29.3 p
			At-risk-of-poverty (% of female population)	20.8	20.9	20.9	20.4	19.9	20.0	21.1	20.8	20.3	20.6 p
		Poverty gap (%)	23.4	23.6	22.2	23.2	23.3	24.6	25.8	24.9	27.6	27.2 p	
		Persistent at-risk-of-poverty (% of female population)			15.6	13.7	14.1	13.3	12.7	14.8	14.6		
Severe Material Deprivation (% of female population)		7.0	6.8	7.4	7.8	7.6	7.5	11.4	15.0	12.4	11.4 p		
Share of people living in low work intensity households (% of females aged 0-59)		12.5	12.9	11.7	12.0	10.7	12.1	11.8	12.0	12.3	12.6 p		
Life expectancy at birth (years)		83.6	84.2	84.2 b	84.2	84.6		85.3	84.8	85.2			
Healthy life years at birth (years) - women		67.8	64.7 bd	62.6 b	61.8	62.6		62.7	61.5	60.9			
Early leavers from education and training (% of females aged 18-24)		18.4	17.0 b	16.4	16.7	16.2	15.3	14.9	14.3	13.6	12.2 b		
NEET: Young people not in employment, education or training (% of females aged 15-24)		18.9	18.3 b	17.2	18.0	18.1	19.0	19.9	20.8	21.4	21.4		
Children (0-17)		At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	28.7	28.4	28.6	28.4	28.7	29.5	31.5	34.1	32.0	32.0 p	
		At-risk-of-poverty (% of Children population)	24.7	24.4	24.6	24.2	24.1	25.2	25.9	26.2	25.2	25.2 p	
	Severe Material Deprivation (% of Children population)	8.2	7.2	7.8	8.6	8.5	8.6	12.1	16.8	13.5	13.6 p		
	Share of children living in low work intensity households (% of Children population)	7.8	7.4	6.7	7.0	6.1	7.5	7.5	7.1	8.0	9.3 p		
	Risk of poverty of children in households at work (Working Intensity > 0.2)	20.3	20.3	20.5	20.0	20.9	20.6	21.6	22.1	20.6	19.5 p		
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	21.6	23.3	20.9	21.9	24.2	23.2	21.0	22.0	25.4	24.8 p		
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	24.8	25.5	25.3	25.0	24.4	25.3	28.5	30.4	29.7	29.6 p		
	At-risk-of-poverty (% of Working age population)	16.6	17.1	17.2	16.8	16.5	17.5	19.0	18.7	19.1	19.7 p		
	Severe Material Deprivation (% of Working age population)	6.8	6.4	7.0	7.4	7.4	7.4	10.9	14.4	12.7	11.7 p		
	Very low work intensity (18-59)	12.0	12.6	11.3	11.5	10.2	11.5	11.5	11.7	12.4	12.9 p		
	In-work at-risk-of poverty rate (% of persons employed 18-64)	8.8	9.0	9.4	9.1	10.2	9.7	11.1	11.1	11.2	11.0 p		
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	20.6	20.5	20.0	21.9	23.3	22.6	21.2	22.4	22.7	23.1 p		
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	25.5	24.8	25.5	24.4	22.9	20.4	24.0	24.7	22.0	20.8 p		
	At-risk-of-poverty (% of Elderly population)	22.7	21.7	22.2	20.9	19.6	16.7	17.0	16.1	15.0	14.7 p		
	Severe Material Deprivation (% of Elderly population)	5.6	6.1	6.5	6.7	5.9	6.3	10.8	12.7	10.3	9.0 p		
	Relative median income of elderly (ratio with median income of people younger than 65)	0.85	0.87	0.86	0.88	0.89	0.92	0.92	0.96	0.97	0.98 p		
	Aggregate replacement ratio (ratio)	0.58	0.58	0.49	0.51	0.51	0.53	0.55	0.59	0.62	0.64 p		
Expenditure in social protection (% of GDP)	Sickness/Health care	6.8	6.9	6.6	6.9	7.3	7.2	7.0	7.0 p	7.0 p			
	Disability	1.4	1.4	1.4	1.5	1.7	1.6	1.6	1.6 p	1.6 p			
	Old age and survivors	15.5	15.6	15.0	15.5	16.5	16.8	16.8	17.3 p	17.7 p			
	Family/Children	1.0	1.0	1.1	1.1	1.3	1.2	1.2	1.2 p	1.2 p			
	Unemployment	0.5	0.5	1.1	1.2	1.5	1.5	1.5	1.6 p	1.8 p			
	Housing and Social exclusion n.e.c.	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2 p	0.2 p			
	Total (including Admin and Other expenditures)	26.2	26.5	26.6	27.7	29.8	29.8	29.6	30.2 p	30.7 p			
of which: Means tested benefits	1.4	1.5	1.5	1.6	1.8	1.7	1.6	1.6 p	1.7 p				

## Macro economic indicators: Cyprus

Cyprus		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Macro Economic Indicators	Annual percentage growth	Real GDP	3.9	4.5	4.9	3.7	-2.0	1.4	0.4	-2.4	-5.9	-2.5 p
		Total employment	3.5	1.8	3.4	2.0	-0.4	-0.2	0.5	-4.2	-5.2	-1.9 p
		Labour productivity	0.4	2.6	1.5	1.6	-1.6	1.6	0.0	1.8	-0.7	-0.6 p
		Annual average hours worked	-1.6	0.8	-0.5	-0.3	-0.5	0.4	0.1	0.7	-0.6	-0.9 p
		Productivity per hour worked	1.9	1.9	2.0	1.9	-1.1	1.2	-0.1	1.1	-0.1	0.4 p
		Harmonized CPI	2.0	2.2	2.2	4.4	0.2	2.6	3.5	3.1	0.4	-0.3
		Price deflator GDP	3.0	3.1	4.3	4.5	0.2	2.0	1.8	2.1	-1.4	-1.2 p
		Nominal compensation per employee	2.0	3.2	2.8	3.4	2.6	16.6 b	2.6 b	0.8	-4.2	-4.0 p
		Real compensation per employee (GDP deflator)	-1.0	0.1	-1.4	-1.1	2.4	14.2 b	0.7 b	-1.3	-2.9	-2.8 p
		Real compensation per employee (private consumption deflator)	-0.1	0.9	0.6	-1.0	2.4	13.6 b	-0.9 b	-2.3	-4.6	-3.7 p
		Nominal unit labour costs	1.6	0.5	1.3	1.7	4.3	14.8 b	2.6	-1.0	-3.5	-3.4 p
		Real unit labour costs	-1.5	-2.4	-2.9	-2.6	4.0	12.5 b	0.8 b	-3.0	-2.2	-2.2 p
		Labour Market Indicators	Total	Total population (000)	727	737	752	758	775 b	796	819	831
Population aged 15-64 (000)	494			500	518	524	538 b	555	571	580	578	572
Total employment (000)	348			357	378	383	383 b	395	398	385	365	363
Employment aged 15-64 (000)	338			348	368	371	371 b	382	386	375	357	355
Employment rate (% population aged 20-64)	74.4			75.8	76.8	76.5	75.3 b	75.0	73.4	70.2	67.2	67.6
Employment rate (% population aged 15-64)	68.5			69.6	71.0	70.9	69.0 b	68.9	67.6	64.6	61.7	62.1
Employment rate (% population aged 15-24)	36.7			37.4	37.4	38.0	34.8 b	33.8	30.1	28.1	23.5	25.8
Employment rate (% population aged 25-54)	81.8			82.6	83.8	83.7	82.3 b	82.2	81.3	78.4	75.5	76.2
Employment rate (% population aged 55-64)	50.6			53.6	55.9	54.8	55.7 b	56.3	54.8	50.7	49.6	46.9
FTE employment rate (% population aged 20-64)	72.6 b			74.3	75.2	74.9	73.3 b	72.4	70.6	67.1	63.2	63.1
Self-employed (% total employment)	22.1			20.6	19.7	17.8	17.8 b	17.3	17.3	16.5	16.6	16.9 p
Part-time employment (% total employment)	8.9			7.7	7.3	7.8	8.6 b	9.5	10.2	10.7	12.7	14.1
Fixed-term contracts (% total employees)	14.0			13.1	13.2	13.9	13.7 b	14.0	14.1	15.0	17.4	18.9
Employment in Services (% total employment)	74.0			74.7	74.4	74.8	74.9	75.9	76.9	78.9	80.1	81.0 p
Employment in Industry (% total employment)	21.0			21.1	21.1	20.9	20.3	19.5	18.6	17.5	16.0	15.2 p
Employment in Agriculture (% total employment)	5.0			4.2	4.5	4.3	4.8	4.5	4.5	3.6	3.9	3.8 p
Activity rate (% population aged 15-64)	72.4			73.0	73.9	73.6	73.0 b	73.6	73.5	73.5	73.6	74.3
Activity rate (% population aged 15-24)	42.6			41.5	41.7	41.7	40.4 b	40.6	38.8	38.9	38.4	40.3
Activity rate (% population aged 25-54)	85.7			86.2	86.7	86.5	86.3 b	86.9	87.3	87.6	87.7	88.4
Activity rate (% population aged 55-64)	52.4			55.5	57.7	56.6	58.2 b	59.1	57.6	56.1	56.6	56.0
Total unemployment (000)	19			17	15	15	22	26	34	52	69	70
Unemployment rate (% labour force)	5.3			4.6	3.9	3.7	5.4	6.3	7.9	11.9	15.9	16.1
Youth unemployment rate (% labour force 15-24)	13.9			10.0	10.2	9.0	13.8	16.6	22.4	27.7	38.9	36.0
Long-term unemployment rate (% labour force)	1.3			0.9	0.7	0.5	0.6	1.3	1.6	3.6	6.1	7.7
Share of long-term unemployment (% of total unemployment)	23.5			19.3	18.6	13.6	10.4 b	20.4	20.8	30.1	38.3	47.7
Youth unemployment ratio (% population aged 15-24)	5.9			4.1	4.2	3.8	5.6 b	6.7	8.7	10.8	14.9	14.5
Employment rate for low skilled 25-64 (ISCED 0-2)	63.8 b			65.6	66.1	63.6	64.3 b	66.1	64.8	57.9	55.5	54.5 b
Employment rate for medium skilled 25-64 (ISCED 3-4)	78.3 b			78.4	79.3	79.5	77.8 b	77.1	75.9	73.3	69.7	69.6 b
Employment rate for high skilled 25-64 (ISCED 5-8)	86.6 b			87.0	87.6	87.6	86.2 b	84.7	83.3	80.8	79.0	79.7 b
Employment rate (Nationals aged 15-64)	68.0 b			69.3	70.9	70.5	68.8 b	68.1	66.5	63.3	60.7	60.8
Employment rate (Other EU-28 aged 15-64)				66.1	66.4	73.0	71.2 b	72.1	70.8	67.0	61.2	63.0
Employment rate (Other than EU-28 aged 15-64)				78.2	76.7	72.4	67.8 b	71.8	73.4	73.4	73.1	75.3
Employment rate (Born in the same country aged 15-64)	68.1 b			69.3	70.8	70.4	68.6 b	68.0	66.6	63.2	60.3	60.4
Employment rate (Born in other EU-28 aged 15-64)				65.0	67.1	71.7	69.9 b	72.3	71.3	68.0	64.2	65.6
Employment rate (Born outside EU-28 aged 15-64)				75.1	75.2	73.4	70.6 b	70.6	69.7	69.3	67.8	70.7
Underemployment (% of labour force aged 15-74)						1.9	2.3 b	2.7	3.8	4.7	6.2	7.8
Seeking but not available (% of labour force aged 15-74)	0.3 b u	0.5	0.3 u	0.5	0.6 b	0.8	0.4	0.8	0.8	0.8		
Discouraged, available but not seeking (% of labour force aged 15-74)	2.4 b	1.8	1.5	1.2	1.4 b	2.3	3.4	3.5	4.6	4.6		

Cyprus		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	354	360	367	371	374 b	384	393	399	397	393
		Population aged 15-64 (000)	240	244	252	256	257 b	265	272	276	275	272
		Total employment (000)	197	200	210	212	205 b	209	209	202	190	185
		Employment aged 15-64 (000)	190	194	202	203	196 b	199	200	194	184	180
		Employment rate (% population aged 20-64)	85.5	86.2	86.4	85.2	82.8 b	81.7	79.6	76.1	72.6	71.6
		Employment rate (% population aged 15-64)	79.2	79.4	80.0	79.2	76.3 b	75.3	73.7	70.4	67.0	66.0
		Employment rate (% population aged 15-24)	40.5	41.0	39.1	39.4	36.4 b	34.4	31.8	30.5	24.0	25.8
		Employment rate (% population aged 25-54)	91.8	92.0	92.4	91.4	89.2 b	88.3	86.4	83.3	80.4	79.6
		Employment rate (% population aged 55-64)	70.8	71.6	72.5	70.9	71.2 b	70.5	69.2	63.5	61.1	57.1
		FTE employment rate (% population aged 20-64)	86.1 b	86.7	86.5	85.2	82.5 b	80.5	78.0	74.1	70.0	68.3
		Self-employed (% total employment)	27.3	25.6	25.3	22.9	22.3 b	22.0	22.4	21.5	21.9	21.9
		Part-time employment (% total employment)	5.0	4.3	4.4	4.8	5.3 b	6.8	7.7	8.0	9.5	11.2
		Fixed-term contracts (% total employees)	9.0	7.9	7.6	8.2	7.6 b	7.1	7.1	9.0	10.3	13.0
		Employment in Services (% total employment)	63.4	64.2	62.8	63.4	63.8 b	65.1	65.1	68.1	70.0	70.6
		Employment in Industry (% total employment)	30.5	30.5	31.0	31.0	30.4 b	29.0	28.9	27.0	24.5	23.7
		Employment in Agriculture (% total employment)	6.1	5.3	6.2	5.6	5.8 b	5.9	6.0	4.9	5.5	5.8
		Activity rate (% population aged 15-64)	82.9	82.7	82.9	82.0	80.7 b	80.4	80.4	80.7	80.6	80.0
		Activity rate (% population aged 15-24)	46.6	45.0	43.9	43.1	42.1 b	40.9	41.4	42.8	40.8	41.2
		Activity rate (% population aged 25-54)	95.3	95.3	95.0	94.0	93.5 b	93.4	93.1	93.8	94.0	93.5
		Activity rate (% population aged 55-64)	73.2	74.1	74.8	73.0	74.4 b	74.3	72.9	71.2	71.2	69.9
		Total unemployment (000)	9	8	7	7	11	14	18	29	38	38
	Unemployment rate (% labour force)	4.4	3.9	3.4	3.2	5.3	6.2	8.1	12.6	16.6	17.1	
	Youth unemployment rate (% labour force 15-24)	13.2	8.9	11.0	8.7	13.6	15.9	23.3	28.8	41.1	37.4	
	Long-term unemployment rate (% labour force)	0.8	0.7	0.8	0.5	0.6 b	1.3	1.7	3.9	6.5	8.3	
	Share of long-term unemployment (% of total unemployment)	19.3	17.0	23.0	16.1	10.4 b	20.9	21.4	31.4	39.1	48.6	
	Youth unemployment ratio (% population aged 15-24)	6.1	4.0	4.8	3.7	5.7 b	6.5	9.6	12.3	16.8	15.4	
	Employment rate for low skilled 25-64 (ISCED 0-2)	82.8 b	83.1	84.7	80.2	78.4 b	76.2	74.4	67.2	62.2	59.9 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	89.8 b	89.3	88.4	88.8	86.9 b	86.2	84.4	79.5	77.7	75.1 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	90.7 b	91.5	92.0	90.9	89.2 b	88.8	87.0	85.5	82.9	83.8 b	
	Employment rate (Nationals aged 15-64)	79.7 b	80.1	80.6	80.6	78.0 b	76.2	74.2	70.4	66.9	65.7	
	Employment rate (Other EU-28 aged 15-64)		75.4	80.5	80.9	78.4 b	79.9	77.0	72.9	67.2	67.5	
	Employment rate (Other than EU-28 aged 15-64)		72.7	67.8	58.5	48.3 b	53.2	58.4	63.0	68.7	68.3	
	Employment rate (Born in the same country aged 15-64)	79.7 b	80.2	80.5	80.3	78.0 b	76.0	74.0	70.2	66.4	65.3	
	Employment rate (Born in other EU-28 aged 15-64)		75.3	80.6	82.1	76.8 b	81.6	80.5	77.1	73.9	72.8	
	Employment rate (Born outside EU-28 aged 15-64)		74.4	74.6	68.3	61.7 b	62.7	62.6	62.2	63.6	65.1	
	Underemployment (% of labour force aged 15-74)				1.2	1.7 b	2.0	3.2	3.9	5.0	6.5	
	Seeking but not available (% of labour force aged 15-74)		0.4 u	0.2 u	0.3 u	0.5 bu	0.6 u	0.4 u	0.8	0.7	0.8	
	Discouraged, available but not seeking (% of labour force aged 15-74)	1.2 b	0.8	0.7 u	0.7 u	1.0 b	2.1	2.7	2.6	3.3	3.4	



Cyprus		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	373	377	386	387	401 b	413	425	432	431	425
		Population aged 15-64 (000)	254	257	266	268	281 b	290	299	304	303	300
		Total employment (000)	151	157	169	171	178 b	187	189	184	175	178
		Employment aged 15-64 (000)	148	155	166	168	175 b	183	186	181	173	176
		Employment rate (% population aged 20-64)	63.8	65.9	67.7	68.2	68.3 b	68.8	67.7	64.8	62.2	63.9
		Employment rate (% population aged 15-64)	58.4	60.3	62.4	62.9	62.3 b	63.0	62.1	59.4	56.9	58.6
		Employment rate (% population aged 15-24)	33.2	34.1	36.0	36.7	33.3 b	33.3	28.7	26.1	23.0	25.9
		Employment rate (% population aged 25-54)	72.2	73.6	75.5	76.2	76.2 b	76.7	76.7	74.0	71.1	73.1
		Employment rate (% population aged 55-64)	31.5	36.6	40.3	39.4	40.6 b	42.5	40.8	38.2	38.3	36.9
		FTE employment rate (% population aged 20-64)	59.9 b	62.5	64.6	65.0	64.8 b	65.1	63.9	60.7	57.1	58.5
		Self-employed (% total employment)	15.3	14.2	12.8	11.5	12.6 b	12.1	11.6	10.9	10.9	11.8
		Part-time employment (% total employment)	14.0	12.1	10.9	11.4	12.4 b	12.7	12.9	13.7	16.1	17.2
		Fixed-term contracts (% total employees)	19.5	19.0	19.2	19.9	20.0 b	20.7	20.9	20.9	24.2	24.3
		Employment in Services (% total employment)	87.4	87.7	88.6	88.6	87.4 b	88.0	89.6	90.4	91.0	91.6
		Employment in Industry (% total employment)	9.0	9.4	8.9	8.7	8.9 b	9.0	7.6	7.3	6.8	6.6
		Employment in Agriculture (% total employment)	3.6	2.9	2.5	2.7	3.6 b	3.0	2.8	2.3	2.2	1.8
		Activity rate (% population aged 15-64)	62.5	63.8	65.4	65.7	66.0 b	67.4	67.4	66.9	67.2	69.1
		Activity rate (% population aged 15-24)	39.0	38.3	39.7	40.5	38.8 b	40.2	36.6	35.5	36.3	39.5
		Activity rate (% population aged 25-54)	76.5	77.4	78.7	79.1	79.8 b	81.0	82.0	82.0	82.0	83.9
		Activity rate (% population aged 55-64)	32.8	37.8	41.6	41.0	42.3 b	44.3	42.7	41.3	42.3	42.5
		Total unemployment (000)	10	9	8	8	10	13	16	23	31	32
		Unemployment rate (% labour force)	6.5	5.4	4.6	4.3	5.5	6.4	7.7	11.1	15.2	15.1
		Youth unemployment rate (% labour force 15-24)	14.7	11.1	9.4	9.4	14.0	17.2	21.5	26.7	36.8	34.6
		Long-term unemployment rate (% labour force)	1.8	1.1	0.7	0.5	0.6 b	1.3	1.5	3.1	5.6	7.0
		Share of long-term unemployment (% of total unemployment)	27.0	21.3	14.6	11.3	10.4 b	19.7	20.0	28.4	37.2	46.6
		Youth unemployment ratio (% population aged 15-24)	5.7	4.3	3.7	3.8	5.4 b	6.9	7.9	9.5	13.3	13.7
		Employment rate for low skilled 25-64 (ISCED 0-2)	47.9 b	50.3	49.6	49.1	52.4 b	57.4	56.0	50.2	49.7	49.5 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	66.7 b	67.4	69.9	69.2	68.6 b	68.1	67.1	66.8	61.4	63.7 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	82.4 b	82.6	83.4	84.5	83.6 b	81.1	80.5	76.9	75.7	76.5 b
		Employment rate (Nationals aged 15-64)	56.6 b	58.6	61.2	60.4	60.1 b	60.2	59.1	56.5	54.5	56.1
		Employment rate (Other EU-28 aged 15-64)		57.6	54.0	65.6	64.2 b	64.7	64.5	61.2	55.8	58.7
		Employment rate (Other than EU-28 aged 15-64)		80.7	81.2	81.1	79.2 b	81.3	80.2	77.4	74.6	78.1
		Employment rate (Born in the same country aged 15-64)	56.5 b	58.2	60.7	60.3	59.4 b	60.0	59.3	56.1	54.1	55.4
		Employment rate (Born in other EU-28 aged 15-64)		57.8	57.5	63.2	64.0 b	64.6	63.2	60.0	56.5	60.1
		Employment rate (Born outside EU-28 aged 15-64)		75.5	75.5	77.0	76.4 b	75.3	73.8	72.9	69.8	73.5
		Underemployment (% of labour force aged 15-74)				2.7	3.1 b	3.5	4.5	5.5	7.5	9.1
		Seeking but not available (% of labour force aged 15-74)	0.4 bu	0.6 u	0.4 u	0.6 u	0.7 bu	1.0	0.5 u	0.7 u	0.8	0.8
		Discouraged, available but not seeking (% of labour force aged 15-74)	4.0 b	3.0	2.4	1.8	2.0 b	2.6	4.2	4.5	6.0	5.9

Cyprus		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	25.3	25.4	25.2	23.3 b	23.5	24.6	24.6	27.1	27.8	27.4
		At-risk-of-poverty (% of total population)	16.1	15.6	15.5	15.9 b	15.8	15.6	14.8	14.7	15.3	14.4
		At-risk-of-poverty threshold (PPS single person)	8866 b	9817	10951	10945 b	11256	10816	11497	11444	10299	9457
		Poverty gap (%)	19.4	18.9	19.7	15.3 b	17.2	18.0	19.0	19.0	17.7	18.5
		Persistent at-risk-of-poverty (% of total population)				9.9	10.1	9.2	8.6	8.3	10.0	7.3
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	21.7	21.6	21.0	22.9 b	23.6	23.5	23.5	23.5	24.3	24.6
		Impact of social transfers (excl. pensions) in reducing poverty (%)	25.8	27.8	26.2	30.6 b	33.1	33.6	37.0	37.5	37.0	41.5
		Severe Material Deprivation (% of total population)	12.2	12.6	13.3	9.1 b	9.5	11.2	11.7	15.0	16.1	15.3
		Share of people living in low work intensity households (% of people aged 0-59)	4.4	3.8	3.7	4.5 b	4.0	4.9	4.9	6.5	7.9	9.7
		Gross Household Disposable income adjusted for consumer prices (growth %)	4.4	5.8	5.7	7.2	-3.3	0.4	-1.4	-5.3	-0.2	-12.7
		Income quintile share ratio S80/S20	4.3	4.3	4.4	4.3 b	4.4	4.5	4.3	4.7	4.9	5.4
		GINI coefficient	28.7 b	28.8	29.8	29.0 b	29.5	30.1	29.2	31.0	32.4	34.8
		Early leavers from education and training (% of population aged 18-24)	18.2	14.9 b	12.5	13.7	11.7 b	12.7	11.3	11.4	9.1	6.8 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	19.5	10.7 b	9.0	9.7	9.9 b	11.7	14.6	16.0	18.7	17.0
		Male	At-risk-of-poverty or exclusion (% of male population)	23.9	23.3	22.7	20.5 b	20.9	22.8	22.8	25.1	26.8
	At-risk-of-poverty (% of male population)		14.5	13.5	13.5	13.7 b	13.7	13.8	12.9	12.9	14.1	13.1
	Poverty gap (%)		17.4	17.2	18.3	14.0 b	14.6	16.6	17.9	18.3	17.4	18.0
	Persistent at-risk-of-poverty (% of male population)					8.2	7.4	7.3	7.5	6.3	8.7	5.7
	Severe Material Deprivation (% of male population)		12.4	12.5	12.5	9.0 b	9.1	11.5	12.0	15.1	16.6	15.6
	Share of people living in low work intensity households (% of males aged 0-59)		3.2	2.6	2.9	3.3 b	3.0	4.2	4.2	5.8	7.6	8.9
Life expectancy at birth (years)	76.8		78.4	77.6	78.2	78.6	79.2	79.3	78.9	80.1		
Healthy life years at birth (years) - men	59.8 d		64.2 bd	63.1	63.9	64.8	65.1	61.6	63.4	64.3		
Early leavers from education and training (% of males aged 18-24)	27.2		22.5 b	19.5	19.0	15.2 b	16.2	15.1	16.5	14.8	11.2 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)	17.3		10.2 b	8.3	8.2	8.6 b	10.4	15.1	17.8	20.6	19.0	
Female	At-risk-of-poverty or exclusion (% of female population)	26.7	27.4	27.6	25.9 b	26.0	26.3	26.4	29.0	28.8	28.8	
	At-risk-of-poverty (% of female population)	17.6	17.7	17.4	18.1 b	17.8	17.2	16.6	16.4	16.5	15.6	
	Poverty gap (%)	21.1	19.8	20.5	16.3 b	19.3	20.1	19.7	19.4	17.8	18.9	
	Persistent at-risk-of-poverty (% of female population)				11.5	12.6	10.9	9.6	10.3	11.2	8.9	
	Severe Material Deprivation (% of female population)	11.9	12.7	14.0	9.3 b	9.8	10.9	11.4	14.9	15.6	15.1	
	Share of people living in low work intensity households (% of females aged 0-59)	5.5	5.1	4.5	5.7 b	5.0	5.5	5.5	7.1	8.2	10.5	
	Life expectancy at birth (years)	80.9	82.2	82.1	82.9	83.6	83.9	83.1	83.4	85.0		
	Healthy life years at birth (years) - women	58.2 d	63.4 bd	62.8	64.5	65.3	64.2	61.0	64.0	65.0		
	Early leavers from education and training (% of females aged 18-24)	10.4	8.2 b	6.8	9.5	8.7 b	9.8	8.1	7.0	4.2	2.9 bu	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	21.5	11.2 b	9.6	10.9	11.1 b	12.8	14.2	14.4	17.0	15.3	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	22.1	21.3	20.8	21.5 b	20.2	21.8	23.4	27.5	27.7	24.7	
	At-risk-of-poverty (% of Children population)	12.8	11.5	12.4	14.0 b	12.3	12.6	12.8	13.9	15.5	12.8	
	Severe Material Deprivation (% of Children population)	12.1	12.1	11.7	9.7 b	9.3	12.5	14.8	18.1	18.7	15.6	
	Share of children living in low work intensity households (% of Children population)	3.5	3.0	2.8	3.4 b	3.1	3.6	3.2	5.0	6.4	7.3	
	Risk of poverty of children in households at work (Working Intensity > 0.2)	10.7	10.4	10.5	12.5 b	10.6	10.6	11.2	11.6	11.8	9.1	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	37.3	43.4	37.7	44.0 b	51.4	49.6	47.1	45.5	43.6	52.9	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	21.3	21.4	21.1	18.9 b	19.9	22.1	22.1	25.8	28.2	28.3	
	At-risk-of-poverty (% of Working age population)	11.1	10.6	10.1	10.8 b	11.2	11.9	11.5	12.2	14.4	13.4	
	Severe Material Deprivation (% of Working age population)	11.8	12.3	12.7	8.6 b	9.5	11.5	11.6	15.5	16.7	16.7	
	Very low work intensity (18-59)	4.7	4.1	4.0	5.0 b	4.4	5.3	5.5	6.9	8.4	10.6	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	6.4	7.2	6.3	6.3 b	6.8	7.4	7.3	8.0	9.0	7.8	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	32.3	34.2	34.0	36.5 b	38.1	37.4	42.5	41.9	38.2	43.7	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	54.2	55.6	55.6	49.3 b	48.6	42.6	39.8	33.4	26.1	27.2	
	At-risk-of-poverty (% of Elderly population)	50.3	51.9	50.6	46.3 b	46.4	39.9	35.5	29.3	20.1	22.4	
	Severe Material Deprivation (% of Elderly population)	14.2	15.3	19.4	10.9 b	9.5	7.3	7.1	7.5	9.0	7.4	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.57 b	0.57	0.57	0.59 b	0.61	0.65	0.67	0.70	0.77	0.75	
	Aggregate replacement ratio (ratio)	0.29	0.28	0.29	0.33 b	0.37	0.37	0.39	0.39	0.40	0.39	
Expenditure in social protection (% of GDP)	Sickness/Health care	4.5	4.6	4.5	4.5	5.1	5.0	5.1	4.9	4.9		
	Disability	0.7	0.7	0.7	0.7	0.8	0.7	0.8	0.8	0.8		
	Old age and survivors	8.3	8.3	8.3	8.4	9.3	10.2	10.8	11.8	13.0		
	Family/Children	2.1	1.9	1.9	2.1	2.2	2.1	2.0	1.6	1.6		
	Unemployment	1.1	1.2	0.9	1.0	1.0	1.1	1.2	1.5	1.9		
	Housing and Social exclusion n.e.c.	1.2	1.3	1.6	1.9	2.5	2.7	2.6	1.9	1.6		
	Total (including Admin and Other expenditures) of which: Means tested benefits	18.4	18.5	18.2	19.5	21.1	22.1	22.8	23.1	24.4	3.0	

## Macro economic indicators: Latvia

Latvia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	10.7	11.9	10.0	-3.6	-14.3	-3.8	6.2	4.0	3.0	2.4		
		Total employment	0.9	5.8	3.8	-0.8	-14.3	-6.7	1.5	1.4	2.3	-1.3		
		Labour productivity	9.7	5.8	5.9	-2.8	0.0	3.1	4.6	2.5	0.7	3.8		
		Annual average hours worked	1.4	0.1	-1.5	6.6	-2.5	-0.9	0.9	-0.9	-0.3	0.6		
		Productivity per hour worked	8.2	5.7	7.5	-8.8	2.6	4.0	3.7	3.5	1.0	3.2		
		Harmonized CPI	6.9	6.6	10.1	15.3	3.3	-1.2	4.2	2.3	0.0	0.7		
		Price deflator GDP	11.1	12.3	20.1	11.8	-9.7	-1.0	6.4	3.6	1.3	1.2		
		Nominal compensation per employee	26.1	22.6	34.1	16.0	-11.5	-5.5	3.7	6.2	5.1	8.5		
		Real compensation per employee (GDP deflator)	13.5	9.1	11.6	3.8	-2.0	-4.5	-2.5	2.5	3.7	7.2		
		Real compensation per employee (private consumption deflator)	18.0	15.0	21.8	0.7	-14.3	-4.3	-0.5	3.8	5.0	7.8		
		Nominal unit labour costs	15.0	15.8	26.6	19.3	-11.5	-8.3	-0.9	3.5	4.3	4.6		
		Real unit labour costs	3.5	3.2	5.3	6.8	-2.0	-7.4	-6.8	-0.1	2.9	3.3		
		Labour Market Indicators	Total	Total population (000)	2219	2198	2180	2163	2135	2093	2050	2016	1996	1968
				Population aged 15-64 (000)	1517	1505	1491	1479	1453	1417	1382	1352	1333	1295
Total employment (000)	972			1031	1057	1055	909	851	862	876	894	885		
Employment aged 15-64 (000)	942			992	1016	1009	877	829	841	852	867	859		
Employment rate (% population aged 20-64)	69.1			73.2	75.2	75.4	66.6	64.3	66.3	68.1	69.7	70.7		
Employment rate (% population aged 15-64)	62.1			65.9	68.1	68.2	60.3	58.5	60.8	63.0	65.0	66.3		
Employment rate (% population aged 15-24)	32.2			35.3	38.1	37.0	27.5	25.4	25.8	28.7	30.2	32.5		
Employment rate (% population aged 25-54)	77.1			80.8	82.1	82.2	74.1	72.6	75.0	76.3	77.9	78.2		
Employment rate (% population aged 55-64)	48.3			53.4	58.0	59.1	52.5	47.8	50.5	52.8	54.8	56.4		
FTE employment rate (% population aged 20-64)	68.4 b			72.9	75.3	75.4	65.6	62.8	64.9	66.8	68.7	69.8		
Self-employed (% total employment)	11.8			12.0	11.2	10.5	11.8	11.8	11.6	11.7	11.9	11.8		
Part-time employment (% total employment)	8.3			6.7	6.3	6.6	8.7	9.8	9.2	9.4	8.1	7.4		
Fixed-term contracts (% total employees)	8.7			7.1	4.1	3.4	4.3	7.1	6.6	4.7	4.4	3.3		
Employment in Services (% total employment)	64.4			62.4	64.9	65.3	67.8	68.8	68.2	68.1	68.4	68.8		
Employment in Industry (% total employment)	26.0			27.3	26.9	27.1	23.7	23.3	23.8	24.0	24.0	23.7		
Employment in Agriculture (% total employment)	9.5			10.3	8.1	7.6	8.4	7.8	8.0	7.8	7.6	7.4		
Activity rate (% population aged 15-64)	69.1			71.0	72.6	74.2	73.5	73.0	72.8	74.4	74.0	74.6		
Activity rate (% population aged 15-24)	38.0			40.9	42.6	42.8	41.2	39.7	37.5	40.1	39.4	40.4		
Activity rate (% population aged 25-54)	85.2			86.1	87.1	88.7	88.4	88.6	88.0	88.4	87.6	87.2		
Activity rate (% population aged 55-64)	53.1			57.3	60.7	63.0	60.9	56.9	59.4	61.8	61.3	62.6		
Total unemployment (000)	108			78	68	88	193	206	167	155	120	108		
Unemployment rate (% labour force)	10.0			7.0	6.1	7.7	17.5	19.5	16.2	15.0	11.9	10.8		
Youth unemployment rate (% labour force 15-24)	15.1			13.6	10.6	13.6	33.3	36.2	31.0	28.5	23.2	19.6		
Long-term unemployment rate (% labour force)	4.5			2.4	1.6	1.9	4.5	8.8	8.8	7.8	5.8	4.7		
Share of long-term unemployment (% of total unemployment)	44.6			34.0	27.0	24.1	25.8	45.0	54.5	52.1	48.6	43.0		
Youth unemployment ratio (% population aged 15-24)	5.8			5.6	4.5	5.8	13.7	14.4	11.6	11.5	9.1	7.9		
Employment rate for low skilled 25-64 (ISCED 0-2)	50.3 b			54.3	59.3	57.4	48.1	47.1	48.5	51.8	50.9	51.3 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	71.8 b			76.2	77.5	77.7	68.2	65.1	66.8	66.9	69.7	70.9 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	83.9 b			86.6	87.8	87.4	83.5	80.7	84.4	86.2	85.2	84.2 b		
Employment rate (Nationals aged 15-64)	62.2 b			65.8	68.1	68.1 b	61.0	59.5	61.4	64.0	66.0	67.0		
Employment rate (Other EU-28 aged 15-64)					80.8		63.2 u			76.7 u	76.6 u	78.9 u		
Employment rate (Other than EU-28 aged 15-64)				76.4	64.2	69.1 b	56.6	53.3	57.5	57.6	59.2	61.6		
Employment rate (Born in the same country aged 15-64)	61.8 b			65.3	67.4	67.9	60.3	58.4	60.7	63.2	65.4	66.5		
Employment rate (Born in other EU-28 aged 15-64)				62.2	67.0	59.3	48.5	53.7	57.2	53.0	59.1	62.3		
Employment rate (Born outside EU-28 aged 15-64)		71.6	73.5	71.7	62.0	60.0	62.2	62.2	62.3	64.4				
Underemployment (% of labour force aged 15-74)				2.0	4.2	5.1	4.3	4.2	3.2	2.7				
Seeking but not available (% of labour force aged 15-74)	0.8 b	0.7	0.6	0.6	0.4	0.5	0.8	0.6	0.5	0.6				
Discouraged, available but not seeking (% of labour force aged 15-74)	8.9 b	6.9	6.1	4.7	7.7	8.1	7.6	6.4	6.1	5.0				

Latvia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	1013	1004	996	990	975	954	933	918	911	899
		Population aged 15-64 (000)	723	719	714	710	698	679	662	648	641	625
		Total employment (000)	497	526	540	531	435	403	416	428	441	439
		Employment aged 15-64 (000)	480	506	519	508	420	393	407	417	428	427
		Employment rate (% population aged 20-64)	74.3	78.4	80.5	79.3	66.8	64.0	67.5	70.0	71.9	73.1
		Employment rate (% population aged 15-64)	66.4	70.4	72.7	71.5	60.3	57.9	61.5	64.4	66.8	68.4
		Employment rate (% population aged 15-24)	38.3	41.8	43.8	42.1	29.5	26.5	28.3	31.8	33.3	36.5
		Employment rate (% population aged 25-54)	80.6	84.3	86.0	84.9	73.7	71.7	75.1	77.7	79.9	80.4
		Employment rate (% population aged 55-64)	53.5	59.3	64.3	62.8	51.8	46.9	51.7	53.2	55.2	56.3
		FTE employment rate (% population aged 20-64)	74.0 b	78.4	81.0	79.6	66.1	62.8	66.5	69.2	71.4	72.8
		Self-employed (% total employment)	13.5	13.7	13.3	13.2	14.8	14.1	14.0	14.2	14.2	14.7
		Part-time employment (% total employment)	6.2	4.8	4.7	4.9	7.3	8.0	7.3	7.1	6.1	5.2
		Fixed-term contracts (% total employees)	11.3	8.8	5.5	4.8	5.9	9.3	7.9	6.2	5.3	4.3
		Employment in Services (% total employment)	52.0	49.0	50.3	51.6	55.3	55.2	54.9	54.7	54.5	54.6
		Employment in Industry (% total employment)	35.3	38.0	39.6	38.6	33.5	34.0	33.7	34.1	34.8	34.9
		Employment in Agriculture (% total employment)	12.8	13.0	10.2	9.8	11.2	10.8	11.4	11.2	10.7	10.5
		Activity rate (% population aged 15-64)	73.9	76.1	77.9	78.3	76.6	75.3	75.8	77.1	76.6	77.8
		Activity rate (% population aged 15-24)	43.9	47.5	49.2	49.0	46.4	42.2	41.1	44.0	42.6	45.3
		Activity rate (% population aged 25-54)	89.1	90.2	91.6	92.0	91.1	91.0	90.8	91.2	90.6	90.5
		Activity rate (% population aged 55-64)	60.1	64.3	67.6	68.2	62.8	58.5	62.5	63.2	62.2	63.7
		Total unemployment (000)	56	41	38	49	115	119	95	83	64	59
		Unemployment rate (% labour force)	10.1	7.3	6.5	8.4	20.9	22.7	18.6	16.2	12.6	11.8
		Youth unemployment rate (% labour force 15-24)	12.8	11.9	11.0	14.0	36.4	37.3	31.3	27.8	21.8	19.4
		Long-term unemployment rate (% labour force)	4.8	2.7	1.9	1.9	5.4	10.9	11.0	8.6	6.6	5.3
		Share of long-term unemployment (% of total unemployment)	48.0	37.5	29.9	23.1	25.9	48.0	59.0	53.5	52.3	44.9
		Youth unemployment ratio (% population aged 15-24)	5.6	5.7	5.4	6.9	16.9	15.8	12.9	12.2	9.3	8.8
		Employment rate for low skilled 25-64 (ISCED 0-2)	59.1 b	63.4	68.2	64.8	50.4	49.5	53.6	59.0	56.8	58.3 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	77.1 b	81.9	83.9	82.1	69.7	66.1	70.0	70.5	73.4	74.8 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	87.3 b	90.4	89.8	90.7	85.8	81.9	84.2	87.7	88.7	86.6 b
		Employment rate (Nationals aged 15-64)	66.3 b	70.2	72.7	71.2 b	60.6	58.6	61.3	64.9	67.3	69.1
		Employment rate (Other EU-28 aged 15-64)			85.6 u							
		Employment rate (Other than EU-28 aged 15-64)		89.2	69.2	72.8 b	58.5	54.4	62.0	61.6	63.5	64.0
		Employment rate (Born in the same country aged 15-64)	65.9 b	69.6	71.8	71.1	60.0	57.7	61.0	64.5	66.6	68.4
Employment rate (Born in other EU-28 aged 15-64)		72.7	68.7	70.0	58.8	52.1	58.1	58.2	68.1	61.8		
Employment rate (Born outside EU-28 aged 15-64)		78.6	80.4	75.0	63.1	60.4	65.9	64.2	68.0	69.1		
Underemployment (% of labour force aged 15-74)				1.7	3.9	4.1	3.8	3.3	2.6	2.0		
Seeking but not available (% of labour force aged 15-74)	0.6 bu	0.5 u	0.4	0.4	0.4 u		0.7	0.6	0.4 u	0.4 u		
Discouraged, available but not seeking (% of labour force aged 15-74)	7.9 b	6.0	5.2	3.9	7.0	8.0	7.0	6.1	5.7	4.9		

Latvia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	1206	1194	1184	1174	1159	1139	1117	1098	1085	1070
		Population aged 15-64 (000)	794	786	777	769	756	738	720	704	691	671
		Total employment (000)	476	505	517	524	474	448	445	447	453	446
		Employment aged 15-64 (000)	462	486	497	501	456	436	434	435	438	432
		Employment rate (% population aged 20-64)	64.5	68.4	70.3	71.9	66.5	64.5	65.3	66.4	67.7	68.5
		Employment rate (% population aged 15-64)	58.2	61.8	63.9	65.2	60.4	59.0	60.2	61.7	63.4	64.3
		Employment rate (% population aged 15-24)	26.1	28.5	32.2	31.7	25.4	24.3	23.4	25.4	27.0	28.3
		Employment rate (% population aged 25-54)	73.8	77.4	78.4	79.6	74.5	73.5	74.8	75.0	76.1	76.0
		Employment rate (% population aged 55-64)	44.5	49.2	53.4	56.3	53.0	48.4	49.7	52.5	54.6	56.4
		FTE employment rate (% population aged 20-64)	63.4 b	68.0	70.1	71.6	65.1	62.8	63.5	64.7	66.2	67.2
		Self-employed (% total employment)	10.1	10.2	9.1	7.7	8.9	9.6	9.3	9.2	9.6	9.0
		Part-time employment (% total employment)	10.4	8.6	8.1	8.5	10.1	11.4	10.9	11.6	10.0	9.6
		Fixed-term contracts (% total employees)	6.1	5.4	2.8	2.1	2.9	5.2	5.5	3.3	3.6	2.4
		Employment in Services (% total employment)	77.0	76.2	79.6	78.8	79.2	81.0	80.6	81.0	81.7	82.7
		Employment in Industry (% total employment)	16.7	16.2	14.3	15.8	14.8	13.8	14.5	14.4	13.6	12.8
		Employment in Agriculture (% total employment)	6.2	7.6	6.1	5.4	6.0	5.2	4.8	4.6	4.7	4.4
		Activity rate (% population aged 15-64)	64.8	66.4	67.8	70.3	70.7	70.8	70.1	72.0	71.6	71.6
		Activity rate (% population aged 15-24)	32.0	34.0	35.8	36.5	35.9	37.2	33.7	36.1	36.0	35.3
	Activity rate (% population aged 25-54)	81.5	82.2	82.8	85.6	85.9	86.3	85.3	85.7	84.8	84.0	
	Activity rate (% population aged 55-64)	48.0	52.1	55.7	59.2	59.5	55.7	57.1	60.8	60.5	61.7	
	Total unemployment (000)	53	36	30	40	78	87	71	73	57	49	
	Unemployment rate (% labour force)	10.0	6.7	5.6	7.1	14.1	16.3	13.8	14.0	11.1	9.8	
	Youth unemployment rate (% labour force 15-24)	18.4	16.0	9.9	13.1	29.2	34.8	30.6	29.5	24.9	20.0	
	Long-term unemployment rate (% labour force)	4.1	2.0	1.3	1.8	3.6	6.7	6.7	7.0	4.9	4.0	
	Share of long-term unemployment (% of total unemployment)	41.0	30.0	23.5	25.3	25.6	41.0	48.5	50.4	44.4	40.7	
	Youth unemployment ratio (% population aged 15-24)	5.9	5.5	3.6	4.8	10.5	12.9	10.3	10.6	9.0	7.0	
	Employment rate for low skilled 25-64 (ISCED 0-2)	38.7 b	41.0	46.9	47.1	44.7	43.1	40.3	40.0	41.0	39.1 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	67.0 b	71.1	71.6	73.4	66.7	64.1	63.6	63.1	65.8	66.9 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	81.8 b	84.5	86.7	85.7	82.3	80.0	84.5	85.4	83.3	83.0 b	
	Employment rate (Nationals aged 15-64)	58.5 b	61.8	64.0	65.3 b	61.4	60.2	61.5	63.1	64.7	65.1	
	Employment rate (Other EU-28 aged 15-64)		59.9 u	58.8	65.0 b	54.7	52.2	52.6	53.1	54.7	59.2	
	Employment rate (Born in the same country aged 15-64)	57.9 b	61.4	63.3	64.8	60.7	59.0	60.4	62.0	64.2	64.8	
	Employment rate (Born in other EU-28 aged 15-64)		52.2	65.3	51.8	39.5	55.1	56.4	48.4	50.8	62.7	
	Employment rate (Born outside EU-28 aged 15-64)		66.3	68.2	69.1	61.1	59.7	59.3	60.6	57.9	60.7	
Underemployment (% of labour force aged 15-74)				2.4	4.6	6.0	4.7	5.2	3.7	3.3		
Seeking but not available (% of labour force aged 15-74)	1.0 b	0.8	0.8	0.8	0.4 u	0.6 u	0.9	0.6	0.6	0.8		
Discouraged, available but not seeking (% of labour force aged 15-74)	10.0 b	8.0	7.0	5.5	8.4	8.3	8.1	6.8	6.6	5.0		



Latvia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	46.3	42.2	35.1	34.2 b	37.9	38.2	40.1	36.2	35.1	32.7
		At-risk-of-poverty (% of total population)	19.4	23.5	21.2	25.9	26.4	20.9	19.0	19.2	19.4	21.2
		At-risk-of-poverty threshold (PPS single person)	2347 b	2686	3352	4283	4279	3525	3566	3661	3868	4392
		Poverty gap (%)	27.5	24.4	24.8	28.6	29.0	28.9	31.7	28.6	27.5	23.6
		Persistent at-risk-of-poverty (% of total population)				12.6	15.6	10.5	9.3	12.6 b	12.1	
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	25.8	28.0	27.5	30.2	31.0	28.5	26.8	25.7	26.0	27.0
		Impact of social transfers (excl. pensions) in reducing poverty (%)	24.8	16.1	22.9	14.2	14.8	26.7	29.1	25.3	25.4	21.5
		Severe Material Deprivation (% of total population)	39.3	31.3	24.0	19.3	22.1	27.6	31.0	25.6	24.0	19.2
		Share of people living in low work intensity households (% of people aged 0-59)	8.3	7.1	6.2	5.4	7.4	12.6	12.6	11.7	10.0	9.6
		Gross Household Disposable income adjusted for consumer prices (growth %)	12.1	15.6	11.5	2.0	-15.0	-5.0	-5.3	1.6	5.5	4.1
		Income quintile share ratio S80/S20	6.7	7.8	6.4	7.3	7.4	6.8	6.5	6.5	6.3	6.5
		GINI coefficient	36.2 b	38.9	35.4	37.5	37.5	35.9	35.1	35.7	35.2	35.5
		Early leavers from education and training (% of population aged 18-24)	15.4	15.6 b	15.6	15.5	14.3	12.9	11.6	10.6	9.8	8.5 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	10.6	11.5 b	11.9	11.8	17.5	17.8	16.0	14.9	13.0	12.0
		Male	At-risk-of-poverty or exclusion (% of male population)	43.3	39.0	32.3	31.4 b	36.0	37.6	39.9	35.5	34.2
	At-risk-of-poverty (% of male population)		18.5	20.9	18.7	23.3	24.4	21.4	19.8	19.3	18.9	19.5
	Poverty gap (%)		34.1	28.7	27.7	26.7	31.7	31.5	34.0	31.8	30.3	28.3
	Persistent at-risk-of-poverty (% of male population)					10.7	13.2	10.6	9.4	13.4 b	12.7	
	Severe Material Deprivation (% of male population)		36.4	29.2	22.1	17.6	21.3	26.9	30.4	24.7	23.1	18.1
	Share of people living in low work intensity households (% of males aged 0-59)		8.4	6.7	5.9	5.7	7.9	13.8	13.3	12.6	10.4	10.2
Life expectancy at birth (years)	65.4		65.4	65.3	66.5	68.1	67.9	68.6	68.9	69.3 b		
Healthy life years at birth (years) - men	50.8 d		50.8 bd	51.4	51.6	52.6	53.1	53.6	54.6	51.7 b		
Early leavers from education and training (% of males aged 18-24)	19.0		19.3 b	20.6	20.0	17.6	16.7	15.8	14.7	13.6	11.7 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)	8.6		7.9 b	9.5	10.2	18.6	18.7	16.1	15.1	12.6	11.3	
Female	At-risk-of-poverty or exclusion (% of female population)	48.7	44.8	37.4	36.6 b	39.4	38.6	40.3	36.8	35.9	34.4	
	At-risk-of-poverty (% of female population)	20.3	25.7	23.4	28.1	28.0	20.4	18.3	19.1	19.8	22.5	
	Poverty gap (%)	24.2	21.5	24.1	29.3	27.4	25.9	28.7	25.7	25.8	21.2	
	Persistent at-risk-of-poverty (% of female population)				14.1	17.7	10.5	9.2	11.9 b	11.6		
	Severe Material Deprivation (% of female population)	41.9	33.1	25.6	20.6	22.8	28.3	31.5	26.5	24.7	20.1	
	Share of people living in low work intensity households (% of females aged 0-59)	8.2	7.5	6.5	5.2	7.0	11.4	12.0	10.8	9.6	9.1	
	Life expectancy at birth (years)	76.5	76.3	76.2	77.5	78.0	78.0	78.8	78.9	78.9 b		
	Healthy life years at birth (years) - women	53.2 d	52.5 bd	54.8	54.3	56.0	56.4	56.6	59.0	54.2 b		
	Early leavers from education and training (% of females aged 18-24)	11.8	11.5 b	10.5	10.8	11.0	9.0	7.5	6.3	5.8	5.1 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	12.6	15.1 b	14.4	13.5	16.3	16.9	16.0	14.6	13.4	12.8	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	45.7	42.7	32.8	32.4 b	38.4	42.2	44.1	40.0	38.4	35.3	
	At-risk-of-poverty (% of Children population)	22.0	25.9	19.8	23.6	26.3	26.3	24.7	24.4	23.4	24.3	
	Severe Material Deprivation (% of Children population)	36.8	30.2	20.5	19.2	24.6	30.7	32.4	27.3	25.4	19.9	
	Share of children living in low work intensity households (% of Children population)	7.9	6.9	5.5	4.6	6.9	12.4	12.6	10.4	9.2	9.6	
	Risk of poverty of children in households at work (Working Intensity > 0.2)	17.0	20.9	16.7	20.1	21.3	18.5	17.4	18.3	18.5	18.4	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	28.6	18.3	33.1	22.9	22.0	28.5	32.3	28.5	28.2	27.5	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	44.1	39.4	31.4	28.0 b	32.8	37.4	41.1	35.9	34.0	30.0	
	At-risk-of-poverty (% of Working age population)	18.2	20.9	17.7	19.4	20.5	20.4	20.2	19.3	18.8	18.4	
	Severe Material Deprivation (% of Working age population)	37.5	29.8	21.8	16.7	20.5	26.8	31.2	25.0	22.9	18.2	
	Very low work intensity (18-59)	8.5	7.2	6.4	5.7	7.6	12.6	12.6	12.1	10.2	9.6	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	9.2	11.2	9.5	10.7	11.2	9.7	9.6	8.9	9.1	8.3	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	24.8	17.7	25.3	17.5	18.0	27.1	28.9	25.2	25.4	23.0	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	55.3	51.9	51.4	58.8 b	55.5	36.8	33.0	33.7	36.1	39.3	
	At-risk-of-poverty (% of Elderly population)	21.1	30.4	35.6	52.0	47.6	17.2	9.1	13.9	17.6	27.6	
	Severe Material Deprivation (% of Elderly population)	49.5	38.1	35.8	28.7	25.3	27.5	28.9	26.4	26.6	22.0	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.75 b	0.67	0.64	0.53	0.57	0.78	0.86	0.80	0.77	0.71	
	Aggregate replacement ratio (ratio)	0.61	0.49	0.38	0.30	0.34	0.47	0.53	0.49	0.47	0.44	
Expenditure in social protection (% of GDP)	Sickness/Health care	3.4	3.8	3.4	3.7	3.9	3.7	3.2	3.0	3.1 p		
	Disability	0.9	0.9	0.7	0.9	1.3	1.3	1.3	1.2	1.2 p		
	Old age and survivors	6.0	5.8	5.0	5.7	7.9	9.4	8.2	7.7	7.6 p		
	Family/Children	1.3	1.2	1.2	1.4	1.7	1.5	1.1	1.0	1.1 p		
	Unemployment	0.5	0.5	0.4	0.5	1.6	1.3	0.7	0.5	0.6 p		
	Housing and Social exclusion n.e.c.	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.3	0.2 p		
	Total (including Admin and Other expenditures) of which: Means tested benefits	12.8 0.2	12.7 0.2	11.3 0.2	12.7 0.2	16.9 0.3	17.8 0.7	15.1 0.7	14.0 0.4	14.1 p 0.3 p		

## Macro economic indicators: Lithuania

Lithuania		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	7.7	7.4	11.1	2.6	-14.8	1.6	6.0	3.8	3.5	3.0		
		Total employment	0.8	-0.3	2.0	-1.3	-7.7	-5.3	0.5	1.8	1.3	2.0		
		Labour productivity	6.9	7.7	8.9	4.0	-7.7	7.3	5.5	2.0	2.2	1.0		
		Annual average hours worked	0.0	-0.3	1.6	1.6	-3.7	1.2	-1.4	-0.1	-0.9	-0.4		
		Productivity per hour worked	6.9	8.0	7.2	2.4	-4.2	6.1	7.0	2.1	3.1	1.4		
		Harmonized CPI	2.7	3.8	5.8	11.1	4.2	1.2	4.1	3.2	1.2	0.2		
		Price deflator GDP	6.9	6.7	8.6	9.7	-3.3	2.4	5.2	2.7	1.3	1.2		
		Nominal compensation per employee	13.8	20.7	14.1	14.1	-9.3	-0.1	6.4	4.2	5.4	3.9		
		Real compensation per employee (GDP deflator)	6.5	13.1	5.1	4.0	-6.2	-2.5	1.1	1.5	4.0	2.7		
		Real compensation per employee (private consumption deflator)	10.9	16.3	7.8	2.7	-12.9	-1.3	2.1	1.0	4.1	3.6		
		Nominal unit labour costs	6.4	12.1	4.8	9.7	-1.7	-7.0	0.8	2.2	3.1	2.8		
		Real unit labour costs	-0.5	4.9	-3.4	-0.1	1.7	-9.1	-4.2	-0.5	1.7	1.6		
		Labour Market Indicators	Total	Total population (000)	3354	3290	3250	3213	3184	3142	3032	2991	2960	2934
				Population aged 15-64 (000)	2249	2209	2188	2169	2154	2127	2037	2007	1984	1961
Total employment (000)	1434			1429	1452	1427	1317	1248	1254	1276	1293	1319		
Employment aged 15-64 (000)	1414			1405	1423	1397	1290	1224	1226	1244	1264	1288		
Employment rate (% population aged 20-64)	70.7			71.3	72.7	72.0	67.0	64.3	66.9	68.5	69.9	71.8		
Employment rate (% population aged 15-64)	62.9			63.6	65.0	64.4	59.9	57.6	60.2	62.0	63.7	65.7		
Employment rate (% population aged 15-24)	21.2			23.7	24.8	26.0	20.6	18.3	19.0	21.5	24.6	27.6		
Employment rate (% population aged 25-54)	80.9			81.1	82.2	80.9	75.9	73.6	76.9	78.5	79.6	80.8		
Employment rate (% population aged 55-64)	49.6			49.7	53.2	53.0	51.2	48.3	50.2	51.7	53.4	56.2		
FTE employment rate (% population aged 20-64)	70.1 b			70.0	71.8	71.4	65.9	63.4	65.8	67.3	68.9	70.8		
Self-employed (% total employment)	17.3			17.1	14.6	11.7	12.0	10.9	10.6	11.1	11.8	12.1		
Part-time employment (% total employment)	7.2			10.4	9.1	6.8	8.3	8.2	8.9	9.5	9.0	9.1		
Fixed-term contracts (% total employees)	5.4			4.6	3.8	2.4	2.3	2.4	2.7	2.6	2.7	2.8		
Employment in Services (% total employment)	56.5			55.6	59.2	61.5	64.2	66.6	67.0	66.1	66.1	66.1		
Employment in Industry (% total employment)	29.4			30.6	30.6	30.5	26.8	24.6	24.6	25.1	25.5	24.7		
Employment in Agriculture (% total employment)	14.1			13.8	10.1	8.0	9.0	8.8	8.5	8.8	8.4	9.2		
Activity rate (% population aged 15-64)	68.7			67.6	67.9	68.4	69.6	70.2	71.4	71.8	72.4	73.7		
Activity rate (% population aged 15-24)	25.2			26.3	27.1	30.0	29.3	28.4	28.2	29.3	31.5	34.2		
Activity rate (% population aged 25-54)	87.8			85.7	85.6	85.4	87.0	88.4	89.8	89.7	89.5	89.7		
Activity rate (% population aged 55-64)	53.2			52.9	55.3	55.4	57.2	56.5	58.0	58.7	60.1	63.0		
Total unemployment (000)	130			88	64	88	211	270	228	197	172	158		
Unemployment rate (% labour force)	8.3			5.8	4.3	5.8	13.8	17.8	15.4	13.4	11.8	10.7		
Youth unemployment rate (% labour force 15-24)	15.8			10.0	8.4	13.3	29.6	35.7	32.6	26.7	21.9	19.3		
Long-term unemployment rate (% labour force)	4.4 e			2.6 e	1.4 e	1.3 e	3.3 e	7.4 e	8.0	6.6	5.1	4.8		
Share of long-term unemployment (% of total unemployment)	52.8			45.3	32.4	21.6	23.7	41.7	52.1	49.2	42.9	44.7		
Youth unemployment ratio (% population aged 15-24)	4.0			2.6	2.3	4.0	8.7	10.2	9.2	7.8	6.9	6.6		
Employment rate for low skilled 25-64 (ISCED 0-2)	46.3 b			46.4	48.6	41.9	37.9	31.6	32.9	36.0	38.9	43.2 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	74.8 b			74.5	75.6	73.9	67.7	63.4	66.0	67.5	68.4	69.4 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	87.5 b			88.8	89.2	88.8	86.7	86.7	88.3	88.2	88.6	89.4 b		
Employment rate (Nationals aged 15-64)	62.8 b			63.6	65.0	64.4	59.9	57.6	60.3	62.0	63.7	65.6		
Employment rate (Other EU-28 aged 15-64)														
Employment rate (Other than EU-28 aged 15-64)				71.7 u	65.2 u	73.8 u	52.6 u	54.5 u	53.3 u	62.8 u	70.2 u	72.9 u		
Employment rate (Born in the same country aged 15-64)	62.7 b			63.3	64.8	64.1	59.7	57.4	60.1	61.9	63.6	65.6		
Employment rate (Born in other EU-28 aged 15-64)														
Employment rate (Born outside EU-28 aged 15-64)		69.6	69.8	70.6	63.6	62.6	62.4	64.5	67.5	68.6				
Underemployment (% of labour force aged 15-74)				1.2 u	2.1	2.3	2.5	2.5	2.4	2.1				
Seeking but not available (% of labour force aged 15-74)	0.4 bu		1.2 u	1.8	0.8	0.9	0.5	0.5 u	0.8	0.8				
Discouraged, available but not seeking (% of labour force aged 15-74)	2.0 b	2.0	1.9	2.4	2.7	1.9	1.2	1.1	0.9	0.6				

Lithuania		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	1561	1529	1507	1487	1473	1450	1397	1378	1364	1352
		Population aged 15-64 (000)	1084	1065	1054	1046	1040	1024	981	968	958	949
		Total employment (000)	732	720	736	720	630	591	604	618	636	647
		Employment aged 15-64 (000)	720	707	719	703	616	579	590	603	620	632
		Employment rate (% population aged 20-64)	75.0	74.9	76.6	75.6	66.8	63.5	67.2	69.1	71.2	73.1
		Employment rate (% population aged 15-64)	66.4	66.4	68.2	67.2	59.3	56.5	60.1	62.2	64.7	66.5
		Employment rate (% population aged 15-24)	24.9	26.2	29.4	30.1	21.2	19.1	20.9	22.8	27.6	31.0
		Employment rate (% population aged 25-54)	83.2	83.6	84.2	82.6	74.2	71.1	75.7	77.7	79.8	80.7
		Employment rate (% population aged 55-64)	59.5	55.5	60.7	60.2	55.5	52.1	54.1	55.9	56.1	58.8
		FTE employment rate (% population aged 20-64)	75.2 b	74.4	76.2	75.5	66.1	62.8	66.5	68.5	70.9	72.9
		Self-employed (% total employment)	19.6	19.2	17.5	14.4	14.9	13.2	12.6	13.3	13.9	14.0
		Part-time employment (% total employment)	5.3	8.3	7.5	4.9	6.9	6.8	7.1	7.5	7.1	7.0
		Fixed-term contracts (% total employees)	7.5	6.7	5.1	2.9	3.0	3.3	3.6	3.4	3.5	3.6
		Employment in Services (% total employment)	45.9	43.2	46.1	48.0	51.6	55.2	56.0	54.0	54.0	54.7
		Employment in Industry (% total employment)	37.5	40.8	41.4	41.8	36.8	33.4	33.3	34.6	35.2	33.6
		Employment in Agriculture (% total employment)	16.7	16.0	12.6	10.2	11.5	11.4	10.7	11.4	10.8	11.7
		Activity rate (% population aged 15-64)	72.4	70.7	71.3	71.6	71.7	72.0	73.5	73.7	74.7	76.0
		Activity rate (% population aged 15-24)	29.6	29.1	31.6	34.6	32.7	31.3	32.1	32.4	35.8	38.6
	Activity rate (% population aged 25-54)	89.9	88.4	87.7	87.3	88.0	89.0	90.7	90.5	90.6	90.8	
	Activity rate (% population aged 55-64)	64.2	59.8	63.3	62.9	63.3	62.6	64.3	64.6	65.2	68.2	
	Total unemployment (000)	65	46	32	46	130	159	132	111	96	90	
	Unemployment rate (% labour force)	8.1	6.0	4.2	6.0	17.1	21.2	17.9	15.2	13.1	12.2	
	Youth unemployment rate (% labour force 15-24)	16.0	10.0	7.0	13.0	35.1	39.0	34.9	29.7	23.0	19.6	
	Long-term unemployment rate (% labour force)	4.2 e	2.6 e	1.5 e	1.1 e	3.7 e	9.1 e	9.4	7.4	5.5	5.4	
	Share of long-term unemployment (% of total unemployment)	51.4	44.4	34.9	17.6	21.7	42.6	52.4	48.9	42.2	44.3	
	Youth unemployment ratio (% population aged 15-24)	4.7	2.9	2.2	4.5	11.4	12.2	11.2	9.6	8.2	7.6	
	Employment rate for low skilled 25-64 (ISCED 0-2)	56.0 b	53.0	56.3	49.6	39.5	33.8	36.1	39.9	43.6	46.1 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	80.1 b	80.2	80.9	78.4	69.4	64.7	68.8	71.2	72.1	72.4 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	89.5 b	89.5	90.5	91.4	86.3	86.5	88.0	87.8	89.6	91.2 b	
	Employment rate (Nationals aged 15-64)	66.3 b	66.3	68.1	67.2	59.3	56.5	60.2	62.2	64.7	66.5	
	Employment rate (Other EU-28 aged 15-64)											
	Employment rate (Other than EU-28 aged 15-64)			78.3 u								
	Employment rate (Born in the same country aged 15-64)	65.9 b	66.1	67.9	66.9	59.1	56.2	59.9	62.1	64.5	66.3	
	Employment rate (Born in other EU-28 aged 15-64)											
	Employment rate (Born outside EU-28 aged 15-64)		72.7	76.2	76.0	66.2	63.9	66.4	68.0	71.3	71.6	
	Underemployment (% of labour force aged 15-74)				0.9 u	2.0	1.8	2.1	2.0	2.0	1.7	
Seeking but not available (% of labour force aged 15-74)			1.1 u	1.6 u	0.8 u	0.9 u				0.7 u		
Discouraged, available but not seeking (% of labour force aged 15-74)	2.0 bu	1.9 u	1.7 u	2.4 u	3.2	2.2	1.4	1.5	1.1 u	0.8 u		

Lithuania		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		
Labour Market Indicators	Female	Total population (000)	1793	1761	1743	1725	1711	1692	1635	1614	1597	1582	
		Population aged 15-64 (000)	1165	1144	1134	1124	1115	1103	1055	1039	1025	1012	
		Total employment (000)	703	709	715	707	687	657	650	658	657	672	
		Employment aged 15-64 (000)	694	698	703	694	674	646	646	636	642	644	656
		Employment rate (% population aged 20-64)	66.6	68.0	69.1	68.7	67.2	65.0	66.6	67.9	68.6	70.6	
		Employment rate (% population aged 15-64)	59.6	61.0	62.0	61.8	60.4	58.5	60.2	61.8	62.8	64.9	
		Employment rate (% population aged 15-24)	17.4	21.0	20.0	21.8	20.1	17.4	17.0	20.1	21.5	24.1	
		Employment rate (% population aged 25-54)	78.6	78.7	80.2	79.4	77.5	75.9	78.1	79.1	79.4	80.9	
		Employment rate (% population aged 55-64)	41.9	45.2	47.5	47.4	47.8	45.5	47.2	48.5	51.2	54.3	
		FTE employment rate (% population aged 20-64)	65.5 b	66.2	67.7	67.7	65.8	63.9	65.1	66.2	67.2	69.0	
		Self-employed (% total employment)	15.0	15.0	11.7	8.9	9.4	8.8	8.8	8.9	9.7	10.3	
		Part-time employment (% total employment)	9.2	12.6	10.7	8.7	9.5	9.4	10.5	11.3	10.8	11.1	
		Fixed-term contracts (% total employees)	3.4	2.6	2.4	1.8	1.6	1.7	1.9	1.9	1.9	2.0	
		Employment in Services (% total employment)	67.6	68.4	72.7	75.2	75.7	76.9	77.2	77.5	77.7	77.1	
		Employment in Industry (% total employment)	21.1	20.1	19.7	18.9	17.6	16.6	16.4	16.1	16.2	16.2	
		Employment in Agriculture (% total employment)	11.3	11.5	7.7	5.9	6.6	6.5	6.5	6.3	6.1	6.7	
		Activity rate (% population aged 15-64)	65.2	64.6	64.9	65.5	67.6	68.6	69.4	70.1	70.3	71.6	
		Activity rate (% population aged 15-24)	20.6	23.3	22.3	25.3	25.9	25.4	24.1	26.1	27.0	29.6	
		Activity rate (% population aged 25-54)	85.8	83.2	83.6	83.6	86.0	87.8	88.9	89.0	88.4	88.7	
		Activity rate (% population aged 55-64)	44.8	47.6	49.2	49.7	52.4	51.7	53.1	54.2	56.1	58.9	
		Total unemployment (000)	66	42	32	42	81	112	96	86	77	68	
		Unemployment rate (% labour force)	8.5	5.6	4.3	5.6	10.5	14.5	12.9	11.6	10.5	9.2	
		Youth unemployment rate (% labour force 15-24)	15.5	10.0	10.4	13.9	22.4	31.6	29.4	22.7	20.4	18.7	
		Long-term unemployment rate (% labour force)	4.6 e	2.6 e	1.3 e	1.5 e	2.8 e	5.9 e	6.7	5.7	4.6	4.2	
		Share of long-term unemployment (% of total unemployment)	54.3	46.2	29.9	25.9	27.0	40.3	51.7	49.6	43.8	45.3	
		Youth unemployment ratio (% population aged 15-24)	3.2	2.3	2.3	3.5	5.8	8.0	7.1	5.9	5.5	5.5	
		Employment rate for low skilled 25-64 (ISCED 0-2)	35.8 b	38.9	39.2	32.9	36.0	29.2	29.3	30.9	32.7	39.1 b	
		Employment rate for medium skilled 25-64 (ISCED 3-4)	69.6 b	68.8	70.4	69.3	65.8	62.0	63.0	63.6	64.3	66.2 b	
		Employment rate for high skilled 25-64 (ISCED 5-8)	86.2 b	88.3	88.3	87.1	86.9	86.8	88.5	88.5	88.0	88.2 b	
		Employment rate (Nationals aged 15-64)	59.6 b	61.0	62.1	61.8	60.5	58.6	60.3	61.8	62.8	64.8	
		Employment rate (Other EU-28 aged 15-64)											
		Employment rate (Other than EU-28 aged 15-64)											
		Employment rate (Born in the same country aged 15-64)	59.6 b	60.8	61.9	61.6	60.4	58.5	60.3	61.8	62.7	64.8	
Employment rate (Born in other EU-28 aged 15-64)													
Employment rate (Born outside EU-28 aged 15-64)		66.5	64.4	65.7	61.6	61.6	58.9	61.8	64.4	66.0			
Underemployment (% of labour force aged 15-74)				1.5 u	2.2	2.9	2.9	2.9	2.8	2.5			
Seeking but not available (% of labour force aged 15-74)			1.4 u	2.0 u	0.7 u	0.9 u		0.7 u	1.0 u	1.0 u			
Discouraged, available but not seeking (% of labour force aged 15-74)	1.9 bu	2.1 u	2.1 u	2.4 u	2.2	1.5	1.1 u	0.7 u	0.7 u				

Lithuania		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	41.0	35.9	28.7	28.3	29.6	34.0	33.1	32.5	30.8	27.3
		At-risk-of-poverty (% of total population)	20.5	20.0	19.1	20.9	20.3	20.5	19.2	18.6	20.6	19.1
		At-risk-of-poverty threshold (PPS single person)	2308 b	2772	3428	4111	4289	3611	3641	4034	4369	4557
		Poverty gap (%)	28.4	29.1	25.7	25.6	23.8	32.6	29.0	22.6	24.8	22.7
		Persistent at-risk-of-poverty (% of total population)				10.9	11.4	7.4	7.7 b	12.3	10.2	16.0
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	26.1	26.6	25.5	27.4	28.6	31.3	30.2	28.4	30.3	27.5
		Impact of social transfers (excl. pensions) in reducing poverty (%)	21.5	24.8	25.1	23.7	29.0	34.5	36.4	34.5	32.0	30.6
		Severe Material Deprivation (% of total population)	32.6	25.3	16.6	12.5	15.6	19.9	19.0	19.8	16.0	13.6
		Share of people living in low work intensity households (% of people aged 0-59)	9.6	8.3	6.4	6.1	7.2	9.5	12.7	11.4	11.0	8.8
		Gross Household Disposable income adjusted for consumer prices (growth %)	7.0	10.1	2.0	7.5	-11.8	-0.4	1.1	0.2	4.3	2.4
		Income quintile share ratio S80/S20	6.9	6.3	5.9	6.1	6.4	7.3	5.8	5.3	6.1	6.1
		GINI coefficient	36.3 b	35.0	33.8	34.5	35.9	37.0	33.0	32.0	34.6	35.0
		Early leavers from education and training (% of population aged 18-24)	8.4	8.8 b	7.8	7.5	8.7	7.9	7.4	6.5	6.3	5.9 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	8.8	8.3 b	7.1	8.8	12.1	13.2	11.8	11.2	11.1	9.9
	Male	At-risk-of-poverty or exclusion (% of male population)	38.9	33.9	26.3	25.9	27.5	33.7	33.0	31.4	28.3	25.5
		At-risk-of-poverty (% of male population)	19.7	19.1	16.7	18.5	18.9	21.2	19.1	18.1	19.4	17.8
		Poverty gap (%)	31.1	30.6	28.2	28.4	29.0	36.6	29.1	24.3	25.2	26.0
		Persistent at-risk-of-poverty (% of male population)				10.2	9.1	6.7	9.1 b	12.5	9.9	15.5
		Severe Material Deprivation (% of male population)	31.1	23.6	15.8	11.9	15.0	19.9	18.7	19.0	14.2	12.8
		Share of people living in low work intensity households (% of males aged 0-59)	9.4	8.3	6.5	6.5	7.7	10.0	12.9	11.8	10.9	9.2
		Life expectancy at birth (years)	65.3	65.3	64.5	65.9	67.5	67.6	68.1	68.4	68.5	
		Healthy life years at birth (years) - men	51.4 d	52.6 bd	53.3	54.5	57.2	57.4	57.0	56.6	56.8	
		Early leavers from education and training (% of males aged 18-24)	11.0 u	11.5 bu	10.1 u	10.2 u	11.6	9.8	10.0	8.1	7.8	7.0 b
		NEET: Young people not in employment, education or training (% of males aged 15-24)	8.2 u	8.2 bu	6.3 u	8.6 u	13.7	14.7	13.1	12.8	11.6	9.5
Female	At-risk-of-poverty or exclusion (% of female population)	42.9	37.7	30.9	30.4	31.4	34.2	33.3	33.4	33.0	28.8	
	At-risk-of-poverty (% of female population)	21.3	20.8	21.2	23.0	21.6	20.0	19.3	19.0	21.6	20.3	
	Poverty gap (%)	26.3	24.7	23.5	24.1	20.3	28.6	29.0	22.0	23.5	20.8	
	Persistent at-risk-of-poverty (% of female population)				11.5	13.3	8.0	6.5 b	12.2	10.4	16.4	
	Severe Material Deprivation (% of female population)	33.8	26.7	17.3	13.0	16.2	19.8	19.3	20.5	17.6	14.3	
	Share of people living in low work intensity households (% of females aged 0-59)	9.8	8.3	6.4	5.7	6.8	8.9	12.5	11.0	11.1	8.4	
	Life expectancy at birth (years)	77.3	77.0	77.2	77.6	78.7	78.9	79.3	79.6	79.6		
	Healthy life years at birth (years) - women	54.6 d	56.5 bd	58.1	59.6	61.2	62.3	62.0	61.6	61.6		
	Early leavers from education and training (% of females aged 18-24)	5.7 u	6.0 bu	5.5 u	4.7 u	5.8	6.0	4.6 u	4.6 u	4.7 u	4.6 bu	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	9.3	8.5 bu	7.9 u	9.1 u	10.5	11.6	10.4	9.5	10.6	10.3	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	42.5	37.2	29.9	29.1	30.8	35.8	34.6	31.9	35.4	28.9	
	At-risk-of-poverty (% of Children population)	27.2	25.1	22.1	23.3	23.3	24.8	25.2	20.8	26.9	23.5	
	Severe Material Deprivation (% of Children population)	32.2	24.0	15.9	11.8	15.8	20.0	16.7	16.9	18.5	13.7	
	Share of children living in low work intensity households (% of Children population)	8.5	7.6	6.4	4.7	5.4	5.7	11.7	9.3	9.8	6.9	
	Risk of poverty of children in households at work (Working Intensity > 0.2)	21.4	19.9	17.3	20.5	20.1	21.9	18.5	15.5	21.2	18.8	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	19.8	22.5	24.3	26.0	36.3	43.1	37.3	41.1	33.9	32.7	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	39.3	34.2	25.8	25.0	27.7	34.6	33.3	31.7	29.3	25.6	
	At-risk-of-poverty (% of Working age population)	19.0	17.8	15.6	17.5	18.4	22.2	20.2	17.9	19.0	17.6	
	Severe Material Deprivation (% of Working age population)	30.8	24.2	15.8	11.5	14.7	18.7	18.0	19.5	14.6	12.3	
	Very low work intensity (18-59)	10.0	8.6	6.4	6.6	7.8	10.6	13.1	12.0	11.4	9.4	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	10.2	10.1	8.1	9.5	10.5	12.7	9.6	7.7	9.2	8.4	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	23.4	28.2	30.4	28.3	30.8	32.3	37.3	36.3	35.4	33.8	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	46.1	41.3	39.1	39.9	35.3	29.8	30.9	35.7	31.7	31.9	
	At-risk-of-poverty (% of Elderly population)	17.0	22.0	29.8	31.0	23.9	9.6	9.7	18.7	19.4	20.1	
	Severe Material Deprivation (% of Elderly population)	40.5	31.5	20.8	17.1	18.8	24.0	25.1	24.1	18.4	17.8	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.81 b	0.74	0.69	0.70	0.73	0.93	0.90	0.78	0.81	0.77	
	Aggregate replacement ratio (ratio)	0.47	0.44	0.40	0.43	0.48	0.58	0.52	0.45	0.48	0.45	
Expenditure in social protection (% of GDP)	Sickness/Health care	3.9	4.1	4.3	4.6	5.5	4.8	4.5	4.3	4.1 p		
	Disability	1.3	1.3	1.4	1.6	2.1	1.8	1.6	1.5	1.4 p		
	Old age and survivors	5.9	5.7	6.5	6.9	9.0	8.0	7.2	7.3	6.9 p		
	Family/Children	1.2	1.1	1.2	1.8	2.8	2.2	1.7	1.4	1.1 p		
	Unemployment	0.4	0.4	0.4	0.4	0.9	0.8	0.6	0.4	0.4 p		
	Housing and Social exclusion n.e.c.	0.2	0.2	0.2	0.2	0.4	0.7	0.8	0.7	0.6 p		
	Total (including Admin and Other expenditures) of which: Means tested benefits	13.2 0.3	13.3 0.2	14.4 0.2	16.1 0.3	21.2 0.5	19.1 1.0	17.0 1.0	16.5 0.9	15.4 p 0.8 p		



## Macro economic indicators: Luxembourg

Luxembourg		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	3.2	5.1	8.4	-0.8	-5.4	5.7	2.6	-0.8	4.3	4.1		
		Total employment	2.7	3.8	4.4	4.8	1.0	1.8	2.9	2.4	1.8	2.5		
		Labour productivity	0.5	1.2	3.8	-5.4	-6.3	3.8	-0.4	-3.2	2.5	1.5		
		Annual average hours worked	-1.5	0.1	0.9	0.0	-3.2	0.1	-0.1	-0.4	-0.7	0.4		
		Productivity per hour worked	2.0	1.1	2.9	-5.4	-3.2	3.7	-0.3	-2.8	3.2	1.1		
		Harmonized CPI	3.8	3.0	2.7	4.1	0.0	2.8	3.7	2.9	1.7	0.7		
		Price deflator GDP	4.1	6.9	1.5	3.3	1.8	3.1	4.2	4.1	2.4	1.0		
		Nominal compensation per employee	4.0	4.3	4.3	2.7	1.7	2.1	2.0	1.6	3.7	2.9		
		Real compensation per employee (GDP deflator)	-0.1	-2.4	2.8	-0.6	-0.2	-1.0	-2.1	-2.4	1.3	2.0		
		Real compensation per employee (private consumption deflator)	0.2	1.3	1.6	-1.4	1.7	-0.7	-1.7	-1.3	1.9	2.2		
		Nominal unit labour costs	3.5	3.0	0.5	8.5	8.5	-1.7	2.3	4.9	1.2	1.4		
		Real unit labour costs	-0.6	-3.5	-1.0	5.0	6.6	-4.7	-1.8	0.9	-1.2	0.4		
		Labour Market Indicators	Total	Total population (000)	450	456	465 b	467	481	488	500	513	517	526
				Population aged 15-64 (000)	304	307	316 b	318	330	335	344	355	359	364
Total employment (000)	194			195	203 b	202	217	221	225	236	239	246		
Employment aged 15-64 (000)	193			195	203 b	202	215	219	222	234	236	243		
Employment rate (% population aged 20-64)	69.0			69.1	69.6 b	68.8	70.4	70.7	70.1	71.4	71.1	72.1		
Employment rate (% population aged 15-64)	63.6			63.6	64.2 b	63.4	65.2	65.2	64.6	65.8	65.7	66.6		
Employment rate (% population aged 15-24)	24.9			23.3	22.5 b	23.8	26.7	21.2	20.7	21.7	21.9	20.4		
Employment rate (% population aged 25-54)	80.7			81.0	81.9 b	80.0	81.2	82.3	82.0	83.1	82.9	83.7		
Employment rate (% population aged 55-64)	31.7			33.2	32.0 b	34.1	38.2	39.6	39.3	41.0	40.5	42.5		
FTE employment rate (% population aged 20-64)	63.2 b			63.7	63.9 b	63.2	64.7 b	65.3	64.7	65.9	65.8	66.8		
Self-employed (% total employment)	6.7			6.4	6.2 b	6.1	6.2	6.2	6.1	6.1	6.1	6.1		
Part-time employment (% total employment)	17.4			17.1	17.8 b	18.0	18.2	17.9	18.4	19.0	19.2	18.9		
Fixed-term contracts (% total employees)	5.3			6.1	6.8 b	6.2	7.2	7.1	7.1	7.7	7.1	8.2		
Employment in Services (% total employment)	74.9			75.4	75.9	76.5	77.1	77.4	77.8	78.3	78.8	79.2		
Employment in Industry (% total employment)	23.6			23.2	22.7	22.2	21.6	21.2	20.9	20.5	20.0	19.7		
Employment in Agriculture (% total employment)	1.5			1.4	1.4	1.3	1.3	1.3	1.3	1.2	1.2	1.2		
Activity rate (% population aged 15-64)	66.6			66.7	66.9 b	66.8	68.7	68.2	67.9	69.4	69.9	70.8		
Activity rate (% population aged 15-24)	28.8			27.8	26.5 b	29.0	32.3	24.7	24.9	26.8	25.9	26.3		
Activity rate (% population aged 25-54)	83.9			84.5	84.7 b	83.4	84.8	85.7	85.6	87.0	87.5	88.0		
Activity rate (% population aged 55-64)	32.4			33.6	32.7 b	35.1	39.4	40.6	40.4	41.9	42.5	44.5		
Total unemployment (000)	9			9 i	9	10	12	11	11	13	15	16		
Unemployment rate (% labour force)	4.6			4.6 i	4.2	4.9	5.1	4.6	4.8	5.1	5.9	6.0		
Youth unemployment rate (% labour force 15-24)	14.6			15.5 i	15.6	17.3	16.5	15.8	16.4	18.0	16.9	22.3		
Long-term unemployment rate (% labour force)	1.2			1.4	1.2	1.6	1.2	1.3	1.4	1.6	1.8	1.7		
Share of long-term unemployment (% of total unemployment)	26.4			29.5	28.7 b	32.4	23.1	29.3	28.8	30.3	30.4	27.4		
Youth unemployment ratio (% population aged 15-24)	3.9			4.5	4.0 b	5.2	5.5	3.5	4.2	5.0	4.0	6.0		
Employment rate for low skilled 25-64 (ISCED 0-2)	61.8 b			60.8	62.3 b	61.1	61.6 b	61.9	62.0	63.0	61.8	60.9 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	71.7 b			73.4	73.9 b	70.7	70.2 b	72.1	70.4	71.9	70.8	72.1 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	84.0 b			85.2	84.5 b	84.7	85.1 b	85.0	85.0	84.8	84.9	84.6 b		
Employment rate (Nationals aged 15-64)	60.9 b			60.9	60.6 b	60.8	62.8 b	62.5	61.5	62.6	62.8	63.7		
Employment rate (Other EU-28 aged 15-64)				69.0	69.9 b	69.1	69.6 b	69.5	69.7	70.9	70.0	71.4		
Employment rate (Other than EU-28 aged 15-64)				46.5	55.2 b	37.1	53.2 b	56.6	55.1	56.7	58.7	53.5		
Employment rate (Born in the same country aged 15-64)	59.8 b			60.0	59.2 b	59.4	61.9 b	60.7	59.5	60.7	60.3	61.5		
Employment rate (Born in other EU-28 aged 15-64)				71.0	73.0 b	72.2	71.1 b	72.2	72.5	73.6	73.6	74.0		
Employment rate (Born outside EU-28 aged 15-64)				55.5	59.9 b	48.5	59.9 b	62.9	59.9	60.9	62.0	62.4		
Underemployment (% of labour force aged 15-74)						0.7	2.1 b	1.7	1.6	2.1	1.8	1.8		
Seeking but not available (% of labour force aged 15-74)				0.4 u	0.3 bu	0.7	0.7 b	0.7	0.6	0.6	0.6	0.7		
Discouraged, available but not seeking (% of labour force aged 15-74)						0.4 u	5.1 b	4.7	4.9	5.1	5.9	5.8		

Luxembourg		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	223	232	234 b	233	240	243	249	256	259	264
		Population aged 15-64 (000)	153	153	157 b	161	167	169	175	180	182	185
		Total employment (000)	113	111	114 b	116	124	125	127	132	132	134
		Employment aged 15-64 (000)	112	111	114 b	115	122	124	126	130	132	134
		Employment rate (% population aged 20-64)	79.4	78.9	78.3 b	77.2	79.0	79.2	78.1	78.5	78.0	78.4
		Employment rate (% population aged 15-64)	73.3	72.6	72.3 b	71.5	73.2	73.1	72.1	72.5	72.1	72.6
		Employment rate (% population aged 15-24)	28.4	25.4	26.5 b	27.0	29.1	22.1	22.8	23.4	24.2	21.9
		Employment rate (% population aged 25-54)	92.8	92.7	92.2 b	90.2	90.8	92.0	90.8	91.0	90.1	90.5
		Employment rate (% population aged 55-64)	38.3	38.7	35.6 b	38.7	46.5	47.7	47.0	47.4	48.3	49.8
		FTE employment rate (% population aged 20-64)	78.7 b	78.4	77.7 b	76.6	78.0 b	78.6	77.2	77.3	76.9	77.4
		Self-employed (% total employment)	7.2	7.3	7.0 b	6.2	7.2	7.0	6.9	6.6	6.6	6.9
		Part-time employment (% total employment)	2.5	2.6	2.6 b	2.7	5.6	4.0	4.8	5.4	6.0	5.4
		Fixed-term contracts (% total employees)	4.9	5.7	6.2 b	5.9	6.3	6.2	6.3	7.3	5.7	7.3
		Employment in Services (% total employment)	64.5	64.4	64.8 b	67.4	67.3	68.1	68.0	68.4	69.7	70.5
		Employment in Industry (% total employment)	33.7	33.9	33.5 b	31.1	31.1	30.3	30.5	30.1	28.8	28.0
		Employment in Agriculture (% total employment)	1.8	1.7	1.7 b	1.6	1.6	1.6	1.5	1.5	1.5	1.5
		Activity rate (% population aged 15-64)	76.0	75.3	75.0 b	74.7	76.6	76.0	75.0	75.9	76.3	77.2
		Activity rate (% population aged 15-24)	32.1	30.6	30.6 b	30.9	34.9	26.8	26.3	28.8	29.8	29.6
	Activity rate (% population aged 25-54)	95.5	95.3	94.9 b	93.7	94.1	94.8	93.9	94.6	94.4	94.9	
	Activity rate (% population aged 55-64)	39.4	38.9	36.4 b	39.7	47.7	48.8	48.4	48.3	50.5	52.1	
	Total unemployment (000)	4	4 i	4	5	6	5	5	6	8	8	
	Unemployment rate (% labour force)	3.6	3.5 i	3.4	4.1	4.5	3.8	3.9	4.5	5.6	5.8	
	Youth unemployment rate (% labour force 15-24)	12.6	16.0 i	13.8	13.4	15.0	17.2	15.1	18.6	18.8	25.1	
	Long-term unemployment rate (% labour force)	1.2	1.2	1.3 b	1.2	0.9	1.3	1.3	1.3	1.7	1.5	
	Share of long-term unemployment (% of total unemployment)	33.8	34.4	35.4 b	29.4	19.9	32.2	33.1	28.8	30.5	26.7	
	Youth unemployment ratio (% population aged 15-24)	3.8	5.2	4.1 b	3.9	5.8	4.7	3.5	5.4	5.6	7.7	
	Employment rate for low skilled 25-64 (ISCED 0-2)	77.1 b	76.6	75.7 b	75.2	74.9 b	74.6	74.9	73.1	72.8	70.0 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	82.3 b	82.5	82.4 b	78.3	79.2 b	81.1	79.0	79.3	78.6	79.8 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	88.9 b	89.4	87.9 b	88.9	90.6 b	90.7	89.8	90.1	89.3	88.9 b	
	Employment rate (Nationals aged 15-64)	70.5 b	69.7	68.7 b	69.4	70.7 b	70.2	67.9	68.7	68.3	69.5	
	Employment rate (Other EU-28 aged 15-64)		77.9	77.5 b	76.5	76.8 b	76.9	76.8	76.9	77.0	76.7	
	Employment rate (Other than EU-28 aged 15-64)		60.0	67.6 b	44.1	68.7 b	72.5	76.0	72.6	68.1	65.7	
	Employment rate (Born in the same country aged 15-64)	68.8 b	68.1	67.3 b	68.2	69.2 b	68.4	65.9	66.3	65.3	66.6	
	Employment rate (Born in other EU-28 aged 15-64)		80.7	80.3 b	78.7	78.8 b	79.6	79.9	80.0	80.7	80.4	
	Employment rate (Born outside EU-28 aged 15-64)		69.8	72.7 b	57.4	74.3 b	74.7	73.5	74.7	72.1	70.7	
	Underemployment (% of labour force aged 15-74)						1.0 b	0.6 u	0.8	0.7 u	0.6 u	0.7
Seeking but not available (% of labour force aged 15-74)				0.6 u	0.6 bu	0.5 u					0.5 u	
Discouraged, available but not seeking (% of labour force aged 15-74)						3.5 b	3.2	3.0	3.4	4.1	3.9	

Luxembourg		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	227	225	230 b	235	241	246	250	257	258	262
		Population aged 15-64 (000)	151	154	159 b	157	163	166	170	175	177	180
		Total employment (000)	81	84	89 b	87	93	96	98	104	105	110
		Employment aged 15-64 (000)	81	84	89 b	87	93	95	97	103	105	109
		Employment rate (% population aged 20-64)	58.4	59.4	61.0 b	60.1	61.5	62.0	61.9	64.1	63.9	65.5
		Employment rate (% population aged 15-64)	53.7	54.6	56.1 b	55.1	57.0	57.2	56.9	59.0	59.1	60.5
		Employment rate (% population aged 15-24)	21.3	21.2	18.4 b	20.6	24.2	20.3	18.5	20.1	19.4	18.8
		Employment rate (% population aged 25-54)	68.4	69.5	71.7 b	69.5	71.4	72.6	72.9	75.0	75.5	76.8
		Employment rate (% population aged 55-64)	24.9	27.8	28.6 b	29.3	29.4	31.3	31.3	34.3	32.4	35.0
		FTE employment rate (% population aged 20-64)	48.0 b	50.1	50.8 b	50.2	52.0 b	52.7	52.9	55.1	55.0	56.8
		Self-employed (% total employment)	5.8	5.3	5.2 b	6.0	4.8	5.1	5.2	5.6	5.6	5.1
		Part-time employment (% total employment)	38.2	36.2	37.2 b	38.3	35.1	36.0	36.1	36.3	36.0	35.7
		Fixed-term contracts (% total employees)	5.8	6.6	7.6 b	6.6	8.4	8.3	8.2	8.2	8.9	9.2
		Employment in Services (% total employment)	90.7	91.3	91.3 b	89.7	91.9	90.9	92.1	92.3	91.7	91.1
		Employment in Industry (% total employment)	8.3	7.7	7.8 b	9.4	7.2	8.1	7.1	6.8	7.6	8.1
		Employment in Agriculture (% total employment)	1.0	1.0	0.9 b	1.0	0.9	1.0	0.9	0.9	0.7	0.7
		Activity rate (% population aged 15-64)	57.0	58.2	58.9 b	58.7	60.7	60.3	60.7	62.8	63.2	64.2
	Activity rate (% population aged 15-24)	25.5	25.0	22.3 b	27.1	29.5	22.7	23.4	24.7	21.8	23.0	
	Activity rate (% population aged 25-54)	72.2	73.8	74.7 b	72.9	75.3	76.4	77.1	79.2	80.5	80.9	
	Activity rate (% population aged 55-64)	25.1	28.5	29.1 b	30.3	30.6	32.0	32.1	35.2	34.2	36.5	
	Total unemployment (000)	5	5 i	5	5	6	6	6	6	7	7	
	Unemployment rate (% labour force)	6.1	5.9 i	5.1	5.9	5.9	5.5	6.0	5.8	6.2	6.3	
	Youth unemployment rate (% labour force 15-24)	17.2	14.9 i	18.2	22.0	18.2	14.3	17.9	17.3	14.2	18.7	
	Long-term unemployment rate (% labour force)	1.2	1.5	1.1 b	2.1	1.6	1.4	1.5	1.8	1.9	1.7	
	Share of long-term unemployment (% of total unemployment)	20.5	26.0	22.3 b	35.2	26.1	26.5	25.4	31.8	30.4	28.2	
	Youth unemployment ratio (% population aged 15-24)	4.1	3.8	3.9 b	6.5	5.2	2.3	4.9	4.6	2.4	4.2	
	Employment rate for low skilled 25-64 (ISCED 0-2)	49.6 b	47.9	51.4 b	49.5	51.2 b	52.1	50.9	54.3	51.7	53.5 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	60.0 b	63.7	64.8 b	62.2	60.9 b	63.2	61.8	64.6	62.8	64.2 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	78.1 b	80.4	80.8 b	79.9	78.6 b	77.9	79.4	78.5	80.0	79.7 b	
	Employment rate (Nationals aged 15-64)	51.1 b	52.3	52.7 b	51.9	54.8 b	54.5	54.9	56.4	57.2	58.0	
	Employment rate (Other EU-28 aged 15-64)		60.0	61.9 b	61.4	62.0 b	62.0	62.1	64.3	62.6	65.6	
	Employment rate (Other than EU-28 aged 15-64)		35.7	46.4 b	29.5	39.8 b	44.4	38.1	45.2	50.7	44.4	
	Employment rate (Born in the same country aged 15-64)	50.5 b	51.9	51.3 b	50.4	54.4 b	52.8	53.0	54.9	55.0	56.1	
Employment rate (Born in other EU-28 aged 15-64)		61.3	65.4 b	65.3	63.1 b	64.5	64.3	66.8	65.9	67.3		
Employment rate (Born outside EU-28 aged 15-64)		43.3	50.1 b	39.8	46.5 b	52.7	49.7	50.1	54.2	55.3		
Underemployment (% of labour force aged 15-74)				1.4	3.5 b	3.1	2.6	3.9	3.4	3.2		
Seeking but not available (% of labour force aged 15-74)		0.7 u		0.8 u	1.0 bu	1.0 u	1.0	1.0	0.9	1.0		
Discouraged, available but not seeking (% of labour force aged 15-74)				0.7 u	7.1 b	6.6	7.3	7.3	8.3	8.2		

Luxembourg		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	17.3	16.5	15.9	15.5	17.8	17.1	16.8	18.4	19.0	19.0
		At-risk-of-poverty (% of total population)	13.7	14.1	13.5	13.4	14.9	14.5	13.6	15.1	15.9	16.4
		At-risk-of-poverty threshold (PPS single person)	16538	15851	16108	16166	16265	15961	15961	15948	16818	16962
		Poverty gap (%)	18.6	19.7	18.8	16.6	17.6	18.6	15.7	15.0	17.5	16.3
		Persistent at-risk-of-poverty (% of total population)			8.9	8.4	8.8	6.0	6.5	7.1	9.2	8.7
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	23.8	23.6	23.4	23.6	27.0	29.1	27.2	29.0	29.4	27.6
		Impact of social transfers (excl. pensions) in reducing poverty (%)	42.4	40.3	42.3	43.2	44.8	50.2	50.0	47.9	45.9	40.6
		Severe Material Deprivation (% of total population)	1.8	1.1	0.8	0.7	1.1	0.5	1.2	1.3	1.8	1.4
		Share of people living in low work intensity households (% of people aged 0-59)	5.7	5.2	5.0	4.7	6.3	5.5	5.8	6.1	6.6	6.1
		Gross Household Disposable income adjusted for consumer prices (growth %)										
		Income quintile share ratio S80/S20	3.9	4.2	4.0	4.1	4.3	4.1	4.0	4.1	4.6	4.4
		GINI coefficient	26.5	27.8	27.4	27.7	29.2	27.9	27.2	28.0	30.4	28.7
		Early leavers from education and training (% of population aged 18-24)	13.3	14.0 b	12.5 b	13.4	7.7 b	7.1	6.2	8.1	6.1	6.1 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	5.5	6.7 b	5.7 b	6.2	5.8 b	5.1	4.7	5.9	5.0	6.3
	Male	At-risk-of-poverty or exclusion (% of male population)	16.2	15.8	15.0	14.2	16.0	16.5	15.6	17.3	18.6	18.5
		At-risk-of-poverty (% of male population)	13.2	13.8	12.9	12.5	13.8	14.6	12.7	14.7	15.7	16.3
		Poverty gap (%)	19.5	19.7	19.1	15.4	16.9	18.6	15.7	14.9	18.0	17.5
		Persistent at-risk-of-poverty (% of male population)			7.9	7.7	7.7	5.2	5.6	6.4	8.5	7.2
		Severe Material Deprivation (% of male population)	2.1	0.9	0.8	0.6	0.9	0.4	1.3	1.3	1.5	1.4
		Share of people living in low work intensity households (% of males aged 0-59)	5.0	4.5	4.3	3.8	4.9	4.8	5.1	5.1	6.5	5.6
Life expectancy at birth (years)		76.7	76.8	76.7	78.1	78.1	77.9	78.5	79.1	79.8		
Healthy life years at birth (years) - men		62.3	61.2	62.3	64.8	65.1	64.4	65.8	65.8	63.8		
Early leavers from education and training (% of males aged 18-24)		17.0	17.6 b	16.6 b	15.8	8.9 b	8.0	7.6	10.7	8.4	8.3 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)		4.3	6.1 b	4.7 b	4.6	6.0 b	5.6	4.6	6.3	5.9	7.8	
Female		At-risk-of-poverty or exclusion (% of female population)	18.3	17.1	16.9	16.7	19.6	17.7	18.0	19.4	19.4	19.5
		At-risk-of-poverty (% of female population)	14.2	14.3	14.1	14.3	16.0	14.4	14.5	15.6	16.0	16.6
		Poverty gap (%)	17.7	20.3	18.7	17.6	19.2	18.8	15.9	15.5	17.4	15.8
		Persistent at-risk-of-poverty (% of female population)			9.8	9.2	9.9	6.9	7.5	7.8	9.8	10.3
	Severe Material Deprivation (% of female population)	1.6	1.3	0.8	0.7	1.3	0.7	1.1	1.3	2.0	1.4	
	Share of people living in low work intensity households (% of females aged 0-59)	6.5	5.9	5.8	5.5	7.8	6.3	6.6	7.2	6.6	6.6	
	Life expectancy at birth (years)	82.3	81.9	82.2	83.1	83.3	83.5	83.6	83.8	83.9		
	Healthy life years at birth (years) - women	62.4	62.1	64.6	64.2	65.9	66.4	67.1	66.4	62.9		
	Early leavers from education and training (% of females aged 18-24)	9.6	10.4 b	8.4 b	10.9	6.6 b	6.0	4.8 u	5.5	3.7 u	3.7 bu	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	6.7	7.3 b	6.6 b	7.8	5.5 b	4.7	4.9	5.5	4.0	4.6	
	Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	22.8	20.4	21.2	20.9	23.7	22.3	21.7	24.6	26.0	26.4
		At-risk-of-poverty (% of Children population)	20.2	19.6	19.9	19.8	22.3	21.4	20.3	22.6	23.9	25.4
		Severe Material Deprivation (% of Children population)	3.3	1.6	0.7	0.9	1.2	0.2	1.2	1.7	2.4	1.8
		Share of children living in low work intensity households (% of Children population)	3.0	3.1	3.5	3.2	4.1	3.2	2.9	4.0	4.5	4.2
Risk of poverty of children in households at work (Working Intensity > 0.2)		19.0	17.9	18.1	18.2	20.3	19.7	19.0	20.8	21.6	22.6	
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)		43.4	40.2	40.1	41.3	43.7	50.4	50.0	50.7	46.3	40.4	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	17.3	16.8	16.0	15.8	18.2	17.5	17.6	18.8	19.0	19.4	
	At-risk-of-poverty (% of Working age population)	12.8	13.5	12.7	12.9	14.2	13.9	13.1	14.5	15.0	15.8	
	Severe Material Deprivation (% of Working age population)	1.7	1.1	0.9	0.7	1.3	0.7	1.4	1.4	1.7	1.5	
	Very low work intensity (18-59)	6.7	5.9	5.6	5.2	7.1	6.4	6.9	6.8	7.4	6.8	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	9.8	10.3	9.3	9.4	10.1	10.6	9.8	10.3	11.2	11.1	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	43.4	42.3	44.8	44.9	46.2	50.5	50.8	47.3	46.8	41.3	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	8.0	8.3	7.2	5.4	6.2	6.1	4.7	6.1	7.0	6.4	
	At-risk-of-poverty (% of Elderly population)	7.8	7.9	7.2	5.4	6.0	5.9	4.7	6.1	6.2	6.3	
	Severe Material Deprivation (% of Elderly population)	0.2	0.4	0.6	0.0	0.2	0.1	0.0	0.0	0.9	0.1	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.96	0.96	0.96	0.97	1.01	1.05	1.05	1.10	1.13	1.11	
	Aggregate replacement ratio (ratio)	0.63	0.66	0.61	0.58	0.62	0.68	0.74	0.79	0.78	0.85	
Expenditure in social protection (% of GDP)	Sickness/Health care	5.5	5.1	4.9	5.3	6.1	5.8	5.6	5.8	6.0		
	Disability	2.8	2.6	2.3	2.4	2.7	2.6	2.6	2.6	2.5		
	Old age and survivors	7.8	7.3	7.1	7.6	8.7	8.2	8.3	8.7	8.7		
	Family/Children	3.6	3.4	3.1	4.2	4.3	4.0	3.6	3.7	3.7		
	Unemployment	1.1	1.0	0.9	1.0	1.3	1.3	1.2	1.3	1.5		
	Housing and Social exclusion n.e.c.	0.6	0.6	0.6	0.6	0.9	0.8	0.8	0.8	0.8		
	Total (including Admin and Other expenditures) of which: Means tested benefits	21.7	20.4	19.3	21.4	24.3	23.1	22.5	23.3	23.6		

## Macro economic indicators: Hungary

Hungary		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	4.4	3.8	0.4	0.8	-6.6	0.7	1.8	-1.7	1.9	3.7		
		Total employment	-0.3	0.4	0.1	-2.0	-2.5	-0.3	0.0	0.1	0.9	4.6		
		Labour productivity	4.7	3.4	0.3	2.9	-4.2	1.0	1.7	-1.8	0.9	-0.9		
		Annual average hours worked	0.0	-0.2	-0.2	0.2	-0.9	-9.5 b	-0.4 b	-1.1	-0.4	0.5		
		Productivity per hour worked	4.6	3.5	0.5	2.7	-3.3	11.6 b	2.1 b	-0.7	1.3	-1.4		
		Harmonized CPI	3.5	4.0	7.9	6.0	4.0	4.7	3.9	5.7	1.7	0.0		
		Price deflator GDP	2.4	3.5	5.4	5.0	3.9	2.3	2.2	3.5	3.1	3.2		
		Nominal compensation per employee	7.6	5.3	5.6	7.3	-1.3	-0.3	3.1	2.1	1.8	0.9		
		Real compensation per employee (GDP deflator)	5.0	1.7	0.2	2.2	-5.1	-2.5	0.9	-1.4	-1.2	-2.3		
		Real compensation per employee (private consumption deflator)	4.0	1.2	-2.2	1.2	-5.2	-4.8	-0.8	-3.4	0.1	0.8		
		Nominal unit labour costs	2.8	1.9	5.3	4.3	3.0	-1.3	1.4	4.0	0.9	1.8		
		Real unit labour costs	0.3	-1.6	-0.1	-0.6	-1.0	-3.5	-0.8	0.4	-2.2	-1.4		
		Labour Market Indicators	Total	Total population (000)	9932	9918	9890	9862	9834	9806	9778	9751	9724	9695
				Population aged 15-64 (000)	6815	6807	6789	6772	6754	6736	6719	6694	6647	6588
Total employment (000)	3902			3928	3902	3848	3748	3732	3759	3827	3893	4101		
Employment aged 15-64 (000)	3879			3904	3873	3818	3717	3701	3724	3793	3860	4070		
Employment rate (% population aged 20-64)	62.2			62.6	62.3	61.5	60.1	59.9	60.4	61.6	63.0	66.7		
Employment rate (% population aged 15-64)	56.9			57.4	57.0	56.4	55.0	54.9	55.4	56.7	58.1	61.8		
Employment rate (% population aged 15-24)	21.8			21.6	21.1	20.2	18.1	18.3	18.0	18.4	20.1	23.5		
Employment rate (% population aged 25-54)	73.7			74.5	74.7	74.5	72.9	72.5	73.0	74.6	75.7	79.2		
Employment rate (% population aged 55-64)	33.0			33.2	32.2	30.9	31.9	33.6	35.3	36.1	37.9	41.7		
FTE employment rate (% population aged 20-64)	61.5 b			62.0	61.6	60.8	59.2	58.9	59.2	60.5	62.2	65.3		
Self-employed (% total employment)	12.7			12.2	11.6	11.4	11.2	10.9	10.7	10.7	9.9	9.6		
Part-time employment (% total employment)	4.1			3.9	4.2	4.7	5.5	5.9	6.8	7.1	6.8	6.4		
Fixed-term contracts (% total employees)	7.0			6.9	7.3	7.9	8.5	9.8	9.1	9.5	10.9	10.8		
Employment in Services (% total employment)	60.7			61.0	61.7	62.0	63.0	63.5	63.3	63.9	65.8	66.2		
Employment in Industry (% total employment)	31.0			31.0	30.8	30.9	30.0	29.2	29.7	28.9	27.3	27.1		
Employment in Agriculture (% total employment)	8.3			8.0	7.5	7.1	7.1	7.2	6.9	7.2	6.9	6.7		
Activity rate (% population aged 15-64)	61.3			62.0	61.6	61.2	61.2	61.9	62.4	63.7	64.7	67.0		
Activity rate (% population aged 15-24)	27.1			26.7	25.7	25.1	24.7	24.8	24.3	25.7	27.4	29.5		
Activity rate (% population aged 25-54)	78.7			79.9	80.1	80.3	80.3	80.9	81.3	82.9	83.3	85.0		
Activity rate (% population aged 55-64)	34.3			34.5	33.7	32.6	34.1	36.5	38.8	39.5	41.2	44.6		
Total unemployment (000)	302			317	312	326 i	418	469	466	473	441	343		
Unemployment rate (% labour force)	7.2			7.5	7.4	7.8 i	10.0	11.2	11.0	11.0	10.2	7.7		
Youth unemployment rate (% labour force 15-24)	19.4			19.1	18.1	19.5 i	26.4	26.4	26.0	28.2	26.6	20.4		
Long-term unemployment rate (% labour force)	3.2			3.4	3.4	3.6	4.2	5.5	5.2	5.0	4.9	3.7		
Share of long-term unemployment (% of total unemployment)	45.0			45.3	46.7	46.2	41.5	49.0	47.6	45.3	48.6	47.5		
Youth unemployment ratio (% population aged 15-24)	5.2			5.1	4.6	4.9	6.5	6.6	6.3	7.2	7.3	6.0		
Employment rate for low skilled 25-64 (ISCED 0-2)	38.1 b			37.9	37.7	38.2	36.9	37.0	37.3	38.1	39.2	45.3 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	70.4 b			70.5	69.9	68.3	66.5	65.8	65.9	67.3	68.5	71.8 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	83.0 b			82.1	80.3	79.5	78.4	78.2	79.3	79.5	80.0	81.8 b		
Employment rate (Nationals aged 15-64)	56.9 b			57.3	57.0	56.3	55.0	54.9	55.4	56.6	58.0	61.7		
Employment rate (Other EU-28 aged 15-64)				60.8	63.5	64.5	65.9	67.9	61.7	62.2	65.1	71.6		
Employment rate (Other than EU-28 aged 15-64)				63.4	65.6	71.6	61.7	49.7	51.2	59.4	63.5	69.9		
Employment rate (Born in the same country aged 15-64)	56.8 b			57.3	56.9	56.2	54.8	54.8	55.3	56.4	57.9	61.6		
Employment rate (Born in other EU-28 aged 15-64)				61.3	64.4	64.0	65.3	67.1	64.1	66.5	67.8	72.5		
Employment rate (Born outside EU-28 aged 15-64)		60.9	63.3	66.0	62.5	59.0	59.0	66.6	67.6	64.3				
Underemployment (% of labour force aged 15-74)				0.1	1.3	1.4	1.6	2.0	2.1	1.8				
Seeking but not available (% of labour force aged 15-74)	0.3 b	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2				
Discouraged, available but not seeking (% of labour force aged 15-74)	4.4 b	4.0	3.8	4.1	4.6	4.8	5.2	5.2	5.2	3.9				



Hungary		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	4698	4691	4680	4669	4657	4646	4636	4632	4622	4610
		Population aged 15-64 (000)	3328	3320	3315	3310	3304	3299	3294	3292	3272	3247
		Total employment (000)	2116	2139	2129	2094	2025	1993	2021	2049	2104	2221
		Employment aged 15-64 (000)	2101	2123	2112	2076	2007	1975	2001	2029	2085	2203
		Employment rate (% population aged 20-64)	69.2	70.1	69.8	68.7	66.5	65.5	66.4	67.3	69.3	73.5
		Employment rate (% population aged 15-64)	63.1	63.9	63.7	62.7	60.7	59.9	60.7	61.6	63.7	67.8
		Employment rate (% population aged 15-24)	24.4	24.6	24.4	23.3	20.0	19.9	19.7	19.8	23.0	26.4
		Employment rate (% population aged 25-54)	80.3	81.3	81.6	81.3	79.1	78.0	79.5	80.2	81.4	85.3
		Employment rate (% population aged 55-64)	40.6	41.2	40.1	37.7	38.7	38.6	39.3	41.4	44.8	49.6
		FTE employment rate (% population aged 20-64)	68.9 b	69.8	69.5	68.3	66.0	65.0	65.7	66.7	69.0	72.6
		Self-employed (% total employment)	15.8	15.1	14.1	14.3	13.8	13.5	13.4	13.1	12.1	11.9
		Part-time employment (% total employment)	2.7	2.6	2.8	3.4	3.9	4.0	4.8	4.7	4.5	4.5
		Fixed-term contracts (% total employees)	7.6	7.5	7.8	8.6	9.1	10.2	9.7	10.5	11.4	11.2
		Employment in Services (% total employment)	49.1	49.4	50.0	50.6	51.1	51.8	51.8	52.5	54.7	55.0
		Employment in Industry (% total employment)	39.6	39.7	39.4	39.6	39.3	38.0	38.6	37.6	35.7	35.8
		Employment in Agriculture (% total employment)	11.3	10.9	10.5	9.8	9.6	10.2	9.6	9.9	9.6	9.2
		Activity rate (% population aged 15-64)	67.9	68.9	68.6	68.0	67.7	67.8	68.4	69.6	71.0	73.4
		Activity rate (% population aged 15-24)	30.3	30.2	29.5	28.7	27.7	27.5	27.0	27.9	31.0	33.0
		Activity rate (% population aged 25-54)	85.5	86.9	87.2	87.3	87.1	87.3	88.2	89.4	89.5	91.2
		Activity rate (% population aged 55-64)	42.3	43.0	42.1	39.8	41.5	42.2	43.7	45.4	49.0	53.2
		Total unemployment (000)	159	165	164	174 i	232	262	252	262	239	182
	Unemployment rate (% labour force)	7.0	7.2	7.1	7.7 i	10.3	11.6	11.1	11.3	10.2	7.6	
	Youth unemployment rate (% labour force 15-24)	19.6	18.6	17.6	18.9 i	27.9	27.8	27.0	29.1	25.6	20.0	
	Long-term unemployment rate (% labour force)	3.3	3.3	3.3	3.6	4.3	5.7	5.2	5.2	5.0	3.6	
	Share of long-term unemployment (% of total unemployment)	46.6	46.2	46.3	47.3	41.4	49.4	47.3	45.5	48.6	48.0	
	Youth unemployment ratio (% population aged 15-24)	6.0	5.6	5.1	5.4	7.7	7.6	7.3	8.1	7.9	6.6	
	Employment rate for low skilled 25-64 (ISCED 0-2)	45.4 b	45.9	46.0	46.9	45.1	44.0	45.8	46.8	47.2	54.7 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	76.9 b	77.5	76.6	74.9	72.6	71.1	71.5	72.3	74.2	78.2 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	87.5 b	86.7	86.2	84.6	83.3	82.8	84.7	85.7	86.8	88.4 b	
	Employment rate (Nationals aged 15-64)	63.0 b	63.9	63.6	62.6	60.6	59.8	60.7	61.5	63.6	67.7	
	Employment rate (Other EU-28 aged 15-64)		73.2	78.8	78.8	76.4	72.6	75.1	80.4	83.0	84.0	
	Employment rate (Other than EU-28 aged 15-64)		81.3	75.0	80.8	72.0 u	56.9 u	60.6	69.0	77.9	92.5 u	
	Employment rate (Born in the same country aged 15-64)	63.0 b	63.8	63.5	62.5	60.5	59.7	60.5	61.4	63.4	67.6	
	Employment rate (Born in other EU-28 aged 15-64)		72.3	75.3	71.7	73.2	70.8	72.5	72.5	78.1	83.8	
	Employment rate (Born outside EU-28 aged 15-64)		72.7	72.1	76.1	74.1	64.3	69.0	75.7	79.1	79.4	
	Underemployment (% of labour force aged 15-74)				0.1 u	1.0	1.1	1.3	1.4	1.6	1.5	
	Seeking but not available (% of labour force aged 15-74)	0.2 bu	0.2 u	0.2 u	0.2 u	0.3	0.2 u	0.2	0.2 u	0.2	0.2 u	
	Discouraged, available but not seeking (% of labour force aged 15-74)	4.4 b	3.9	3.7	3.8	4.4	4.5	5.0	4.9	4.9	3.6	

Hungary		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	5234	5227	5210	5193	5177	5160	5143	5118	5102	5085
		Population aged 15-64 (000)	3486	3487	3475	3462	3449	3437	3424	3402	3375	3341
		Total employment (000)	1785	1790	1773	1755	1723	1740	1738	1778	1789	1880
		Employment aged 15-64 (000)	1777	1781	1761	1742	1711	1726	1723	1764	1776	1867
		Employment rate (% population aged 20-64)	55.6	55.6	55.2	54.8	54.0	54.6	54.7	56.2	56.9	60.2
		Employment rate (% population aged 15-64)	51.0	51.1	50.7	50.3	49.6	50.2	50.3	51.9	52.6	55.9
		Employment rate (% population aged 15-24)	19.2	18.6	17.7	17.1	16.2	16.6	16.2	17.0	17.0	20.5
		Employment rate (% population aged 25-54)	67.2	67.8	67.9	67.9	66.9	67.0	66.6	69.0	70.0	73.2
		Employment rate (% population aged 55-64)	26.7	26.6	25.8	25.3	26.3	29.4	31.9	31.7	32.1	35.2
		FTE employment rate (% population aged 20-64)	54.6 b	54.6	54.2	53.7	52.7	53.2	53.0	54.6	55.6	58.3
		Self-employed (% total employment)	9.1	8.7	8.6	8.0	8.1	7.9	7.5	8.0	7.2	6.8
		Part-time employment (% total employment)	5.8	5.5	5.8	6.3	7.4	8.1	9.1	9.8	9.4	8.7
		Fixed-term contracts (% total employees)	6.4	6.1	6.8	7.1	7.8	9.3	8.4	8.5	10.4	10.3
		Employment in Services (% total employment)	74.9	75.2	76.0	75.8	77.2	77.2	76.9	77.3	78.8	79.3
		Employment in Industry (% total employment)	20.6	20.3	20.2	20.3	18.8	19.1	19.3	18.6	17.4	16.9
		Employment in Agriculture (% total employment)	4.6	4.5	3.8	3.9	4.0	3.7	3.8	4.0	3.8	3.7
		Activity rate (% population aged 15-64)	55.1	55.5	54.9	54.7	55.0	56.3	56.6	58.0	58.6	60.7
		Activity rate (% population aged 15-24)	23.8	23.2	21.8	21.4	21.5	22.0	21.5	23.4	23.6	25.9
		Activity rate (% population aged 25-54)	72.1	73.1	73.2	73.4	73.6	74.6	74.4	76.5	77.1	78.8
		Activity rate (% population aged 55-64)	27.7	27.7	26.9	26.6	28.1	31.7	34.8	34.5	34.7	37.4
		Total unemployment (000)	143	152	148	153 i	186	208	214	211	202	162
		Unemployment rate (% labour force)	7.4	7.8	7.7	8.0 i	9.7	10.7	11.0	10.6	10.1	7.9
		Youth unemployment rate (% labour force 15-24)	19.1	19.8	18.6	20.4 i	24.5	24.7	24.7	27.1	27.9	20.9
		Long-term unemployment rate (% labour force)	3.2	3.5	3.6	3.6	4.1	5.2	5.3	4.8	4.9	3.7
		Share of long-term unemployment (% of total unemployment)	43.4	44.3	47.2	45.0	41.6	48.5	47.9	45.0	48.5	46.8
		Youth unemployment ratio (% population aged 15-24)	4.5	4.6	4.1	4.4	5.3	5.4	5.3	6.3	6.6	5.4
		Employment rate for low skilled 25-64 (ISCED 0-2)	33.2 b	32.6	32.1	32.3	31.4	32.2	31.5	31.8	33.4	38.1 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	63.3 b	62.8	62.6	61.1	59.5	59.8	59.6	61.6	62.0	64.6 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	79.4 b	78.5	75.6	75.6	74.8	74.8	75.3	75.0	75.1	77.0 b
		Employment rate (Nationals aged 15-64)	51.0 b	51.1	50.7	50.3	49.6	50.2	50.4	51.9	52.6	55.9
		Employment rate (Other EU-28 aged 15-64)		48.2	49.9	49.4	55.2	64.3	51.3	48.3	48.2	57.3
		Employment rate (Other than EU-28 aged 15-64)			57.2 u	64.0	54.0 u	40.9 u	40.8 u	47.5 u		50.9 u
		Employment rate (Born in the same country aged 15-64)	50.9 b	51.1	50.6	50.2	49.4	50.0	50.2	51.7	52.5	55.8
Employment rate (Born in other EU-28 aged 15-64)		52.1	55.3	57.5	59.0	64.3	57.8	61.4	58.8	62.1		
Employment rate (Born outside EU-28 aged 15-64)		50.1	55.8	59.3	55.4	53.8	48.6	57.5	57.0	52.4		
Underemployment (% of labour force aged 15-74)				0.2 u	1.6	1.8	2.0	2.7	2.7	2.2		
Seeking but not available (% of labour force aged 15-74)	0.4 b	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3		
Discouraged, available but not seeking (% of labour force aged 15-74)	4.3 b	4.1	3.9	4.4	4.9	5.1	5.5	5.5	5.6	4.3		

Hungary		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	32.1	31.4	29.4	28.2	29.6	29.9	31.0	32.4	33.5	31.1
		At-risk-of-poverty (% of total population)	13.5	15.9	12.3	12.4	12.4	12.3	13.8	14.0	14.3	14.6
		At-risk-of-poverty threshold (PPS single person)	3337 b	3646	3894	3958	4097	4025	4321	4635	4442	4587
		Poverty gap (%)	18.4	24.1	19.8	17.3	16.3	16.5	18.3	21.0	21.7	22.4
		Persistent at-risk-of-poverty (% of total population)				7.7	8.6	5.7	8.8	8.4	8.0	
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	29.4	29.6	29.3	30.4	28.9	28.4	28.9	27.1	26.3	26.3
		Impact of social transfers (excl. pensions) in reducing poverty (%)	54.1	46.3	58.0	59.2	57.1	56.7	52.3	48.3	45.6	44.5
		Severe Material Deprivation (% of total population)	22.9	20.9	19.9	17.9	20.3	21.6	23.1	25.7	26.8	23.9
		Share of people living in low work intensity households (% of people aged 0-59)	9.5	13.1	11.3	12.0	11.3	11.9	12.2	12.8	12.6	12.2
		Gross Household Disposable income adjusted for consumer prices (growth %)	4.0	1.7	-3.0	-2.2	-4.1	-2.5	3.6	-3.3	1.4	2.8
		Income quintile share ratio S80/S20	4.0	5.5	3.7	3.6	3.5	3.4	3.9	4.0	4.2	4.2
		GINI coefficient	27.6 b	33.3	25.6	25.2	24.7	24.1	26.8	26.9	28.0	27.9
		Early leavers from education and training (% of population aged 18-24)	12.5	12.5 b	11.4	11.7	11.5	10.8	11.4	11.8	11.9	11.4 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	12.9	12.4 b	11.5	11.5	13.6	12.6	13.2	14.8	15.5	13.6
	Male	At-risk-of-poverty or exclusion (% of male population)	31.3	31.1	28.6	27.3	29.1	29.4	30.5	31.8	33.1	30.6
		At-risk-of-poverty (% of male population)	13.9	16.3	12.3	12.4	12.8	12.6	14.1	14.2	14.6	14.9
		Poverty gap (%)	19.3	25.3	20.5	17.9	16.3	16.9	18.5	21.8	22.5	23.0
		Persistent at-risk-of-poverty (% of male population)				7.8	9.2	6.2	8.9	8.6	8.6	
		Severe Material Deprivation (% of male population)	22.6	20.8	19.6	17.3	20.2	21.5	22.7	25.2	26.6	23.5
		Share of people living in low work intensity households (% of males aged 0-59)	8.4	12.5	10.8	11.1	10.6	11.3	11.9	12.4	12.5	11.8
Life expectancy at birth (years)		68.7	69.2	69.4	70.0	70.3	70.7	71.2	71.6	72.2		
Healthy life years at birth (years) - men		52.2 d	54.4 d	55.1	54.8	55.9	56.3	57.6	59.2	59.1		
Early leavers from education and training (% of males aged 18-24)		13.7	13.7 b	12.5	12.4	12.2	11.5	12.3	12.3	12.5	12.5 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)		11.2	11.0 b	9.9	10.1	12.7	11.7	12.1	13.6	13.6	12.0	
Female	At-risk-of-poverty or exclusion (% of female population)	32.8	31.8	30.1	29.0	30.0	30.3	31.4	33.0	33.9	31.5	
	At-risk-of-poverty (% of female population)	13.2	15.5	12.3	12.4	12.1	12.0	13.6	13.9	14.0	14.4	
	Poverty gap (%)	18.0	23.3	18.9	17.0	16.3	15.6	18.0	20.1	20.7	22.0	
	Persistent at-risk-of-poverty (% of female population)				7.5	8.1	5.4	8.6	8.2	7.5		
	Severe Material Deprivation (% of female population)	23.1	21.0	20.1	18.4	20.4	21.6	23.5	26.1	26.9	24.3	
	Share of people living in low work intensity households (% of females aged 0-59)	10.6	13.7	11.8	12.9	12.0	12.5	12.5	13.2	12.6	12.6	
	Life expectancy at birth (years)	77.2	77.8	77.8	78.3	78.4	78.6	78.7	78.7	79.1		
	Healthy life years at birth (years) - women	54.3 d	57.2 d	57.8	58.2	58.2	58.6	59.1	60.5	60.1		
	Early leavers from education and training (% of females aged 18-24)	11.3	11.3 b	10.2	11.0	10.8	10.1	10.6	11.2	11.4	10.3 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	14.7	13.9 b	13.0	12.9	14.5	13.4	14.3	16.0	17.4	15.3	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	38.4	37.7	34.1	33.4	37.2	38.7	39.6	40.9	43.0	41.4	
	At-risk-of-poverty (% of Children population)	19.9	24.8	18.8	19.7	20.6	20.3	23.0	22.6	23.2	24.6	
	Severe Material Deprivation (% of Children population)	27.5	24.8	24.4	21.5	25.5	28.8	29.8	33.4	35.0	32.4	
	Share of children living in low work intensity households (% of Children population)	9.6	14.0	10.0	11.1	11.9	13.9	14.1	15.7	14.4	14.8	
	Risk of poverty of children in households at work (Working Intensity > 0.2)	14.7	15.7	12.6	13.3	14.1	12.4	14.7	12.2	14.1	15.0	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	55.0	43.6	57.8	57.7	55.5	57.2	51.6	47.6	46.7	46.1	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	32.1	31.1	29.8	29.1	30.2	30.5	31.7	32.9	34.5	31.5	
	At-risk-of-poverty (% of Working age population)	13.2	14.5	11.6	12.0	11.9	11.9	13.6	13.6	14.3	14.5	
	Severe Material Deprivation (% of Working age population)	22.2	20.2	19.0	17.6	20.1	21.3	23.1	25.6	27.0	23.6	
	Very low work intensity (18-59)	9.5	12.8	11.8	12.3	11.1	11.3	11.6	11.9	12.0	11.4	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	8.8	6.9	5.8	5.8	6.2	5.4	6.1	5.3	6.6	6.4	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	54.6	49.1	59.3	60.3	58.0	57.0	52.3	49.3	45.4	44.2	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	23.9	23.9	21.1	17.5	17.5	16.8	18.0	20.6	19.0	18.1	
	At-risk-of-poverty (% of Elderly population)	6.5	9.4	6.1	4.3	4.6	4.1	4.5	6.0	4.4	4.2	
	Severe Material Deprivation (% of Elderly population)	19.9	18.6	17.2	14.4	14.6	14.1	15.5	17.4	16.7	15.8	
	Relative median income of elderly (ratio with median income of people younger than 65)	1.01 b	0.94	0.97	1.0	1.02	1.01	1.0	0.97	1.05	1.08	
	Aggregate replacement ratio (ratio)	0.61	0.54	0.58	0.61	0.62	0.60	0.59	0.58	0.61	0.63	
Expenditure in social protection (% of GDP)	Sickness/Health care	6.5	6.4	5.7	5.7	5.8	5.8	5.6	5.1	5.1		
	Disability	2.1	2.2	2.1	2.1	2.1	1.9	1.7	1.6	1.5		
	Old age and survivors	9.1	9.3	9.8	10.2	10.4	10.4	10.5	11.2	11.2		
	Family/Children	2.5	2.8	2.8	2.8	3.0	2.9	2.8	2.7	2.6		
	Unemployment	0.6	0.7	0.8	0.8	1.0	0.9	0.8	0.6	0.5		
	Housing and Social exclusion n.e.c.	0.7	0.7	1.1	0.9	0.8	0.7	0.5	0.4	0.4		
	Total (including Admin and Other expenditures) of which: Means tested benefits	21.9 1.1	22.5 1.0	22.7 1.4	22.9 1.2	23.4 1.2	23.1 1.1	22.1 1.0	21.8 0.9	21.6 0.9		

## Macro economic indicators: Malta

Malta		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	3.8	1.8	4.0	3.3	-2.5	3.5	2.1	2.5	2.6	3.5		
		Total employment	1.3	1.5	2.2	2.5	0.0	1.7	2.8	2.3	4.2	4.5		
		Labour productivity	2.5	0.3	1.7	0.8	-2.5	1.8	-0.7	0.3	-1.5	-1.0		
		Annual average hours worked	3.6	-0.1	-0.2	0.3	-0.4	-2.0	-2.3	-1.6	-2.0	-1.9		
		Productivity per hour worked	-1.0	0.4	1.9	0.5	-2.1	3.9	1.6	1.9	0.5	0.9		
		Harmonized CPI	2.5	2.6	0.7	4.7	1.8	2.0	2.5	3.2	1.0	0.8		
		Price deflator GDP	2.2	2.7	2.8	3.0	2.7	3.8	2.3	2.0	1.9	1.8		
		Nominal compensation per employee	1.3	4.4	3.7	4.1	3.0	2.0	3.5	3.9	0.4	0.3		
		Real compensation per employee (GDP deflator)	-0.9	1.6	0.9	1.1	0.3	-1.8	1.2	1.9	-1.4	-1.5		
		Real compensation per employee (private consumption deflator)	-1.2	1.8	3.0	-0.6	1.1	0.0	1.0	0.6	-0.5	-0.5		
		Nominal unit labour costs	-1.1	4.1	2.0	3.2	5.6	0.2	4.2	3.6	2.0	1.2		
		Real unit labour costs	-3.3	1.2	-0.9	0.3	2.9	-3.5	1.9	1.7	0.1	-0.5		
		Labour Market Indicators	Total	Total population (000)	397 b	399	400	402	405	406	408	410	414	418
				Population aged 15-64 (000)	277 b	279	281	284	286	285	284	284	284	285
Total employment (000)	149 b			151	155	159	160	163	167	170	176	176	181	
Employment aged 15-64 (000)	148 b			150	155	158	158	161	164	168	173	173	178	
Employment rate (% population aged 20-64)	57.4 b			57.9	58.6	59.2	59.0	60.1	61.6	63.1	64.8	66.3	66.3	
Employment rate (% population aged 15-64)	53.6 b			53.9	55.0	55.5	55.3	56.2	57.9	59.1	60.8	62.3	62.3	
Employment rate (% population aged 15-24)	45.0 b			44.8	46.8	46.6	44.1	44.2	45.0	43.8	46.0	46.1	46.1	
Employment rate (% population aged 25-54)	63.1 b			64.4	66.2	67.2	68.1	68.6	70.6	72.6	74.0	75.8	75.8	
Employment rate (% population aged 55-64)	31.9 b			30.7	29.5	30.1	29.1	31.9	33.2	34.7	36.3	37.7	37.7	
FTE employment rate (% population aged 20-64)	56.2 b			56.4	56.9	57.4	57.1	58.1	59.3	60.4	61.8	62.7	62.7	
Self-employed (% total employment)	12.1 b			12.0	12.2	12.3	12.7	12.5	12.2	12.7	12.2	11.7	11.7	
Part-time employment (% total employment)	9.3 b			9.9	10.8	11.5	11.5	12.4	13.4	14.1	15.2	16.5	16.5	
Fixed-term contracts (% total employees)	4.4 b			3.8	5.1	4.3	5.0	5.4	6.6	6.8	7.5	7.7	7.7	
Employment in Services (% total employment)	71.4			72.0	72.8	74.5	75.8	76.0	76.2 b	87.3	78.2	79.2 b	79.2 b	
Employment in Industry (% total employment)	26.3			25.8	25.0	23.5	22.0	21.8	21.8 b	11.7	20.0	19.1 b	19.1 b	
Employment in Agriculture (% total employment)	2.3			2.2	2.2	2.0	2.2	2.1	2.0 b	1.1	1.8	1.7 b	1.7 b	
Activity rate (% population aged 15-64)	57.6 b			57.9	58.8	59.1	59.4	60.4	61.8	63.1	65.0	66.3	66.3	
Activity rate (% population aged 15-24)	53.6 b			53.0	54.1	52.7	51.6	50.9	51.9	50.9	52.8	52.2	52.2	
Activity rate (% population aged 25-54)	66.4 b			67.9	69.8	70.7	71.9	72.9	74.7	76.5	78.1	79.5	79.5	
Activity rate (% population aged 55-64)	33.0 b			31.5	30.6	31.4	30.9	33.3	34.2	36.0	38.5	40.3	40.3	
Total unemployment (000)	11			11	11	10	12	12	11	11	12	11	11	
Unemployment rate (% labour force)	6.9			6.8	6.5	6.0	6.9	6.9	6.4	6.3	6.4	5.9	5.9	
Youth unemployment rate (% labour force 15-24)	16.1			15.5	13.5	11.7	14.5	13.2	13.3	14.1	13.0	11.8	11.8	
Long-term unemployment rate (% labour force)	3.3			2.7	2.7	2.5	2.9	3.1	3.1	3.1	2.9	2.7	2.7	
Share of long-term unemployment (% of total unemployment)	48.6 b			39.6	41.3	42.7	42.0	44.9	47.3	48.5	45.7	46.9	46.9	
Youth unemployment ratio (% population aged 15-24)	8.6 b			8.2	7.3	6.1	7.5	6.7	6.9	7.2	6.9	6.2	6.2	
Employment rate for low skilled 25-64 (ISCED 0-2)	46.7 b			46.7	47.3	47.9	47.2	47.6	49.1 b	49.5	50.9	52.5 b	52.5 b	
Employment rate for medium skilled 25-64 (ISCED 3-4)	82.4 b			82.8	81.4	79.8	79.8	79.5	77.6 b	80.9	80.4	81.6 b	81.6 b	
Employment rate for high skilled 25-64 (ISCED 5-8)	84.3 b			83.0	86.8	87.0	85.6	86.5	88.2 b	88.1	88.1	88.2 b	88.2 b	
Employment rate (Nationals aged 15-64)	53.6 b			54.0	55.1	55.6	55.3	56.2	57.9	59.0	60.9	62.4	62.4	
Employment rate (Other EU-28 aged 15-64)				53.3	49.2	51.6	48.8	55.6	53.0	59.1	52.0	57.7	57.7	
Employment rate (Other than EU-28 aged 15-64)				47.2	52.1	54.6	57.3	59.6	61.2	62.5	62.3	62.8	62.8	
Employment rate (Born in the same country aged 15-64)	53.5 b			53.9	54.8	55.3	55.0	56.0	57.7	58.9	60.8	62.2	62.2	
Employment rate (Born in other EU-28 aged 15-64)				55.1	54.5	54.9	53.7	57.0	54.1	57.9	57.2	65.2	65.2	
Employment rate (Born outside EU-28 aged 15-64)				53.5	59.1	63.7	62.3	63.3	65.1	64.8	63.4	64.2	64.2	
Underemployment (% of labour force aged 15-74)						1.8	1.9	2.5	2.4	2.2	2.7	2.4	2.4	
Seeking but not available (% of labour force aged 15-74)	0.4 bu	0.8	0.8			0.2 u		0.3 u	0.2 u	0.2 u	0.2 u			
Discouraged, available but not seeking (% of labour force aged 15-74)	1.6 b		1.5	1.3	1.1	1.1	2.2	2.5	1.9	1.3	1.3			

Malta		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		
Labour Market Indicators	Male	Total population (000)	198 b	199	199	201	202	203	203	205	207	209	
		Population aged 15-64 (000)	140 b	141	142	144	145	145	144	144	145	145	
		Total employment (000)	104 b	105	105	106	106	107	108	108	110	112	
		Employment aged 15-64 (000)	103 b	104	105	105	104	105	105	106	106	107	109
		Employment rate (% population aged 20-64)	79.7 b	79.6	79.0	78.5	77.5	78.2	79.0	79.2	79.4	80.3	
		Employment rate (% population aged 15-64)	73.5 b	73.6	73.5	72.9	71.9	72.5	73.8	73.8	74.1	74.9	
		Employment rate (% population aged 15-24)	46.7 b	47.5	48.9	48.0	45.8	45.9	48.0	46.7	47.5	45.6	
		Employment rate (% population aged 25-54)	89.1 b	89.7	90.3	89.5	89.3	89.1	90.0	89.7	89.6	90.5	
		Employment rate (% population aged 55-64)	52.0 b	50.6	47.4	47.9	46.3	50.0	51.5	53.1	53.9	55.6	
		FTE employment rate (% population aged 20-64)	80.1 b	80.0	79.7	78.9	77.6	78.3	78.8	78.7	78.8	79.5	
		Self-employed (% total employment)	15.1 b	15.2	15.1	15.6	16.0	16.2	15.9	16.6	16.3	15.3	
		Part-time employment (% total employment)	4.4 b	4.7	4.3	4.5	5.3	5.9	6.7	7.0	8.2	8.5	
		Fixed-term contracts (% total employees)	3.6 b	2.7	3.7	3.4	3.9	4.3	5.7	6.1	6.9	6.8	
		Employment in Services (% total employment)	65.2 b	65.6	66.0	66.8	69.0	69.4	69.5	82.6	71.7	72.3	
		Employment in Industry (% total employment)	31.7 b	31.3	31.0	30.4	28.0	27.6	27.6	15.7	25.7	25.3	
		Employment in Agriculture (% total employment)	3.1 b	3.1	3.1	2.8	3.0	3.0	2.9	1.6	2.6	2.4	
		Activity rate (% population aged 15-64)	78.5 b	78.5	78.0	77.2	77.0	77.8	78.6	78.3	79.4	79.9	
		Activity rate (% population aged 15-24)	55.8 b	56.8	57.5	55.3	54.6	53.6	55.7	54.0	55.9	52.9	
		Activity rate (% population aged 25-54)	93.4 b	94.1	94.4	93.8	93.9	94.5	94.9	94.3	94.4	95.1	
		Activity rate (% population aged 55-64)	54.2 b	51.9	48.8	49.5	48.9	52.3	53.0	54.9	57.2	60.1	
		Total unemployment (000)	7	7	6	6	7	8	7	7	8	7	
		Unemployment rate (% labour force)	6.3	6.1	5.8	5.6	6.5	6.7	6.0	5.7	6.5	6.1	
		Youth unemployment rate (% labour force 15-24)	16.2	16.4	15.0	13.1	16.2	14.4	13.7	13.5	15.2	13.8	
		Long-term unemployment rate (% labour force)	3.3 b	3.0	2.8	2.7	3.1	3.3	3.3	3.3	3.4	3.1	
		Share of long-term unemployment (% of total unemployment)	54.2 b	46.9	48.2	47.7	47.8	49.9	55.5	57.6	51.0	52.1	
		Youth unemployment ratio (% population aged 15-24)	9.0 b	9.3	8.6	7.2	8.8	7.7	7.6	7.3	8.5	7.3	
		Employment rate for low skilled 25-64 (ISCED 0-2)	76.4 b	75.2	74.6	73.5	72.7	73.2	74.5 b	73.1	73.5	74.8 b	
		Employment rate for medium skilled 25-64 (ISCED 3-4)	91.9 b	92.8	90.8	90.2	88.6	88.7	87.4 b	90.3	88.6	90.2 b	
		Employment rate for high skilled 25-64 (ISCED 5-8)	89.0 b	91.0	92.2	92.8	91.9	91.5	92.5 b	92.4	92.9	92.4 b	
		Employment rate (Nationals aged 15-64)	73.6 b	73.8	73.7	72.8	72.1	72.6	73.9	73.6	74.3	74.9	
		Employment rate (Other EU-28 aged 15-64)		65.3	59.0 u	71.5	58.9	69.3	71.4	81.1	67.5	74.0	
		Employment rate (Other than EU-28 aged 15-64)		71.8	72.2	76.7	72.2	69.7	69.2	76.7	72.1	74.6	
		Employment rate (Born in the same country aged 15-64)	73.5 b	73.5	73.5	72.5	71.8	72.3	73.8	73.6	74.2	74.8	
Employment rate (Born in other EU-28 aged 15-64)		72.6	66.4	74.9	68.0	69.6	74.7	77.1	70.5	76.9			
Employment rate (Born outside EU-28 aged 15-64)		79.4	76.5	83.2	79.9	82.5	76.8	77.2	75.6	75.0			
Underemployment (% of labour force aged 15-74)				1.0	1.4	1.7	1.5	1.4	1.8	1.5			
Seeking but not available (% of labour force aged 15-74)	0.4 bu	0.4 u	0.4 u										
Discouraged, available but not seeking (% of labour force aged 15-74)	0.6 bu		0.6 u	0.5 u	0.5 u	0.4 u	1.0	1.2	1.0	0.7 u			



Malta		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		
Labour Market Indicators	Female	Total population (000)	200 b	200	200	201	202	203	204	206	207	209	
		Population aged 15-64 (000)	137 b	138	139	140	141	141	140	140	140	140	140
		Total employment (000)	46 b	47	50	53	54	56	58	62	62	66	70
		Employment aged 15-64 (000)	46 b	46	50	53	54	56	58	62	62	66	69
		Employment rate (% population aged 20-64)	34.8 b	35.7	37.7	39.4	40.0	41.6	43.8	46.6	49.8	51.9	51.9
		Employment rate (% population aged 15-64)	33.4 b	33.7	36.0	37.7	38.0	39.5	41.5	44.0	47.0	49.3	49.3
		Employment rate (% population aged 15-24)	43.1 b	42.0	44.5	45.0	42.2	42.4	41.8	40.7	44.4	46.6	46.6
		Employment rate (% population aged 25-54)	36.4 b	38.2	41.3	44.1	45.9	47.5	50.8	54.9	57.8	60.5	60.5
		Employment rate (% population aged 55-64)	12.7 b	11.2	12.1	12.7	12.2	14.1	15.1	16.3	18.7	19.8	19.8
		FTE employment rate (% population aged 20-64)	32.2 b	32.7	34.0	35.6	36.1	37.7	39.9	42.1	45.0	46.0	46.0
		Self-employed (% total employment)	5.4 b	5.0	6.1	5.6	6.1	5.4	5.4	5.9	5.4	5.8	5.8
		Part-time employment (% total employment)	20.4 b	21.6	24.6	25.4	23.8	24.9	25.9	26.5	26.8	29.3	29.3
		Fixed-term contracts (% total employees)	5.9 b	5.8	7.7	5.8	6.8	7.1	8.1	7.9	8.4	9.1	9.1
		Employment in Services (% total employment)	84.8 b	86.0	86.9	89.6	89.0	88.4	88.4	94.5	88.8	90.2	90.2
		Employment in Industry (% total employment)	14.6 b	13.6	12.6	9.9	10.4	11.1	11.2	5.2	10.6	9.2	9.2
		Employment in Agriculture (% total employment)	0.6 b				0.7				0.6	0.5	0.5
		Activity rate (% population aged 15-64)	36.4 b	36.8	39.1	40.4	41.2	42.5	44.7	47.5	50.2	52.1	52.1
		Activity rate (% population aged 15-24)	51.3 b	49.1	50.5	50.0	48.3	48.1	48.0	47.7	49.5	51.6	51.6
		Activity rate (% population aged 25-54)	38.7 b	40.8	44.3	46.7	48.9	50.6	54.0	58.1	61.1	63.3	63.3
		Activity rate (% population aged 55-64)	12.7 b	11.6	12.8	13.6	13.2	14.6	15.6	17.3	19.7	20.6	20.6
	Total unemployment (000)	4	4	4	4	4	4	4	5	4	4	4	
	Unemployment rate (% labour force)	8.4	8.3	7.9	6.8	7.6	7.1	7.1	7.3	6.3	5.4	5.4	
	Youth unemployment rate (% labour force 15-24)	16.0	14.4	11.8	10.0	12.5	11.8	12.9	14.7	10.4	9.7	9.7	
	Long-term unemployment rate (% labour force)	3.1 b	2.3	2.4	2.4	2.4	2.5	2.5	2.7	2.4	2.0	2.0	
	Share of long-term unemployment (% of total unemployment)	39.3 b	27.7	31.1	34.6	32.5	36.1	34.6	36.3	36.6	37.2	37.2	
	Youth unemployment ratio (% population aged 15-24)	8.2 b	7.1	6.0	5.0	6.1	5.7	6.2	7.0	5.1	5.0	5.0	
	Employment rate for low skilled 25-64 (ISCED 0-2)	20.8 b	21.3	22.6	24.2	23.2	23.6	24.6 b	26.8	28.4	29.8 b	29.8 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	64.5 b	62.2	65.3	64.2	66.4	66.3	66.3 b	69.4	70.9	72.6 b	72.6 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	78.3 b	74.8	80.6	80.4	79.3	81.5	83.6 b	83.8	83.3	83.9 b	83.9 b	
	Employment rate (Nationals aged 15-64)	33.2 b	33.8	35.9	37.7	37.9	39.1	41.3	44.0	46.9	49.2	49.2	
	Employment rate (Other EU-28 aged 15-64)		39.7 u	42.0 u	35.1 u	40.0	45.7	39.9	35.8	35.4 u	42.8	42.8	
	Employment rate (Other than EU-28 aged 15-64)		28.3 u	37.3	38.7	43.9	51.1	53.4	49.5	55.6	54.5	54.5	
	Employment rate (Born in the same country aged 15-64)	33.1 b	33.7	35.6	37.3	37.7	39.0	41.1	43.8	46.8	48.8	48.8	
	Employment rate (Born in other EU-28 aged 15-64)		36.7 u	44.6	39.8	40.1	46.4	38.7	38.4	41.5	53.7	53.7	
	Employment rate (Born outside EU-28 aged 15-64)		33.4	42.5	46.3	46.3	47.4	54.1	52.7	54.0	55.4	55.4	
	Underemployment (% of labour force aged 15-74)				3.2	2.9	4.0	4.2	3.6	4.1	3.8	3.8	
	Seeking but not available (% of labour force aged 15-74)		1.5 u	1.6 u								0.6 u	
	Discouraged, available but not seeking (% of labour force aged 15-74)	3.7 b		3.4	3.0	2.3	2.4	4.5	4.8	3.4	2.3	2.3	

Malta		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	20.5	19.5	19.7	20.1	20.3	21.2	22.1	23.1	24.0	23.8
		At-risk-of-poverty (% of total population)	14.3	14.2	15.1	15.3	14.9	15.5	15.6	15.1	15.7	15.9
		At-risk-of-poverty threshold (PPS single person)	7054 b	7246	7465	7958	8146	8023	8417	8760	9034	9300
		Poverty gap (%)	16.9	18.2	18.1	20.3	16.2	17.3	17.7	16.1	19.1	17.8
		Persistent at-risk-of-poverty (% of total population)				7.7	7.7	9.1	11.4	9.7	8.5	10.6
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	20.1	21.3	21.5	22.9	22.9	23.5	23.2	24.0	23.3	23.8
		Impact of social transfers (excl. pensions) in reducing poverty (%)	28.9	33.3	29.8	33.2	34.9	34.0	32.8	37.1	32.6	33.2
		Severe Material Deprivation (% of total population)	5.4	3.9	4.4	4.3	5.0	6.5	6.6	9.2	9.5	10.2
		Share of people living in low work intensity households (% of people aged 0-59)	9.6	9.7	9.6	8.6	9.2	9.2	8.9	9.0	9.0	9.8
		Gross Household Disposable income adjusted for consumer prices (growth %)										
	Income quintile share ratio S80/S20	3.9	4.0	3.9	4.3	4.0	4.3	4.0	3.9	4.1	4.0	
	GINI coefficient	27.0 b	27.1	26.3	28.1	27.4	28.6	27.2	27.1	27.9	27.7	
	Early leavers from education and training (% of population aged 18-24)	33.0 b	32.2 b	30.2	27.2	25.7	23.8	22.7 b	21.1	20.5	20.3 b	
	NEET: Young people not in employment, education or training (% of total population aged 15-24)	11.9 b	10.3 b	11.5	8.3	9.9	9.5	10.2	10.6	9.9	10.5	
	Male	At-risk-of-poverty or exclusion (% of male population)	18.9	17.9	18.6	18.7	19.1	20.1	20.9	21.9	23.1	22.9
		At-risk-of-poverty (% of male population)	13.9	13.5	14.7	13.9	14.3	14.8	15.0	14.4	15.4	15.7
		Poverty gap (%)	16.8	18.3	16.7	21.7	15.9	17.7	17.1	16.7	19.0	18.5
		Persistent at-risk-of-poverty (% of male population)				7.7	6.3	8.4	10.2	10.0	7.2	10.6
		Severe Material Deprivation (% of male population)	5.2	3.6	4.0	4.1	4.8	6.3	6.4	8.6	9.4	9.9
		Share of people living in low work intensity households (% of males aged 0-59)	7.8	8.0	8.2	6.9	7.3	7.4	7.0	7.6	7.6	8.8
Life expectancy at birth (years)		77.2	77.0	77.5	77.1	77.9	79.3	78.6	78.6	79.6		
Healthy life years at birth (years) - men		68.6 d	68.3	69.2	68.8	69.4	70.1	69.9	71.5	71.6		
Early leavers from education and training (% of males aged 18-24)		37.4 b	36.1 b	34.8	31.1	30.1	29.9	28.8 b	25.2	23.2	22.2 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)		11.2 b	9.8 b	11.9	6.8	9.4	8.2	9.7	10.0	9.8	9.0	
Female	At-risk-of-poverty or exclusion (% of female population)	22.0	21.1	20.9	21.5	21.6	22.4	23.2	24.3	24.9	24.7	
	At-risk-of-poverty (% of female population)	14.8	14.9	15.5	16.7	15.5	16.2	16.1	15.8	16.1	16.0	
	Poverty gap (%)	16.9	18.2	18.7	19.0	16.6	16.6	19.1	16.0	19.1	17.1	
	Persistent at-risk-of-poverty (% of female population)				7.8	9.0	9.7	12.6	9.5	9.8	10.7	
	Severe Material Deprivation (% of female population)	5.7	4.2	4.8	4.6	5.2	6.6	6.9	9.7	9.6	10.5	
	Share of people living in low work intensity households (% of females aged 0-59)	11.4	11.5	11.1	10.4	11.3	11.0	10.9	10.5	10.4	10.7	
	Life expectancy at birth (years)	81.4	81.9	82.2	82.3	82.7	83.6	83.0	83.0	84.0		
	Healthy life years at birth (years) - women	70.4 d	69.5	71.1	72.1	71.0	71.3	70.7	72.2	72.7		
	Early leavers from education and training (% of females aged 18-24)	28.3 b	28.1 b	25.3	23.2	21.1	17.4	16.3 b	16.8	17.7	18.3 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	12.7 b	10.9 b	11.2	9.8	10.4	10.9	10.7	11.3	10.1	12.0	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	23.3	22.2	23.9	25.0	26.5	26.7	27.8	31.0	32.0	31.3	
	At-risk-of-poverty (% of Children population)	17.6	17.6	19.8	20.4	21.2	22.1	23.0	23.1	24.0	24.1	
	Severe Material Deprivation (% of Children population)	6.1	4.9	6.4	6.3	7.2	7.7	7.7	12.3	11.8	13.9	
	Share of children living in low work intensity households (% of Children population)	9.6	9.4	10.0	9.8	10.4	9.7	10.0	10.4	11.2	12.3	
	Risk of poverty of children in households at work (Working Intensity > 0.2)	12.1	12.3	13.6	14.1	15.9	16.0	16.9	17.0	17.8	16.8	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	32.3	36.5	31.0	33.6	35.0	31.4	29.9	36.0	28.8	25.9	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	18.1	17.4	17.8	17.5	18.1	19.6	20.7	21.1	22.5	21.8	
	At-risk-of-poverty (% of Working age population)	11.4	11.2	12.6	12.0	12.1	13.1	13.1	12.4	13.6	13.2	
	Severe Material Deprivation (% of Working age population)	5.0	3.5	4.0	4.0	4.6	6.4	6.8	8.9	9.5	9.8	
	Very low work intensity (18-59)	9.6	9.8	9.4	8.2	8.9	9.0	8.6	8.6	8.3	9.0	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	4.3	4.1	4.6	5.1	5.4	5.8	6.1	5.2	5.9	5.7	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	32.5	38.1	33.0	37.8	38.3	36.7	35.8	40.1	32.0	34.3	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	27.1	25.7	22.8	26.0	22.2	21.7	21.0	22.3	20.8	23.3	
	At-risk-of-poverty (% of Elderly population)	23.3	23.5	20.3	24.3	19.7	18.2	17.6	17.3	14.9	16.9	
	Severe Material Deprivation (% of Elderly population)	6.3	4.4	3.1	3.1	4.1	5.0	4.7	6.4	7.1	8.1	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.75 b	0.80	0.78	0.73	0.77	0.81	0.79	0.80	0.79	0.78	
	Aggregate replacement ratio (ratio)	0.47	0.45	0.47	0.41	0.45	0.44	0.48	0.46	0.56	0.56	
Expenditure in social protection (% of GDP)	Sickness/Health care	5.2	5.0	5.1	5.3	5.9	5.5	5.4	5.6	5.9		
	Disability	1.2	1.1	1.1	1.0	0.9	0.8	0.8	0.7	0.7		
	Old age and survivors	9.1	9.3	9.2	9.3	10.1	10.4	10.1	10.6	10.3		
	Family/Children	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2		
	Unemployment	0.6	0.6	0.5	0.5	0.6	0.5	0.5	0.6	0.6		
	Housing and Social exclusion n.e.c.	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.4	0.4		
	Total (including Admin and Other expenditures) of which: Means tested benefits	17.9 3.1	17.7 3.1	17.7 3.1	18.1 2.5	19.5 2.6	19.1 2.5	18.7 2.5	19.3 2.5	19.4 2.5		

## Macro economic indicators: Netherlands

Netherlands		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	2.2	3.5	3.7	1.7	-3.8	1.4	1.7	-1.1	-0.5 p	1.0 p		
		Total employment	0.7	2.2	3.0	1.6	-0.9	-0.7	0.9	-0.2	-0.9 p	-0.2 p		
		Labour productivity	1.5	1.3	0.7	0.1	-2.9	2.1	0.8	-0.9	0.4 p	1.2 p		
		Annual average hours worked	-1.0	-0.2	-0.1	0.0	-0.6	0.0	0.1	-0.7	0.1 p	0.4 p		
		Productivity per hour worked	2.5	1.6	0.8	0.0	-2.4	2.1	0.7	-0.2	0.3 p	0.8 p		
		Harmonized CPI	1.5	1.7	1.6	2.2	1.0	0.9	2.5	2.8	2.6	0.3		
		Price deflator GDP	1.9	2.6	2.1	2.5	0.4	0.8	0.1	1.4	1.4 p	0.8 p		
		Nominal compensation per employee	1.1	1.6	3.2	3.8	2.4	0.4	1.8	2.1	2.0 p	2.0 p		
		Real compensation per employee (GDP deflator)	-0.9	-0.9	1.1	1.3	2.0	-0.4	1.6	0.7	0.6 p	1.2 p		
		Real compensation per employee (private consumption deflator)	-0.4	0.0	1.6	1.6	1.4	-0.5	-0.7	-0.7	-0.6 p	1.7 p		
		Nominal unit labour costs	-0.4	0.3	2.4	3.7	5.5	-1.7	1.0	3.0	1.5 p	0.8 p		
		Real unit labour costs	-2.3	-2.2	0.3	1.3	5.1	-2.5	0.9	1.5	0.2 p	-0.1 p		
		Labour Market Indicators	Total	Total population (000)	16107	16142	16180	16190	16223	16350 b	16400 b	16507	16622	16658
				Population aged 15-64 (000)	10943	10964	10986	10970	10970	11017 b	10994 b	10992	11014	10980
Total employment (000)	8111			8261	8464	8593	8596	8370 b	8291 b	8345	8285	8236		
Employment aged 15-64 (000)	8013			8152	8345	8468	8443	8227 b	8152 b	8175	8104	8029		
Employment rate (% population aged 20-64)	75.1			76.3	77.8	78.9	78.8	76.8 b	76.4 b	76.6	75.9	75.4		
Employment rate (% population aged 15-64)	73.2			74.3	76.0	77.2	77.0	74.7 b	74.2 b	74.4	73.6	73.1		
Employment rate (% population aged 15-24)	65.2			66.2	68.4	69.3	68.0	63.0 b	61.3 b	61.1	60.1	58.8		
Employment rate (% population aged 25-54)	82.9			84.2	85.4	86.8	86.3	84.7 b	84.0 b	83.6	82.2	81.7		
Employment rate (% population aged 55-64)	46.1			47.7	50.9	53.0	55.1	53.7 b	55.2 b	57.6	59.2	59.9		
FTE employment rate (% population aged 20-64)	60.1 b			61.1	62.4	63.4	63.3	61.3 b	61.4	61.3	60.7 b	60.4		
Self-employed (% total employment)	15.4			15.6	15.7	15.5	15.6	15.7	15.9 b	16.3	16.9 p	17.1 p		
Part-time employment (% total employment)	46.1			46.2	46.8	47.3	48.3	48.9 b	48.9 b	49.6	50.6	50.4		
Fixed-term contracts (% total employees)	15.5			16.6	18.1	18.2	18.2	18.5 b	18.3 b	19.4	20.5	21.5		
Employment in Services (% total employment)	80.2			80.7	81.0	81.2	81.5	81.9	82.2	82.4	82.7 p	82.9 p		
Employment in Industry (% total employment)	17.2			16.8	16.5	16.4	16.2	15.8	15.6	15.4	15.1 p	14.9 p		
Employment in Agriculture (% total employment)	2.6			2.5	2.4	2.3	2.3	2.3	2.3	2.2	2.2 p	2.2 p		
Activity rate (% population aged 15-64)	76.9			77.4	78.5	79.3	79.7	78.2 b	78.1 b	79.0	79.4	79.0		
Activity rate (% population aged 15-24)	71.0			70.8	72.7	73.2	72.8	69.0 b	68.1 b	69.2	69.2	67.4		
Activity rate (% population aged 25-54)	86.5			87.1	87.6	88.5	88.8	87.9 b	87.4 b	87.6	87.4	87.1		
Activity rate (% population aged 55-64)	48.1			49.6	52.8	54.7	56.8	55.9 b	57.9 b	60.8	63.5	64.9		
Total unemployment (000)	489			419	355	318	381	435	434	516	647	660		
Unemployment rate (% labour force)	5.9			5.0	4.2	3.7	4.4	5.0	5.0	5.8	7.3	7.4		
Youth unemployment rate (% labour force 15-24)	11.8			10.0	9.4	8.6	10.2	11.1	10.0	11.7	13.2	12.7		
Long-term unemployment rate (% labour force)	2.4			2.2	1.6	1.3	1.1	1.4 b	1.7	2.0	2.6	3.0		
Share of long-term unemployment (% of total unemployment)	40.2			43.0	39.4	34.8	24.8	27.6 b	33.2 b	33.7	35.8	40.0		
Youth unemployment ratio (% population aged 15-24)	5.8			4.6	4.3	3.9	4.8	6.0 b	6.8 b	8.1	9.1	8.6		
Employment rate for low skilled 25-64 (ISCED 0-2)	59.5 b			60.6	61.9	63.7	63.6	61.4 b	61.7 b	61.7	60.3 b	58.8 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	77.9 b			79.1	80.3	81.5	81.7	80.3 b	79.6 b	79.6	77.8 b	77.9 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	85.6 b			86.4	87.7	88.3	88.1	87.2 b	87.0 b	87.3	87.6 b	87.7 b		
Employment rate (Nationals aged 15-64)	74.1 b			75.1	76.7	77.8	77.6	75.3 b	74.8 b	75.0	74.4	73.9		
Employment rate (Other EU-28 aged 15-64)				74.1	75.5	77.9	76.6	73.3 b	73.4 b	75.4	72.6	73.0		
Employment rate (Other than EU-28 aged 15-64)				47.2	50.2	55.7	54.0	51.4 b	50.6 b	51.6	48.4	49.1		
Employment rate (Born in the same country aged 15-64)	75.2 b			76.2	77.7	78.7	78.6	76.2 b	75.8 b	76.1	75.5	75.0		
Employment rate (Born in other EU-28 aged 15-64)				72.1	72.8	74.7	74.0	72.0 b	72.4 b	73.1	71.9	72.4		
Employment rate (Born outside EU-28 aged 15-64)				59.5	62.2	65.6	64.6	62.3 b	60.7 b	60.5	58.2	58.0		
Underemployment (% of labour force aged 15-74)						1.1	1.3	1.3 b	1.4 b	1.7	6.6	6.7		
Seeking but not available (% of labour force aged 15-74)	0.7 b			0.6	0.7	0.6	0.6	0.8 b	1.2 b	1.3	1.5	1.6		
Discouraged, available but not seeking (% of labour force aged 15-74)	3.8 b			3.8	3.2	3.0	3.1	3.5 b	3.3 b	3.6	3.9	4.1		

Netherlands		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	7992	8006	8022	8027	8043	8103 b	8126 b	8187	8252	8266
		Population aged 15-64 (000)	5519	5524	5529	5516	5512	5533 b	5517 b	5519	5533	5510
		Total employment (000)	4483	4552	4631	4676	4648	4526 b	4475 b	4501	4459	4460
		Employment aged 15-64 (000)	4411	4471	4547	4588	4540	4425 b	4377 b	4376	4324	4305
		Employment rate (% population aged 20-64)	82.4	83.5	84.8	85.5	84.9	82.8 b	82.4 b	82.3	81.1	81.1
		Employment rate (% population aged 15-64)	79.9	80.9	82.2	83.2	82.4	80.0 b	79.3 b	79.3	78.2	78.1
		Employment rate (% population aged 15-24)	65.5	67.2	68.9	69.8	67.5	62.6 b	60.0 b	59.7	59.2	58.7
		Employment rate (% population aged 25-54)	90.3	91.4	92.1	93.0	92.0	90.0 b	89.8 b	89.1	86.8	86.9
		Employment rate (% population aged 55-64)	56.9	58.0	61.5	63.7	65.4	64.5 b	64.5 b	66.9	68.9	69.4
		FTE employment rate (% population aged 20-64)	77.1 b	77.9	79.2	79.9	79.0	76.7 b	76.5	76.1	74.7 b	74.7
		Self-employed (% total employment)	18.0	18.4	18.7	18.6	18.6	18.9 b	19.1 b	19.6	20.3 b	20.6
		Part-time employment (% total employment)	22.6	23.0	23.6	23.9	24.9	25.4 b	25.2 b	26.2	27.7	28.0
		Fixed-term contracts (% total employees)	14.3	15.4	16.6	16.6	16.4	17.3 b	17.1 b	18.5	19.6	20.8
		Employment in Services (% total employment)	70.6	71.1	71.6	71.6	71.8	72.1 b	72.4 b	72.8	73.6 b	74.1
		Employment in Industry (% total employment)	25.9	25.6	25.2	25.3	25.1	24.7 b	24.5 b	24.1	23.4 b	22.9
		Employment in Agriculture (% total employment)	3.4	3.4	3.2	3.1	3.1	3.2 b	3.1 b	3.1	3.0 b	3.0
		Activity rate (% population aged 15-64)	83.7	83.9	84.6	85.3	85.3	83.7 b	83.2 b	83.9	84.3	84.2
		Activity rate (% population aged 15-24)	71.2	71.5	73.0	73.7	72.7	68.6 b	67.0 b	67.7	68.4	67.0
		Activity rate (% population aged 25-54)	93.8	94.1	94.0	94.5	94.4	93.3 b	93.0 b	93.0	92.3	92.2
		Activity rate (% population aged 55-64)	59.5	60.4	64.0	65.9	67.6	67.3 b	67.5 b	70.6	74.2	75.5
	Total unemployment (000)	233	188	154	141	184	213	216	260	346	343	
	Unemployment rate (% labour force)	5.0	4.1	3.3	3.0	3.9	4.5	4.6	5.5	7.2	7.2	
	Youth unemployment rate (% labour force 15-24)	12.7	10.0	9.4	9.3	11.4	12.0	10.5	11.8	13.5	12.4	
	Long-term unemployment rate (% labour force)	2.2	1.9	1.4	1.1	0.9	1.3 b	1.6 b	1.9	2.6	2.9	
	Share of long-term unemployment (% of total unemployment)	43.2	45.8	41.8	37.3	23.7	27.6 b	34.6 b	34.3	36.3	40.6	
	Youth unemployment ratio (% population aged 15-24)	5.7	4.3	4.1	4.0	5.2	6.1 b	7.0 b	8.0	9.2	8.3	
	Employment rate for low skilled 25-64 (ISCED 0-2)	75.2 b	76.6	77.6	78.4	77.7	74.8 b	74.4 b	74.1	71.7 b	70.9 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	84.1 b	84.8	85.9	87.2	86.8	85.4 b	84.9 b	84.6	82.9 b	83.0 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	88.0 b	88.7	90.0	90.5	90.2	89.3 b	89.7 b	90.0	89.7 b	90.3 b	
	Employment rate (Nationals aged 15-64)	80.7 b	81.5	82.7	83.5	82.8	80.5 b	79.9 b	79.7	78.8	78.6	
	Employment rate (Other EU-28 aged 15-64)		80.3	81.2	83.4	82.5	79.7 b	78.0 b	80.5	79.7	80.7	
	Employment rate (Other than EU-28 aged 15-64)		60.4	65.8	71.6	67.3	62.7 b	62.7 b	64.0	57.9	60.1	
	Employment rate (Born in the same country aged 15-64)	81.5 b	82.4	83.5	84.2	83.5	81.2 b	80.6 b	80.5	79.5	79.4	
	Employment rate (Born in other EU-28 aged 15-64)		78.4	80.0	80.2	79.3	77.5 b	79.1 b	79.1	79.8	80.6	
	Employment rate (Born outside EU-28 aged 15-64)		69.3	72.2	75.6	73.6	70.2 b	69.1 b	69.3	66.0	66.7	
	Underemployment (% of labour force aged 15-74)				0.6	0.8	0.9 b	1.0 b	1.2	4.5	4.5	
	Seeking but not available (% of labour force aged 15-74)	0.5 b	0.4	0.5	0.5	0.5	0.6 b	0.9 b	1.0	1.1	1.2	
	Discouraged, available but not seeking (% of labour force aged 15-74)	3.2 b	3.1	2.7	2.6	2.7	3.2 b	3.1 b	3.3	3.6	3.5	

Netherlands		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	8116	8136	8157	8164	8181	8247 b	8274 b	8320	8370	8392
		Population aged 15-64 (000)	5424	5441	5457	5454	5458	5485 b	5477 b	5474	5481	5470
		Total employment (000)	3628	3709	3832	3917	3948	3844 b	3816 b	3845	3827	3776
		Employment aged 15-64 (000)	3603	3681	3798	3880	3903	3802 b	3775 b	3799	3780	3724
		Employment rate (% population aged 20-64)	67.6	69.0	70.7	72.2	72.7	70.8 b	70.4 b	71.0	70.6	69.7
		Employment rate (% population aged 15-64)	66.4	67.7	69.6	71.1	71.5	69.3 b	68.9 b	69.4	69.0	68.1
		Employment rate (% population aged 15-24)	64.9	65.1	67.9	68.8	68.4	63.5 b	62.6 b	62.5	61.0	58.8
		Employment rate (% population aged 25-54)	75.5	77.0	78.7	80.5	80.7	79.3 b	78.1 b	78.1	77.5	76.5
		Employment rate (% population aged 55-64)	35.2	37.2	40.1	42.2	44.7	42.8 b	45.9 b	48.3	49.5	50.4
		FTE employment rate (% population aged 20-64)	44.5 b	46.0	47.3	48.7	49.3	47.8 b	48.3	48.1	48.1 b	47.6
		Self-employed (% total employment)	12.0	12.1	11.9	11.9	12.1	12.0 b	12.1 b	12.4	12.9 b	13.1
		Part-time employment (% total employment)	75.1	74.7	75.0	75.3	75.8	76.5 b	76.7 b	77.1	77.2	76.9
		Fixed-term contracts (% total employees)	16.9	18.0	19.7	20.0	20.3	19.9 b	19.5 b	20.4	21.4	22.1
		Employment in Services (% total employment)	91.4	91.8	91.9	92.1	92.3	92.7 b	92.8 b	92.9	93.2 b	93.2
		Employment in Industry (% total employment)	6.9	6.6	6.6	6.4	6.3	5.9 b	5.9 b	5.8	5.5 b	5.4
		Employment in Agriculture (% total employment)	1.7	1.6	1.5	1.5	1.4	1.4 b	1.3 b	1.3	1.3 b	1.3
		Activity rate (% population aged 15-64)	70.0	70.7	72.2	73.3	74.1	72.6 b	72.9 b	74.0	74.4	73.8
		Activity rate (% population aged 15-24)	70.8	70.1	72.4	72.6	72.9	69.4 b	69.2 b	70.8	70.0	67.7
		Activity rate (% population aged 25-54)	79.0	80.1	81.2	82.5	83.0	82.4 b	81.8 b	82.3	82.6	81.9
		Activity rate (% population aged 55-64)	36.5	38.6	41.4	43.5	46.0	44.5 b	48.2 b	51.0	52.8	54.3
		Total unemployment (000)	256	231	201	176	197	222	218	255	301	317
		Unemployment rate (% labour force)	6.9	6.2	5.2	4.5	4.9	5.5	5.4	6.2	7.3	7.8
		Youth unemployment rate (% labour force 15-24)	11.0	10.1	9.3	7.8	9.0	10.1	9.5	11.6	12.9	13.1
		Long-term unemployment rate (% labour force)	2.6	2.5	1.9	1.4	1.3	1.5 b	1.7 b	2.1	2.6	3.0
		Share of long-term unemployment (% of total unemployment)	37.0	40.3	37.1	32.2	26.1	27.5 b	31.8 b	33.1	35.2	39.3
		Youth unemployment ratio (% population aged 15-24)	5.9	4.9	4.5	3.8	4.5	6.0 b	6.6 b	8.2	9.0	8.9
		Employment rate for low skilled 25-64 (ISCED 0-2)	47.1 b	47.4	48.9	51.2	51.2	49.4 b	50.3 b	50.4	50.0 b	47.8 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	71.5 b	73.2	74.4	75.7	76.6	75.3 b	74.3 b	74.5	72.6 b	72.5 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	82.7 b	83.7	85.1	85.8	85.7	84.9 b	84.1 b	84.5	85.4 b	84.9 b
		Employment rate (Nationals aged 15-64)	67.5 b	68.5	70.5	72.0	72.3	70.1 b	69.8 b	70.2	69.9	69.0
		Employment rate (Other EU-28 aged 15-64)		68.8	70.4	73.0	71.6	68.2 b	69.5 b	71.1	66.7	66.6
		Employment rate (Other than EU-28 aged 15-64)		34.8	35.9	41.8	42.8	41.1 b	39.8 b	40.4	39.6	39.2
		Employment rate (Born in the same country aged 15-64)	68.6 b	69.8	71.7	73.0	73.5	71.1 b	71.0 b	71.6	71.4	70.4
		Employment rate (Born in other EU-28 aged 15-64)		67.4	67.3	70.4	70.0	67.7 b	67.5 b	68.8	66.0	66.4
Employment rate (Born outside EU-28 aged 15-64)		49.8	52.8	56.2	56.1	54.9 b	52.8 b	52.2	51.1	49.9		
Underemployment (% of labour force aged 15-74)				1.7	1.8	1.8 b	1.9 b	2.2	9.1	9.4		
Seeking but not available (% of labour force aged 15-74)	1.0 b	0.9	0.9	0.8	0.8	1.0 b	1.6 b	1.5	2.0	2.0		
Discouraged, available but not seeking (% of labour force aged 15-74)	4.6 b	4.7	3.9	3.4	3.5	3.9 b	3.6 b	3.8	4.4	4.8		



Netherlands		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	16.7	16.0	15.7	14.9	15.1	15.1	15.7	15.0	15.9	16.5
		At-risk-of-poverty (% of total population)	10.7	9.7	10.2	10.5	11.1	10.3	11.0	10.1	10.4	11.6
		At-risk-of-poverty threshold (PPS single person)	9612 b	9897	10522	11485	11618	11288	11300	11387	11536	11283
		Poverty gap (%)	20.9	16.9	17.0	14.9	16.5	16.2	15.5	17.3	16.5	16.9
		Persistent at-risk-of-poverty (% of total population)				6.4	4.7	8.2	7.7	5.8	6.5	
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	21.7	21.0	20.6	19.9	20.5	21.1	20.9	20.6	20.8	21.3
		Impact of social transfers (excl. pensions) in reducing poverty (%)	50.7	53.8	50.5	47.2	45.9	51.2	47.4	51.0	50.0	45.5
		Severe Material Deprivation (% of total population)	2.5	2.3	1.7	1.5	1.4	2.2	2.5	2.3	2.5	3.2
		Share of people living in low work intensity households (% of people aged 0-59)	9.8	10.9	9.7	8.2	8.5	8.4	8.9	8.9	9.3	10.2
		Gross Household Disposable income adjusted for consumer prices (growth %)	-0.4	0.4	1.9	-0.6	1.1	-0.6	0.1	-1.4	-1.0	1.1
		Income quintile share ratio S80/S20	4.0	3.8	4.0	4.0	4.0	3.7	3.8	3.6	3.6	3.8
		GINI coefficient	26.9 b	26.4	27.6	27.6	27.2	25.5	25.8	25.4	25.1	26.2
		Early leavers from education and training (% of population aged 18-24)	13.5	12.6 b	11.7	11.4	10.9	10.0 b	9.2	8.9	9.3 b	8.7 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	5.3	4.0 b	3.5	3.4	4.1	4.3 b	4.3	4.9	5.6 b	5.5
	Male	At-risk-of-poverty or exclusion (% of male population)	15.6	14.6	14.6	14.3	14.3	14.1	14.9	13.6	14.9	15.8
		At-risk-of-poverty (% of male population)	10.6	9.5	9.6	10.5	10.8	9.7	10.8	9.5	10.2	11.3
		Poverty gap (%)	21.9	18.9	17.5	14.6	16.9	15.1	15.3	17.3	15.1	17.7
		Persistent at-risk-of-poverty (% of male population)				6.9	5.4	6.8	8.1	4.8	6.3	
		Severe Material Deprivation (% of male population)	2.3	1.7	1.7	1.5	1.4	2.3	2.4	2.3	2.4	2.7
		Share of people living in low work intensity households (% of males aged 0-59)	8.3	9.0	8.6	7.0	7.6	7.4	8.0	7.8	8.3	9.6
		Life expectancy at birth (years)	77.2	77.7	78.1	78.4 b	78.7	78.9	79.4	79.3	79.5	
		Healthy life years at birth (years) - men	65.4 d	65.2	66.1	62.5 b	61.7	61.3	64.0	63.5	61.4	
		Early leavers from education and training (% of males aged 18-24)	15.9	15.1 b	14.0	14.0	13.1	12.1 b	11.1	10.5	11.2 b	10.6 b
		NEET: Young people not in employment, education or training (% of males aged 15-24)	5.0	3.7 b	3.1	3.1	4.1	4.4 b	4.4	4.6	5.6 b	5.2
Female	At-risk-of-poverty or exclusion (% of female population)	17.7	17.4	16.9	15.5	15.9	16.0	16.6	16.3	16.9	17.2	
	At-risk-of-poverty (% of female population)	10.8	9.9	10.7	10.4	11.3	10.8	11.1	10.6	10.6	11.9	
	Poverty gap (%)	19.9	16.7	16.9	17.0	16.3	16.4	16.5	17.1	17.2	16.2	
	Persistent at-risk-of-poverty (% of female population)				5.8	4.1	9.5	7.3	6.8	6.7		
	Severe Material Deprivation (% of female population)	2.7	2.8	1.7	1.6	1.5	2.2	2.6	2.4	2.6	3.6	
	Share of people living in low work intensity households (% of females aged 0-59)	11.4	12.8	10.8	9.4	9.3	9.3	9.7	10.0	10.4	10.9	
	Life expectancy at birth (years)	81.7	82.0	82.5	82.5 b	82.9	83.0	83.1	83.0	83.2		
	Healthy life years at birth (years) - women	63.5 d	63.5	64.3	59.9 b	60.1	60.2	59.0	58.9	57.5		
	Early leavers from education and training (% of females aged 18-24)	11.1	10.1 b	9.3	8.8	8.6	7.8 b	7.2	7.2	7.4 b	6.8 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	5.5	4.4 b	4.0	3.8	4.1	4.2 b	4.2	5.1	5.7 b	5.9	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	19.6	17.5	17.2	15.5	17.5	16.9	18.0	16.9	17.0	17.1	
	At-risk-of-poverty (% of Children population)	15.3	13.5	14.0	12.9	15.4	13.7	15.5	13.2	12.6	13.7	
	Severe Material Deprivation (% of Children population)	3.4	3.2	1.9	2.2	1.5	2.0	2.9	3.3	2.3	3.7	
	Share of children living in low work intensity households (% of Children population)	7.3	8.5	6.2	5.1	5.4	5.8	6.3	6.4	6.4	7.3	
	Risk of poverty of children in households at work (Working Intensity > 0.2)	12.2	9.2	11.3	10.1	12.2	11.2	11.8	10.1	10.1	10.0	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	44.4	49.3	43.6	43.9	38.9	45.6	36.2	44.5	47.3	43.2	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	17.7	17.5	16.5	15.8	15.9	16.5	17.0	16.5	18.0	18.9	
	At-risk-of-poverty (% of Working age population)	10.2	9.3	8.9	9.9	10.3	10.1	10.5	10.1	10.9	12.4	
	Severe Material Deprivation (% of Working age population)	2.4	2.3	1.9	1.6	1.6	2.7	2.8	2.4	3.0	3.6	
	Very low work intensity (18-59)	10.8	11.9	11.0	9.5	9.7	9.4	9.8	9.9	10.5	11.4	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	5.8	4.4	4.5	4.7	5.0	5.1	5.4	4.6	4.5	5.3	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	53.9	55.7	55.3	50.0	49.3	53.5	51.6	53.7	51.3	46.8	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	6.4	6.4	9.8	9.7	8.1	6.2	6.9	6.2	6.1	6.9	
	At-risk-of-poverty (% of Elderly population)	5.4	5.8	9.5	9.4	7.7	5.9	6.5	5.5	5.5	5.9	
	Severe Material Deprivation (% of Elderly population)	1.2	0.7	0.7	0.4	0.4	0.3	0.4	0.7	0.8	1.0	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.88 b	0.87	0.83	0.84	0.86	0.87	0.87	0.90	0.90	0.89	
	Aggregate replacement ratio (ratio)	0.43	0.43	0.43	0.43	0.44	0.47	0.46	0.47	0.47	0.50	
Expenditure in social protection (% of GDP)	Sickness/Health care	8.0	8.8	8.6	9.4	10.4	10.7	10.9	11.3 p			
	Disability	2.5	2.4	2.4	2.4	2.5	2.5	2.4	2.3 p			
	Old age and survivors	11.1	10.9	10.9	10.9	11.6	11.9	12.0	12.5 p			
	Family/Children	1.3	1.5	1.6	1.2	1.3	1.2	1.2	1.1 p			
	Unemployment	1.6	1.4	1.1	1.0	1.4	1.6	1.5	1.8 p			
	Housing and Social exclusion n.e.c.	1.6	2.1	2.1	2.1	2.4	2.4	2.6	2.5 p			
	Total (including Admin and Other expenditures)	27.9	28.8	28.3	28.5	31.6	32.1	32.3	33.3 p			
of which: Means tested benefits	3.1	3.4	3.7	3.9	4.5	4.6	4.7	4.8 p				

## Macro economic indicators: Austria

Austria		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	2.1	3.4	3.6	1.5	-3.8	1.9	2.8	0.8	0.3	0.4		
		Total employment	1.2	1.7	1.8	1.9	-0.4	0.7	1.6	1.1	0.5	0.9		
		Labour productivity	0.9	1.6	1.8	-0.4	-3.4	1.2	1.2	-0.3	-0.1	-0.5		
		Annual average hours worked	-1.3	-1.0	-0.6	-0.4	-3.2	-0.3	0.4	-1.4	-1.0	-0.5		
		Productivity per hour worked	2.2	2.6	2.4	0.1	-0.2	1.5	0.8	1.1	0.8	-0.1		
		Harmonized CPI	2.1	1.7	2.2	3.2	0.4	1.7	3.6	2.6	2.1	1.5		
		Price deflator GDP	2.6	1.9	2.3	1.8	1.9	1.0	1.9	2.0	1.5	1.6		
		Nominal compensation per employee	2.1	3.1	3.0	3.3	1.6	1.1	2.1	2.7	2.2	1.7		
		Real compensation per employee (GDP deflator)	-0.5	1.2	0.7	1.5	-0.3	0.1	0.2	0.7	0.7	0.1		
		Real compensation per employee (private consumption deflator)	0.0	1.4	0.7	0.1	1.2	-0.6	-1.5	0.1	0.1	0.3		
		Nominal unit labour costs	1.1	1.5	1.2	3.7	5.2	-0.1	0.8	3.0	2.3	2.3		
		Real unit labour costs	-1.4	-0.5	-1.0	1.9	3.2	-1.1	-1.1	1.0	0.9	0.6		
		Labour Market Indicators	Total	Total population (000)	8096	8136	8164	8190	8206	8223	8245	8281	8330	8394
				Population aged 15-64 (000)	5507	5517	5529	5549	5559	5572	5601	5621	5643	5676
Total employment (000)	3747			3826	3924	3994	3982	4017	4052	4085	4105	4113		
Employment aged 15-64 (000)	3711			3783	3864	3929	3909	3944	3982	4013	4030	4034		
Employment rate (% population aged 20-64)	70.4			71.6	72.8	73.8	73.4	73.9	74.2	74.4	74.6	74.2		
Employment rate (% population aged 15-64)	67.4			68.6	69.9	70.8	70.3	70.8	71.1	71.4	71.4	71.1		
Employment rate (% population aged 15-24)	51.6			52.3	53.8	54.4	53.1	52.8	53.9	53.7	53.1	52.1		
Employment rate (% population aged 25-54)	81.6			82.2	82.9	83.4	82.9	83.3	84.1	84.3	84.0	83.4		
Employment rate (% population aged 55-64)	29.9			33.0	36.0	38.8	39.4	41.2	39.9	41.6	43.8	45.1		
FTE employment rate (% population aged 20-64)	63.2 b			64.0	65.1 b	65.7	64.9	65.1	65.3	65.4	65.5	64.7		
Self-employed (% total employment)	14.1			14.1	13.9	13.9	14.1	14.0	13.8	13.5	13.4	13.4		
Part-time employment (% total employment)	21.3			22.0	22.7	23.5	24.8	25.3	25.3	26.0	26.8	27.9		
Fixed-term contracts (% total employees)	9.0			8.9	8.8	8.9	9.1	9.4	9.5	9.3	9.2	9.1		
Employment in Services (% total employment)	69.8			70.5	70.5	70.7	71.3	71.8	71.9	72.2	72.5	72.5		
Employment in Industry (% total employment)	24.5			24.2	24.3	24.2	23.7	23.3	23.4	23.4	23.2	23.0		
Employment in Agriculture (% total employment)	5.6			5.3	5.2	5.0	5.0	4.9	4.7	4.4	4.3	4.4		
Activity rate (% population aged 15-64)	71.4			72.4	73.5	73.9	74.3	74.4	74.6	75.1	75.5	75.4		
Activity rate (% population aged 15-24)	58.0			57.9	59.4	59.5	59.5	58.3	59.2	59.2	58.8	58.0		
Activity rate (% population aged 25-54)	85.7			86.1	86.5	86.5	87.0	87.1	87.6	88.1	88.3	88.0		
Activity rate (% population aged 55-64)	31.2			34.3	37.2	39.7	40.5	42.2	41.4	43.1	45.5	46.9		
Total unemployment (000)	223			212	200	172	223	203	194	209	231	245		
Unemployment rate (% labour force)	5.6			5.3	4.9	4.1	5.3	4.8	4.6	4.9	5.4	5.6		
Youth unemployment rate (% labour force 15-24)	11.0			9.8	9.4	8.5	10.7	9.5	8.9	9.4	9.7	10.3		
Long-term unemployment rate (% labour force)	1.4			1.5	1.3	1.0	1.2	1.2	1.2	1.2	1.3	1.5		
Share of long-term unemployment (% of total unemployment)	25.6			28.0	27.2	24.3	21.7	25.4	26.3	24.9	24.6	27.2		
Youth unemployment ratio (% population aged 15-24)	6.4			5.7	5.6	5.1	6.4	5.5	5.3	5.6	5.7	6.0		
Employment rate for low skilled 25-64 (ISCED 0-2)	51.9 b			53.9 b	56.1 b	55.4	54.0	54.8	55.1	54.7	54.1	53.0 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	73.0 b			74.2 b	75.4 b	76.9	76.3	77.0	76.8	77.1	77.5	75.9 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	83.9 b			85.1 b	86.0 b	85.6	85.8	85.3	85.9	86.7	86.0	85.3 b		
Employment rate (Nationals aged 15-64)	68.2 b			69.5	70.9 b	71.9	71.6	71.9	72.2	72.6	72.7	72.3		
Employment rate (Other EU-28 aged 15-64)				69.2	69.7 b	70.6	68.2	69.8	69.6	71.2	71.9	73.0		
Employment rate (Other than EU-28 aged 15-64)				55.3	56.5 b	56.5	55.5	57.0	58.2	57.0	55.2	54.2		
Employment rate (Born in the same country aged 15-64)	68.7 b			70.0	71.2 b	72.3	71.9	72.0	72.3	72.7	72.8	72.6		
Employment rate (Born in other EU-28 aged 15-64)				64.9	67.0 b	67.5	67.2	69.5	69.9	71.1	72.2	72.7		
Employment rate (Born outside EU-28 aged 15-64)				59.5	61.2 b	61.3	60.3	62.4	63.0	62.0	60.7	59.5		
Underemployment (% of labour force aged 15-74)						3.2	3.5	2.9	3.1	3.4	3.8	3.9		
Seeking but not available (% of labour force aged 15-74)	0.9 b			0.8	0.7 b	0.9	0.9	0.9	0.9	1.0	0.9	1.0		
Discouraged, available but not seeking (% of labour force aged 15-74)	4.0 b			4.1	3.8 b	3.5	3.7	3.7	3.4	3.5	3.3	3.6		

Austria		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	3933	3954	3971	3985	3993	4002	4014	4036	4064	4101
		Population aged 15-64 (000)	2742	2746	2752	2762	2764	2769	2782	2793	2807	2826
		Total employment (000)	2046	2085	2138	2164	2134	2148	2162	2171	2180	2175
		Employment aged 15-64 (000)	2022	2058	2100	2122	2087	2104	2120	2129	2134	2126
		Employment rate (% population aged 20-64)	76.9	78.1	79.5	80.1	78.7	79.0	79.2	79.3	79.1	78.3
		Employment rate (% population aged 15-64)	73.7	74.9	76.3	76.8	75.5	76.0	76.2	76.2	76.0	75.2
		Employment rate (% population aged 15-24)	54.8	55.8	57.0	57.6	55.8	56.6	58.0	57.1	56.4	54.3
		Employment rate (% population aged 25-54)	87.9	88.4	89.0	88.9	87.4	87.7	88.4	88.3	87.5	86.6
		Employment rate (% population aged 55-64)	38.5	41.9	46.0	48.9	49.1	49.9	48.2	50.2	52.8	54.3
		FTE employment rate (% population aged 20-64)	75.8 b	76.7	78.1 b	78.2	76.6	76.6	77.0	77.0	76.6	75.5
		Self-employed (% total employment)	16.4	16.4	15.8	16.1	16.4	16.3	16.1	15.8	15.7	15.9
		Part-time employment (% total employment)	6.2	6.6	7.2	8.2	8.8	9.2	8.9	9.2	10.3	10.9
		Fixed-term contracts (% total employees)	9.2	9.0	8.7	8.8	9.2	9.8	9.6	9.3	9.4	9.2
		Employment in Services (% total employment)	58.3	59.0	59.1	59.3	59.7	60.3	60.4	60.6	61.3	61.3
		Employment in Industry (% total employment)	36.0	35.6	35.6	35.6	35.2	34.6	34.6	34.6	34.0	34.0
		Employment in Agriculture (% total employment)	5.7	5.4	5.2	5.1	5.1	5.1	5.0	4.8	4.7	4.7
		Activity rate (% population aged 15-64)	78.0	78.9	80.0	80.0	80.0	80.0	79.9	80.2	80.4	80.0
		Activity rate (% population aged 15-24)	62.0	61.8	62.9	62.9	62.9	62.6	63.6	63.1	62.3	60.7
		Activity rate (% population aged 25-54)	92.0	92.2	92.5	92.1	91.9	91.9	92.0	92.3	92.1	91.5
		Activity rate (% population aged 55-64)	40.4	44.1	47.6	49.9	50.5	51.4	50.4	52.2	55.1	56.8
		Total unemployment (000)	118	108	100	88	124	113	103	113	124	135
		Unemployment rate (% labour force)	5.4	5.0	4.5	3.9	5.5	5.0	4.6	5.0	5.4	5.9
		Youth unemployment rate (% labour force 15-24)	11.6	9.8	9.3	8.4	11.2	9.6	8.8	9.6	9.4	10.6
		Long-term unemployment rate (% labour force)	1.4	1.5	1.2	1.0	1.2	1.4	1.3	1.3	1.4	1.7
		Share of long-term unemployment (% of total unemployment)	26.0	30.1	26.9	26.0	22.0	27.9	27.8	26.0	25.9	28.2
		Youth unemployment ratio (% population aged 15-24)	7.2	6.1	5.8	5.3	7.0	6.0	5.6	6.0	5.8	6.4
		Employment rate for low skilled 25-64 (ISCED 0-2)	62.3 b	63.6 b	65.8 b	65.0	62.8	62.8	63.6	62.3	61.2	59.1 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	78.8 b	79.6 b	81.0 b	81.9	80.2	80.6	80.4	80.5	80.9	79.8 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	85.7 b	87.7 b	89.1 b	88.7	88.6	88.8	89.0	89.6	88.6	87.2 b
		Employment rate (Nationals aged 15-64)	74.3 b	75.5	76.9 b	77.4	76.4	76.7	76.8	76.8	76.8	76.2
		Employment rate (Other EU-28 aged 15-64)		77.8	80.6 b	80.1	75.8	75.7	76.2	77.3	77.3	77.5
		Employment rate (Other than EU-28 aged 15-64)		65.0	66.3 b	67.9	64.1	66.5	68.5	67.4	65.7	62.1
		Employment rate (Born in the same country aged 15-64)	74.6 b	75.9	77.1 b	77.7	76.5	76.7	76.8	76.8	76.7	76.2
Employment rate (Born in other EU-28 aged 15-64)		72.5	77.4 b	75.4	75.5	75.1	77.0	77.5	79.4	78.6		
Employment rate (Born outside EU-28 aged 15-64)		68.9	70.1 b	71.2	67.8	70.6	71.4	71.2	69.0	66.4		
Underemployment (% of labour force aged 15-74)				1.2	1.7	1.4	1.5	1.6	1.9	1.9		
Seeking but not available (% of labour force aged 15-74)	0.7 b	0.7	0.6 b	0.7	0.9	0.8	0.7	0.8	0.8	0.9		
Discouraged, available but not seeking (% of labour force aged 15-74)	3.6 b	3.5	3.1 b	2.9	3.0	3.2	3.2	3.2	3.0	3.4		

Austria		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	4163	4182	4194	4205	4213	4221	4231	4245	4266	4294
		Population aged 15-64 (000)	2765	2772	2777	2788	2795	2803	2819	2827	2836	2850
		Total employment (000)	1701	1741	1786	1831	1849	1869	1890	1913	1925	1938
		Employment aged 15-64 (000)	1689	1725	1763	1807	1822	1840	1862	1885	1897	1908
		Employment rate (% population aged 20-64)	64.0	65.2	66.2	67.6	68.2	68.8	69.2	69.6	70.0	70.1
		Employment rate (% population aged 15-64)	61.1	62.2	63.5	64.8	65.2	65.7	66.1	66.7	66.9	66.9
		Employment rate (% population aged 15-24)	48.5	48.8	50.6	51.3	50.5	48.9	49.8	50.3	49.8	49.9
		Employment rate (% population aged 25-54)	75.2	76.0	76.7	77.8	78.4	78.9	79.8	80.4	80.5	80.3
		Employment rate (% population aged 55-64)	21.8	24.5	26.5	29.3	30.3	33.0	32.2	33.5	35.2	36.4
		FTE employment rate (% population aged 20-64)	51.6 b	52.4	53.2 b	54.4	54.3	54.9	55.0	55.1	55.6	55.1
		Self-employed (% total employment)	11.3	11.4	11.7	11.4	11.6	11.4	11.1	10.8	10.7	10.6
		Part-time employment (% total employment)	39.5	40.4	41.2	41.6	43.1	43.8	44.1	45.1	45.6	46.9
		Fixed-term contracts (% total employees)	8.8	8.9	9.0	9.1	9.0	8.9	9.4	9.3	9.0	9.1
		Employment in Services (% total employment)	83.2	83.5	83.5	83.9	84.4	84.8	84.6	84.9	84.6	84.7
		Employment in Industry (% total employment)	11.3	11.2	11.3	11.2	10.8	10.6	11.0	11.2	11.5	11.2
		Employment in Agriculture (% total employment)	5.5	5.2	5.2	4.9	4.8	4.6	4.4	3.9	3.9	4.1
		Activity rate (% population aged 15-64)	64.9	66.0	67.1	67.8	68.7	68.9	69.3	70.0	70.7	70.8
		Activity rate (% population aged 15-24)	54.1	54.1	56.0	56.2	56.2	54.0	54.8	55.4	55.3	55.4
		Activity rate (% population aged 25-54)	79.4	80.1	80.5	80.9	82.1	82.4	83.2	84.0	84.5	84.5
		Activity rate (% population aged 55-64)	22.5	25.2	27.5	30.1	31.1	33.6	33.0	34.5	36.4	37.5
		Total unemployment (000)	106	103	100	84	99	91	91	96	108	110
		Unemployment rate (% labour force)	5.9	5.6	5.3	4.4	5.1	4.6	4.6	4.8	5.3	5.4
		Youth unemployment rate (% labour force 15-24)	10.3	9.8	9.6	8.6	10.1	9.4	9.1	9.2	10.0	9.9
		Long-term unemployment rate (% labour force)	1.5	1.4	1.5	1.0	1.1	1.0	1.1	1.1	1.2	1.4
		Share of long-term unemployment (% of total unemployment)	25.1	25.7	27.6	22.6	21.3	22.4	24.5	23.7	23.1	25.9
		Youth unemployment ratio (% population aged 15-24)	5.6	5.3	5.4	4.8	5.7	5.1	5.0	5.1	5.5	5.5
		Employment rate for low skilled 25-64 (ISCED 0-2)	45.9 b	48.8 b	51.0 b	50.2	49.4	50.5	50.3	50.5	49.9	49.5 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	66.8 b	68.3 b	69.2 b	71.4	72.1	73.0	73.0	73.3	73.9	71.6 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	81.4 b	81.5 b	81.8 b	81.5	82.4	81.0	82.2	83.2	82.9	83.3 b
		Employment rate (Nationals aged 15-64)	62.2 b	63.5	64.9 b	66.4	66.8	67.1	67.6	68.3	68.6	68.5
		Employment rate (Other EU-28 aged 15-64)		61.5	60.4 b	62.8	61.6	64.5	63.9	66.0	67.4	69.1
		Employment rate (Other than EU-28 aged 15-64)		45.1	45.9 b	44.8	47.0	47.5	47.8	46.7	44.9	46.4
		Employment rate (Born in the same country aged 15-64)	62.7 b	64.1	65.4 b	66.9	67.2	67.3	67.8	68.5	68.9	68.9
Employment rate (Born in other EU-28 aged 15-64)		59.0	59.0 b	61.5	60.8	65.2	64.4	66.3	66.6	67.9		
Employment rate (Born outside EU-28 aged 15-64)		50.4	52.5 b	51.6	52.6	54.3	54.8	53.1	52.7	52.7		
Underemployment (% of labour force aged 15-74)				5.6	5.6	4.6	5.0	5.4	6.0	6.1		
Seeking but not available (% of labour force aged 15-74)	1.1 b	0.9	0.8 b	1.1	1.0	1.0	1.0	1.2	1.0	1.1		
Discouraged, available but not seeking (% of labour force aged 15-74)	4.6 b	4.9	4.7 b	4.2	4.4	4.2	3.8	3.8	3.8	3.9		

Austria		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014		
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	17.4	17.8	16.7	20.6 b	19.1	18.9	19.2	18.5	18.8	19.2	
		At-risk-of-poverty (% of total population)	12.6	12.6	12.0	15.2 b	14.5	14.7	14.5	14.4	14.4	14.1	
		At-risk-of-poverty threshold (PPS single person)	10317	10452	10686	11359 b	11683	11710	12255	12361	12542	12997	
		Poverty gap (%)	14.8	15.5	17.0	19.9 b	19.2	21.8	19.1	20.1	21.3	20.1	
		Persistent at-risk-of-poverty (% of total population)			5.5	5.6	6.2	6.5	9.8 b	8.7	8.9	8.5	
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	25.5	25.1	24.7	25.9 b	25.3	26.0	27.1	25.8	25.9	25.4	
		Impact of social transfers (excl. pensions) in reducing poverty (%)	50.6	49.8	51.4	41.3 b	42.7	43.5	46.5	44.2	44.4	44.5	
		Severe Material Deprivation (% of total population)	3.5	3.6	3.3	5.9 b	4.6	4.3	4.0	4.0	4.2	4.0	
		Share of people living in low work intensity households (% of people aged 0-59)	7.3	8.1	8.2	7.4 b	7.1	7.8	8.6	7.7	7.8	9.1	
		Gross Household Disposable income adjusted for consumer prices (growth %)	3.8	2.6	2.1	0.8	-0.2	-1.0	-0.2	1.9	-1.8	0.5	
		Income quintile share ratio S80/S20	3.8	3.7	3.8	4.2 b	4.2	4.3	4.1	4.2	4.1	4.1	
		GINI coefficient	26.3	25.3	26.2	27.7 b	27.5	28.3	27.4	27.6	27.0	27.6	
		Early leavers from education and training (% of population aged 18-24)	9.3	10.0 b	10.8	10.2	8.8	8.3	8.5	7.8	7.5	7.0 b	
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	8.6	7.8 b	7.4 b	7.4	8.2	7.4	7.3	6.8	7.3	7.7	
		Male	At-risk-of-poverty or exclusion (% of male population)	15.8	15.7	14.5	18.9 b	17.6	17.3	17.9	17.3	17.4	17.7
			At-risk-of-poverty (% of male population)	11.9	11.0	10.6	14.2 b	13.8	13.4	14.0	13.5	13.5	13.3
	Poverty gap (%)		15.8	17.5	18.7	21.0 b	19.1	22.2	19.1	20.4	22.7	19.9	
	Persistent at-risk-of-poverty (% of male population)				3.5	4.9	4.4	5.8	8.5 b	7.5	7.9	6.6	
	Severe Material Deprivation (% of male population)		3.2	3.8	3.1	5.5 b	4.2	3.9	3.6	3.8	4.3	3.8	
	Share of people living in low work intensity households (% of males aged 0-59)		6.2	7.0	6.6	6.1 b	5.5	6.7	7.5	6.7	7.0	7.8	
	Life expectancy at birth (years)		76.6	77.1	77.4	77.7 b	77.6	77.8	78.3	78.4	78.6		
	Healthy life years at birth (years) - men		58.2	58.7	58.7	58.5 b	59.5	59.4	59.5	60.2	59.7		
	Early leavers from education and training (% of males aged 18-24)		9.7	10.3 b	11.5	10.4	8.6	8.4	9.0	8.0	7.9	7.6 b	
	NEET: Young people not in employment, education or training (% of males aged 15-24)		8.4	7.5 b	7.0 b	6.8	7.7	7.2	7.3	6.6	7.2	8.0	
Female	At-risk-of-poverty or exclusion (% of female population)	19.0	19.7	18.9	22.3 b	20.5	20.5	20.3	19.6	20.1	20.5		
	At-risk-of-poverty (% of female population)	13.3	14.0	13.3	16.1 b	15.3	15.8	15.0	15.3	15.2	14.9		
	Poverty gap (%)	14.2	14.1	15.9	18.7 b	19.2	21.6	19.1	20.0	20.7	20.1		
	Persistent at-risk-of-poverty (% of female population)			7.3	6.3	7.9	7.1	11.0 b	9.9	10.0	10.4		
	Severe Material Deprivation (% of female population)	3.7	3.4	3.5	6.3 b	4.9	4.6	4.4	4.2	4.2	4.2		
	Share of people living in low work intensity households (% of females aged 0-59)	8.5	9.2	9.8	8.6 b	8.7	8.9	9.7	8.7	8.5	10.5		
	Life expectancy at birth (years)	82.2	82.8	83.1	83.3 b	83.2	83.5	83.8	83.6	83.8			
	Healthy life years at birth (years) - women	60.1	61.0	61.4	59.9 b	60.8	60.8	60.1	62.5	60.2			
	Early leavers from education and training (% of females aged 18-24)	8.9	9.8 b	10.2	9.9	8.9	8.3	8.0	7.6	7.1	6.5 b		
	NEET: Young people not in employment, education or training (% of females aged 15-24)	8.8	8.1 b	7.9 b	8.0	8.7	7.7	7.2	7.0	7.4	7.4		
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	19.1	19.3	18.5	22.9 b	20.8	22.4	22.1	20.9	22.9	23.3		
	At-risk-of-poverty (% of Children population)	15.3	14.7	14.8	18.1 b	17.1	19.0	17.8	17.5	18.6	18.2		
	Severe Material Deprivation (% of Children population)	4.0	4.2	3.7	6.7 b	5.0	5.6	5.8	5.8	6.4	6.0		
	Share of children living in low work intensity households (% of Children population)	5.7	7.0	6.3	5.5 b	5.7	5.9	7.0	6.1	7.2	8.6		
	Risk of poverty of children in households at work (Working Intensity > 0.2)	12.6	11.2	11.6	15.6 b	14.2	15.4	14.4	14.1	15.3	13.6		
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	59.0	60.0	59.0	51.0 b	52.1	49.7	54.8	52.7	52.9	51.7		
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	17.4	17.4	16.7	19.8 b	18.7	18.3	18.8	18.4	18.3	18.9		
	At-risk-of-poverty (% of Working age population)	11.5	11.0	10.6	13.3 b	13.0	12.9	13.1	13.3	12.9	12.9		
	Severe Material Deprivation (% of Working age population)	3.6	3.8	3.4	6.0 b	4.9	4.5	4.0	4.1	4.3	4.0		
	Very low work intensity (18-59)	7.9	8.4	8.8	8.0 b	7.5	8.4	9.1	8.2	7.9	9.3		
	In-work at-risk-of poverty rate (% of persons employed 18-64)	6.8	6.3	6.1	8.5 b	8.2	7.5	7.6	8.2	7.9	7.2		
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	52.3	52.6	54.5	44.1 b	45.2	47.1	48.6	45.5	46.3	46.9		
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	15.5	17.3	15.1	21.2 b	18.6	17.4	17.4	16.2	16.2	15.7		
	At-risk-of-poverty (% of Elderly population)	13.9	16.2	14.0	18.9 b	17.4	16.8	16.2	15.1	15.4	14.2		
	Severe Material Deprivation (% of Elderly population)	2.1	2.1	2.1	4.4 b	2.8	1.9	2.1	1.9	1.8	2.0		
	Relative median income of elderly (ratio with median income of people younger than 65)	0.96	0.94	0.93	0.88 b	0.89	0.90	0.92	0.93	0.95	0.95		
	Aggregate replacement ratio (ratio)	0.69	0.65	0.62	0.61 b	0.56	0.57	0.59	0.58	0.59	0.60		
Expenditure in social protection (% of GDP)	Sickness/Health care	7.2	7.0	7.0	7.3	7.7	7.6	7.4	7.5	7.7			
	Disability	2.4	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.1			
	Old age and survivors	13.4	13.4	13.3	13.6	14.7	14.8	14.5	14.9	15.1			
	Family/Children	3.0	2.8	2.7	2.8	3.0	3.1	2.8	2.8	2.8			
	Unemployment	1.6	1.6	1.4	1.4	1.7	1.7	1.5	1.5	1.6			
	Housing and Social exclusion n.e.c.	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5			
	Total (including Admin and Other expenditures) of which: Means tested benefits	28.8	28.3	27.9	28.5	30.7	30.6	29.8	30.2	30.7			



## Macro economic indicators: Poland

Poland		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Macro Economic Indicators	Annual percentage growth	Real GDP	3.5	6.2	7.2	3.9	2.6	3.7	5.0	1.6	1.3	3.3
		Total employment	2.2	3.2	4.5	3.8	0.4	-2.7 b	0.6 b	0.1	-0.1	1.7 p
		Labour productivity	1.4	2.9	2.6	0.1	2.3	6.5 b	4.4 b	1.4	1.3	1.6 p
		Annual average hours worked	-0.3	0.1	-0.1	-0.4	-0.8	-0.3 b	-0.3 b	-0.3	-0.2	0.2 p
		Productivity per hour worked	1.6	2.8	2.7	0.5	3.0	6.8 b	4.7 b	1.7	1.5	1.4 p
		Harmonized CPI	2.2	1.3	2.6	4.2	4.0	2.7	3.9	3.7	0.8	0.1
		Price deflator GDP	2.6	1.8	3.9	3.6	3.9	2.3	3.2	2.4	0.4	0.4
		Nominal compensation per employee	2.0	2.3	5.1	8.6	3.4	10.1 b	5.3 b	3.6	1.7	1.6 p
		Real compensation per employee (GDP deflator)	-0.6	0.4	1.1	4.9	-0.5	7.6 b	2.0 b	1.2	1.3	1.2 p
		Real compensation per employee (private consumption deflator)	-0.2	0.9	2.5	4.2	-0.6	7.3 b	1.4 b	-0.1	0.9	1.6 p
		Nominal unit labour costs	0.6	-0.7	2.4	8.5	1.1	3.4 b	0.9	2.1	0.3	0.0 p
		Real unit labour costs	-1.9	-2.4	-1.4	4.8	-2.7	1.1 b	-2.3 b	-0.3	-0.1	-0.4 p
		Labour Market Indicators	Total	Total population (000)	37527 e	37446	37277	37158	37196	36585 b	36600	36610
Population aged 15-64 (000)	26211			26325	26299	26266	26338	25842 b	25814	25697	25525	25278
Total employment (000)	14116			14594	15241	15800	15868	15473 b	15562	15591	15568	15862
Employment aged 15-64 (000)	13834			14338	14997	15557	15630	15233 b	15313	15340	15313	15591
Employment rate (% population aged 20-64)	58.3			60.1	62.7	65.0	64.9	64.3 b	64.5	64.7	64.9	66.5
Employment rate (% population aged 15-64)	52.8			54.5	57.0	59.2	59.3	58.9 b	59.3	59.7	60.0	61.7
Employment rate (% population aged 15-24)	22.5			24.0	25.8	27.3	26.8	26.4 b	24.9	24.7	24.2	25.8
Employment rate (% population aged 25-54)	69.6			71.8	74.9	77.5	77.6	77.2 b	77.3	77.2	77.0	78.4
Employment rate (% population aged 55-64)	27.2			28.1	29.7	31.6	32.3	34.1 b	36.9	38.7	40.6	42.5
FTE employment rate (% population aged 20-64)	57.1 b			59.0	61.7	64.1	64.0	63.4 b	63.7	64.0	64.2	65.8
Self-employed (% total employment)	25.8			24.5	23.5	22.8	22.6	22.7 b	22.7	22.1	21.8	21.3 p
Part-time employment (% total employment)	10.8			9.8	9.2	8.5	8.4	8.4 b	8.0	7.9	7.8	7.8
Fixed-term contracts (% total employees)	25.7			27.3	28.2	27.0	26.5	27.3 b	26.9	26.9	26.9	28.4
Employment in Services (% total employment)	53.2			54.1	54.5	54.3	55.8	56.9 b	56.7	57.3	57.8	58.3 p
Employment in Industry (% total employment)	29.5			30.2	30.9	31.8	31.0	30.1 b	30.4	30.2	30.3	30.2 p
Employment in Agriculture (% total employment)	17.3			15.7	14.6	14.0	13.3	13.0 b	12.9	12.6	12.0	11.5 p
Activity rate (% population aged 15-64)	64.4			63.4	63.2	63.8	64.7	65.3 b	65.7	66.5	67.0	67.9
Activity rate (% population aged 15-24)	35.7			34.2	33.0	33.1	33.8	34.6 b	33.5	33.6	33.3	33.9
Activity rate (% population aged 25-54)	82.5			81.7	81.7	82.5	83.4	84.1 b	84.2	84.6	84.6	85.1
Activity rate (% population aged 55-64)	30.5			30.7	31.8	33.3	34.5	36.7 b	39.6	41.8	44.0	45.6
Total unemployment (000)	3018			2311	1579	1165	1359 i	1650	1659	1749	1793	1567
Unemployment rate (% labour force)	17.9			13.9	9.6	7.1	8.1 i	9.7	9.7	10.1	10.3	9.0
Youth unemployment rate (% labour force 15-24)	36.9			29.8	21.6	17.2	20.6 i	23.7	25.8	26.5	27.3	23.9
Long-term unemployment rate (% labour force)	10.3			7.8	4.9	2.4	2.5	3.0	3.6	4.1	4.4	3.8
Share of long-term unemployment (% of total unemployment)	57.7			56.1	51.3	33.5	30.3	31.1 b	37.2	40.3	42.5	42.7
Youth unemployment ratio (% population aged 15-24)	13.2			10.2	7.1	5.7	7.0	8.2 b	8.6	8.9	9.1	8.1
Employment rate for low skilled 25-64 (ISCED 0-2)	37.3 b			38.6	41.0	43.0	41.6	39.9 b	39.7	39.8	38.5	39.3 b
Employment rate for medium skilled 25-64 (ISCED 3-4)	61.7 b			62.9	65.2	67.1	66.3	65.4 b	65.8	65.4	65.2	66.1 b
Employment rate for high skilled 25-64 (ISCED 5-8)	82.8 b			83.5	84.5	85.1	85.3	84.6 b	84.6	84.7	84.8	86.3 b
Employment rate (Nationals aged 15-64)	52.8 b			54.5	57.0	59.2	59.3	58.9 b	59.3	59.7	60.0	61.7
Employment rate (Other EU-28 aged 15-64)				53.8 u	70.8 u	85.3 u	73.3 u	58.8 bu	75.3 u	74.5 u	70.7 u	73.9 u
Employment rate (Other than EU-28 aged 15-64)				50.5	62.6	63.5	61.9	60.5 b	57.1	61.9	56.7	62.4
Employment rate (Born in the same country aged 15-64)	52.9 b			54.6	57.1	59.3	59.4	59.0 b	59.3	59.7	60.0	61.7
Employment rate (Born in other EU-28 aged 15-64)				37.3	34.2	40.3	34.2 u	41.9 bu	54.6 u	62.4 u	62.0 u	64.2
Employment rate (Born outside EU-28 aged 15-64)				34.2	38.7	45.5	51.7	54.8 b	55.6	61.6	58.0	62.5
Underemployment (% of labour force aged 15-74)						1.5 b	1.7	1.8 b	1.8	2.0 b	2.1	2.2
Seeking but not available (% of labour force aged 15-74)	1.1 b	0.8 b	0.8	0.6 b	0.6	0.7 b	0.6	0.6 b	0.5	0.6		
Discouraged, available but not seeking (% of labour force aged 15-74)	3.8 b	5.1 b	4.8	3.8 b	3.8	3.7 b	3.7	3.7 b	3.9	3.7		

Poland		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	18104 e	18052	17924	17831	17850	17708 b	17714	17715	17702	17664
		Population aged 15-64 (000)	12986	13027	12976	12931	12971	12888 b	12874	12819	12737	12620
		Total employment (000)	7809	8081	8403	8718	8722	8566 b	8648	8651	8641	8778
		Employment aged 15-64 (000)	7643	7927	8258	8573	8578	8418 b	8496	8498	8486	8607
		Employment rate (% population aged 20-64)	65.1	67.3	70.2	73.0	72.6	71.3 b	71.9	72.0	72.1	73.6
		Employment rate (% population aged 15-64)	58.9	60.9	63.6	66.3	66.1	65.3 b	66.0	66.3	66.6	68.2
		Employment rate (% population aged 15-24)	25.4	26.9	29.2	31.0	30.4	30.5 b	29.6	29.2	28.6	30.0
		Employment rate (% population aged 25-54)	76.1	78.3	81.1	84.0	83.7	82.5 b	83.0	82.9	82.7	83.9
		Employment rate (% population aged 55-64)	35.9	38.4	41.4	44.1	44.3	45.2 b	47.8	49.3	51.3	53.1
		FTE employment rate (% population aged 20-64)	65.0 b	67.2	70.3	73.3	72.8	71.6 b	72.1	72.4	72.6	74.1
		Self-employed (% total employment)	27.9	26.7	25.6	24.8	24.8	25.0 b	25.1	24.6	24.5	24.3
		Part-time employment (% total employment)	8.0	7.1	6.6	5.9	5.8	5.8 b	5.5	5.2	5.2	5.1
		Fixed-term contracts (% total employees)	26.5	28.5	28.4	26.3	26.3	27.5 b	27.5	27.4	27.4	28.6
		Employment in Services (% total employment)	42.8	43.4	43.5	42.8	44.0	45.1 b	44.8	45.1	45.3	46.0
		Employment in Industry (% total employment)	39.4	40.3	41.4	43.1	42.6	41.5 b	41.8	41.6	41.8	41.5
		Employment in Agriculture (% total employment)	17.8	16.3	15.1	14.1	13.4	13.4 b	13.5	13.3	12.9	12.5
		Activity rate (% population aged 15-64)	70.8	70.1	70.0	70.9	71.8	72.1 b	72.6	73.3	73.9	74.6
		Activity rate (% population aged 15-24)	39.5	37.5	36.5	36.5	38.1	39.3 b	38.7	38.5	38.4	38.8
		Activity rate (% population aged 25-54)	88.7	88.2	87.9	88.8	89.4	89.6 b	89.7	90.0	90.0	90.5
		Activity rate (% population aged 55-64)	40.9	42.6	44.7	46.8	47.5	48.9 b	51.6	53.5	55.9	57.2
	Total unemployment (000)	1543	1191	817	583	716 i	881	856	900	927	815	
	Unemployment rate (% labour force)	16.7	13.0	9.0	6.4	7.8 i	9.4	9.0	9.4	9.7	8.5	
	Youth unemployment rate (% labour force 15-24)	35.8	28.3	20.0	15.2	20.2 i	22.4	23.6	24.1	25.4	22.7	
	Long-term unemployment rate (% labour force)	9.4	7.1	4.6	2.0	2.2	2.9 b	3.3	3.7	4.0	3.7	
	Share of long-term unemployment (% of total unemployment)	56.1	54.7	50.8	31.8	27.9	30.8 b	36.3	39.0	41.5	42.9	
	Youth unemployment ratio (% population aged 15-24)	14.1	10.6	7.3	5.6	7.7	8.8 b	9.1	9.3	9.7	8.8	
	Employment rate for low skilled 25-64 (ISCED 0-2)	46.2 b	48.9	51.8	55.0	53.4	49.5 b	49.2	49.6	49.0	49.7 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	69.8 b	71.4	73.9	76.1	75.1	74.0 b	74.7	74.3	74.2	75.2 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	86.2 b	86.8	88.3	89.2	89.9	88.6 b	88.9	89.1	89.5	90.9 b	
	Employment rate (Nationals aged 15-64)	58.8 b	60.9	63.6	66.3	66.1	65.3 b	66.0	66.3	66.6	68.2	
	Employment rate (Other EU-28 aged 15-64)			77.2 u	89.0 u	82.0 u		83.3 u	84.7 u	83.6 u	82.3 u	
	Employment rate (Other than EU-28 aged 15-64)		61.0 u	68.1 u	66.0 u	68.3 u	75.4 bu	70.5 u	73.7 u	71.8 u	70.2 u	
	Employment rate (Born in the same country aged 15-64)	59.0 b	60.9	63.7	66.4	66.2	65.3 b	66.0	66.3	66.6	68.2	
	Employment rate (Born in other EU-28 aged 15-64)		41.5 u	43.4 u	50.6 u	43.3 u	44.8 bu	59.8 u	69.8 u	73.9 u	72.4 u	
	Employment rate (Born outside EU-28 aged 15-64)		43.5 u	51.9 u	51.9	60.9 u	68.4 bu	65.0 u	72.0 u	66.8	71.9	
	Underemployment (% of labour force aged 15-74)				1.1 b	1.2	1.3 b	1.3	1.4 b	1.4	1.4	
	Seeking but not available (% of labour force aged 15-74)	0.8 b	0.7 b	0.6	0.5 b	0.5	0.5 b	0.5	0.5 b	0.4	0.4	
	Discouraged, available but not seeking (% of labour force aged 15-74)	2.9 b	4.1 b	3.8	3.0 b	3.0	3.0 b	3.0	3.0 b	3.2	3.0	

Poland		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	19422 e	19394	19353	19327	19346	18877 b	18887	18894	18885	18848
		Population aged 15-64 (000)	13225	13298	13322	13335	13368	12954 b	12940	12878	12788	12657
		Total employment (000)	6306	6513	6838	7082	7147	6908 b	6914	6940	6927	7084
		Employment aged 15-64 (000)	6191	6411	6738	6984	7052	6815 b	6817	6842	6828	6984
		Employment rate (% population aged 20-64)	51.7	53.1	55.5	57.3	57.6	57.3 b	57.2	57.5	57.6	59.4
		Employment rate (% population aged 15-64)	46.8	48.2	50.6	52.4	52.8	52.6 b	52.7	53.1	53.4	55.2
		Employment rate (% population aged 15-24)	19.6	21.0	22.4	23.7	23.2	22.1 b	20.0	19.9	19.5	21.3
		Employment rate (% population aged 25-54)	63.1	65.3	68.8	71.0	71.6	71.7 b	71.5	71.5	71.2	72.7
		Employment rate (% population aged 55-64)	19.7	19.0	19.4	20.7	21.9	24.2 b	27.2	29.2	31.0	32.9
		FTE employment rate (% population aged 20-64)	49.6 b	51.2	53.6	55.4	55.7	55.4 b	55.5	55.8	56.0	57.6
		Self-employed (% total employment)	23.1	21.8	21.0	20.3	20.0	19.9 b	19.6	18.9	18.4	17.7
		Part-time employment (% total employment)	14.3	13.0	12.5	11.7	11.6	11.6 b	11.2	11.3	11.1	11.1
		Fixed-term contracts (% total employees)	24.7	26.0	27.9	27.7	26.6	27.1 b	26.1	26.3	26.5	28.1
		Employment in Services (% total employment)	66.1	67.4	67.9	68.4	70.1	71.4 b	71.5	72.4	73.2	73.5
		Employment in Industry (% total employment)	17.3	17.6	18.0	17.8	16.7	15.9 b	16.3	15.9	15.9	16.3
		Employment in Agriculture (% total employment)	16.6	15.0	14.1	13.8	13.2	12.6 b	12.2	11.7	10.9	10.2
		Activity rate (% population aged 15-64)	58.1	56.8	56.5	57.0	57.8	58.5 b	58.9	59.7	60.1	61.1
		Activity rate (% population aged 15-24)	31.8	30.7	29.3	29.6	29.4	29.6 b	28.1	28.4	27.9	28.7
		Activity rate (% population aged 25-54)	76.4	75.4	75.6	76.3	77.5	78.6 b	78.6	79.1	79.1	79.6
		Activity rate (% population aged 55-64)	21.5	20.3	20.6	21.6	23.2	25.9 b	29.0	31.3	33.3	35.2
	Total unemployment (000)	1475	1120	763	582	644 i	769	802	850	866	752	
	Unemployment rate (% labour force)	19.4	15.1	10.3	7.9	8.6 i	10.0	10.4	10.9	11.1	9.6	
	Youth unemployment rate (% labour force 15-24)	38.4	31.6	23.7	19.7	21.1 i	25.4	28.8	30.0	30.1	25.5	
	Long-term unemployment rate (% labour force)	11.5	8.7	5.4	2.8	2.8	3.2 b	4.0	4.6	4.8	4.1	
	Share of long-term unemployment (% of total unemployment)	59.3	57.7	51.8	35.1	33.0	31.5 b	38.2	41.8	43.5	42.6	
	Youth unemployment ratio (% population aged 15-24)	12.2	9.7	7.0	5.9	6.2	7.5 b	8.1	8.5	8.4	7.3	
	Employment rate for low skilled 25-64 (ISCED 0-2)	29.8 b	29.7	31.6	32.4	31.1	30.8 b	30.7	30.2	28.3	29.0 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	53.1 b	53.8	56.1	57.4	56.9	56.0 b	55.8	55.4	55.0	55.9 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	80.2 b	81.0	81.7	82.2	82.1	81.8 b	81.6	81.5	81.6	83.0 b	
	Employment rate (Nationals aged 15-64)	46.8 b	48.2	50.6	52.4	52.7	52.6 b	52.7	53.1	53.4	55.2	
	Employment rate (Other EU-28 aged 15-64)		41.0 u	58.2 u	61.4 u	57.9 u	49.2 bu	47.3 u	49.9 u	40.4 u	55.1 u	
	Employment rate (Born in the same country aged 15-64)	47.0 b	48.3	50.7	52.4	52.8	52.6 b	52.7	53.1	53.4	55.2	
	Employment rate (Born in other EU-28 aged 15-64)		32.5 u		28.2 u							
	Employment rate (Born outside EU-28 aged 15-64)		27.4 u	29.4 u	39.8 u	45.8	45.6 bu	48.7 u	53.2 u	49.9 u	55.3	
	Underemployment (% of labour force aged 15-74)				2.0 b	2.1	2.3 b	2.4	2.8 b	2.9	3.1	
	Seeking but not available (% of labour force aged 15-74)	1.5 b	1.0 b	0.9	0.8 b	0.8	0.8 b	0.8	0.7 b	0.7	0.7	
	Discouraged, available but not seeking (% of labour force aged 15-74)	4.9 b	6.5 b	6.1	4.8 b	4.7	4.5 b	4.4	4.5 b	4.8	4.7	

Poland		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	45.3	39.5	34.4	30.5 b	27.8	27.8	27.2	26.7	25.8	24.7
		At-risk-of-poverty (% of total population)	20.5	19.1	17.3	16.9	17.1	17.6	17.7	17.1	17.3	17.0
		At-risk-of-poverty threshold (PPS single person)	2855 b	3057	3365	4039	4417	4547	4993	5181	5495	5736
		Poverty gap (%)	30.1	25.0	24.0	20.6	22.7	22.2	21.4	22.2	22.6	23.2
		Persistent at-risk-of-poverty (% of total population)				10.4	10.2	10.5	10.1	10.7	9.0	10.7
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	29.8	28.6	26.5	25.1	23.6	24.4	24.1	22.9	23.0	23.1
		Impact of social transfers (excl. pensions) in reducing poverty (%)	31.2	33.2	34.7	32.7	27.5	27.9	26.6	25.3	24.8	26.4
		Severe Material Deprivation (% of total population)	33.8	27.6	22.3	17.7	15.0	14.2	13.0	13.5	11.9	10.4
		Share of people living in low work intensity households (% of people aged 0-59)	14.3	12.4	10.1	8.0	6.9	7.3	6.9	6.9	7.2	7.3
		Gross Household Disposable income adjusted for consumer prices (growth %)	0.9	4.3	5.2	4.2	5.7	1.8	0.0	1.1	2.8	
		Income quintile share ratio S80/S20	6.6	5.6	5.3	5.1	5.0	5.0	5.0	4.9	4.9	4.9
		GINI coefficient	35.6 b	33.3	32.2	32.0	31.4	31.1	31.1	30.9	30.7	30.8
		Early leavers from education and training (% of population aged 18-24)	5.3	5.4	5.0	5.0 b	5.3	5.4 b	5.6	5.7	5.6 b	5.4 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	13.9	12.6	10.6	9.0 b	10.1	10.8 b	11.5	11.8	12.2 b	12.0
		Male	At-risk-of-poverty or exclusion (% of male population)	44.7	39.0	33.5	29.9 b	27.0	27.0	26.6	26.1	25.5
	At-risk-of-poverty (% of male population)		21.3	19.7	17.6	17.0	16.9	17.4	17.8	17.1	17.3	17.2
	Poverty gap (%)		30.8	25.9	25.4	21.5	23.7	23.3	22.8	23.3	23.4	24.4
	Persistent at-risk-of-poverty (% of male population)					10.7	10.4	10.2	10.4	10.4	9.1	10.8
	Severe Material Deprivation (% of male population)		33.4	27.4	21.9	17.6	14.6	14.1	12.9	13.2	11.8	10.6
	Share of people living in low work intensity households (% of males aged 0-59)		13.9	11.8	9.5	7.3	6.4	6.7	6.4	6.5	6.9	7.1
Life expectancy at birth (years)	70.8		70.9	71.0	71.3	71.5	72.2	72.6	72.6	73.0		
Healthy life years at birth (years) - men	61.2 d		58.4 bd	57.6	58.6	58.3	58.5	59.1	59.1	59.2		
Early leavers from education and training (% of males aged 18-24)	6.8		6.9	6.2	6.1 b	6.6	7.2 b	7.4	7.8	7.9 b	7.3 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)	13.4		12.1	9.3	7.3 b	9.4	10.5 b	11.2	11.5	12.1 b	12.0	
Female	At-risk-of-poverty or exclusion (% of female population)		45.8	40.0	35.1	31.2 b	28.6	28.5	27.7	27.3	26.2	24.7
	At-risk-of-poverty (% of female population)		19.9	18.5	17.1	16.7	17.4	17.7	17.6	17.1	17.3	16.8
	Poverty gap (%)		29.8	24.2	22.8	20.0	21.8	21.0	20.3	21.2	21.9	22.3
	Persistent at-risk-of-poverty (% of female population)					10.2	10.1	10.7	9.9	11.0	9.0	10.6
	Severe Material Deprivation (% of female population)		34.2	27.8	22.7	17.9	15.3	14.4	13.2	13.8	12.0	10.2
	Share of people living in low work intensity households (% of females aged 0-59)	14.7	13.1	10.7	8.6	7.4	8.0	7.4	7.2	7.4	7.5	
	Life expectancy at birth (years)	79.3	79.7	79.8	80.0	80.1	80.7	81.1	81.1	81.2		
	Healthy life years at birth (years) - women	66.9 d	62.9 bd	61.5	63.0	62.5	62.3	63.3	62.8	62.7		
	Early leavers from education and training (% of females aged 18-24)	3.7	3.9	3.8	3.9 b	3.9	3.5 b	3.7	3.5	3.2 b	3.3 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	14.5	13.1	11.9	10.8 b	10.8	11.0 b	11.8	12.2	12.3 b	12.0	
	Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	48.0	42.0	37.1	32.9 b	31.0	30.8	29.8	29.3	29.8	28.2
		At-risk-of-poverty (% of Children population)	29.3	26.3	24.2	22.4	23.0	22.5	22.0	21.5	23.2	22.3
		Severe Material Deprivation (% of Children population)	34.2	28.2	22.5	17.5	15.3	14.9	13.2	13.7	11.8	10.2
		Share of children living in low work intensity households (% of Children population)	10.6	8.7	6.6	5.0	4.7	4.8	4.1	4.6	5.0	5.1
		Risk of poverty of children in households at work (Working Intensity > 0.2)	24.0	21.9	20.8	19.8	20.3	19.4	19.7	18.8	20.3	19.5
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)		24.9	27.6	29.9	31.1	23.6	26.7	26.9	25.6	22.4	24.2	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	45.6	40.2	34.9	30.6 b	27.3	27.6	27.0	26.7	26.1	25.2	
	At-risk-of-poverty (% of Working age population)	20.4	19.1	17.2	16.3	16.0	16.9	17.1	16.5	16.7	16.7	
	Severe Material Deprivation (% of Working age population)	33.1	27.2	21.9	17.2	14.4	13.6	12.5	13.2	12.0	10.5	
	Very low work intensity (18-59)	15.6	13.6	11.2	8.9	7.6	8.1	7.8	7.6	7.8	8.0	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	13.8	12.8	11.7	11.5	11.0	11.5	11.2	10.4	10.8	10.7	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	33.6	35.7	36.5	34.5	30.4	29.9	28.2	27.0	26.8	28.3	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	39.3	32.5	27.3	26.9 b	25.8	24.4	24.7	23.4	19.7	18.2	
	At-risk-of-poverty (% of Elderly population)	7.3	7.8	7.8	11.7	14.4	14.2	14.7	14.0	12.3	11.7	
	Severe Material Deprivation (% of Elderly population)	36.7	29.2	23.7	20.8	17.3	16.5	15.4	14.8	11.5	9.7	
	Relative median income of elderly (ratio with median income of people younger than 65)	1.09 b	1.07	1.04	0.97	0.92	0.93	0.94	0.95	0.98	0.99	
	Aggregate replacement ratio (ratio)	0.58	0.59	0.58	0.56	0.56	0.57	0.55	0.58	0.60	0.63	
Expenditure in social protection (% of GDP)	Sickness/Health care	3.8	3.8	3.9	4.5	4.7	4.5	4.3	4.2 p			
	Disability	2.1	1.9	1.7	1.6	1.5	1.6	1.5	1.5 p			
	Old age and survivors	11.4	11.6	10.8	11.0	11.9	11.4	10.9	10.6 p			
	Family/Children	0.9	0.9	0.9	1.3	1.3	1.4	1.3	0.8 p			
	Unemployment	0.6	0.6	0.4	0.4	0.4	0.4	0.3	0.3 p			
	Housing and Social exclusion n.e.c.	0.5	0.3	0.3	0.2	0.2	0.3	0.2	0.2 p			
	Total (including Admin and Other expenditures) of which: Means tested benefits	20.0	19.7	18.5	19.4	20.6	20.0	19.1	18.1 p			

## Macro economic indicators: Portugal

Portugal		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Macro Economic Indicators	Annual percentage growth	Real GDP	0.8	1.6	2.5	0.2	-3.0	1.9	-1.8	-4.0	-1.1	0.9 e
		Total employment	-0.5	0.4	0.0	0.4	-2.7	-1.4	-1.9	-4.1	-2.9	1.4 e
		Labour productivity	1.2	1.2	2.5	-0.2	-0.3	3.4	0.1	0.1	1.8	-0.5 e
		Annual average hours worked	0.1	-0.6	0.9	-0.7	0.0	0.1	-1.2	-0.9	0.6	0.3 e
		Productivity per hour worked	1.1	1.8	1.6	0.5	-0.3	3.2	1.4	1.0	1.2	-0.8 e
		Harmonized CPI	2.1	3.0	2.4	2.7	-0.9	1.4	3.6	2.8	0.4	-0.2
		Price deflator GDP	3.3	3.2	3.0	1.7	1.1	0.6	-0.3	-0.4	2.3	1.0 e
		Nominal compensation per employee	4.7	1.8	3.5	2.6	2.4	2.1	-1.9	-3.1	3.6	-1.4 e
		Real compensation per employee (GDP deflator)	1.3	-1.3	0.5	0.9	1.3	1.4	-1.6	-2.7	1.3	-2.3 e
		Real compensation per employee (private consumption deflator)	2.5	-1.2	1.0	0.0	3.3	0.7	-5.2	-5.7	3.1	-1.2 e
		Nominal unit labour costs	3.4	0.7	1.0	2.8	2.7	-1.2	-2.0	-3.2	1.8	-0.9 e
		Real unit labour costs	0.1	-2.5	-2.0	1.1	1.6	-1.9	-1.7	-2.8	-0.5	-1.8 e
		Labour Market Indicators	Total	Total population (000)	10500	10522	10542	10557	10566	10569	10553 b	10508
Population aged 15-64 (000)	7017			7024	7035	7036	7029	7012	6979 b	6930	6859	6794
Total employment (000)	5047			5079	5093	5117	4969	4898	4740 b	4547	4429	4500
Employment aged 15-64 (000)	4723			4751	4756	4786	4645	4577	4453 b	4256	4158	4255
Employment rate (% population aged 20-64)	72.2			72.6	72.5	73.1	71.1	70.3	68.8 b	66.3	65.4	67.6
Employment rate (% population aged 15-64)	67.3			67.6	67.6	68.0	66.1	65.3	63.8 b	61.4	60.6	62.6
Employment rate (% population aged 15-24)	35.3			34.8	34.4	34.1	30.8	27.9	26.6 b	23.0	21.7	22.4
Employment rate (% population aged 25-54)	80.7			81.2	80.9	81.6	79.7	79.2	77.8 b	75.5	74.6	77.4
Employment rate (% population aged 55-64)	50.4			50.1	51.0	50.7	49.7	49.5	47.8 b	46.5	46.9	47.8
FTE employment rate (% population aged 20-64)	70.6 b			70.8	70.5	71.3	69.3	68.4	65.9 b	63.0	62.3	64.8
Self-employed (% total employment)	18.6			18.2	17.7	17.5	17.2	16.5	16.6	17.2	16.6	16.3
Part-time employment (% total employment)	11.4			11.5	12.3	12.2	11.9	11.9	13.6 b	14.6	14.3	13.1
Fixed-term contracts (% total employees)	19.4			20.4	22.3	22.7	22.0	22.8	22.0 b	20.5	21.4	21.4
Employment in Services (% total employment)	59.2			59.9	60.4	61.4	62.8	63.7	64.4	65.0	65.7	65.9
Employment in Industry (% total employment)	29.0			28.4	28.0	27.2	25.6	25.2	24.5	23.2	22.9	22.8
Employment in Agriculture (% total employment)	11.9			11.8	11.6	11.4	11.6	11.2	11.1	11.7	11.4	11.3
Activity rate (% population aged 15-64)	73.2			73.6	73.9	73.9	73.4	73.7	73.6 b	73.4	73.0	73.2
Activity rate (% population aged 15-24)	42.1			41.7	41.3	40.9	38.7	36.1	38.2 b	37.1	35.0	34.3
Activity rate (% population aged 25-54)	87.0			87.7	87.7	88.0	87.8	88.7	88.4 b	88.5	88.3	88.6
Activity rate (% population aged 55-64)	53.7			53.4	54.6	54.3	53.8	54.3	53.6 b	53.3	54.4	55.3
Total unemployment (000)	470 e			478 e	494 e	476 e	574 e	645 e	688	835	855	729
Unemployment rate (% labour force)	8.8 e			8.9 e	9.1 e	8.8 e	10.7 e	12.0 e	12.9	15.8	16.4	14.1
Youth unemployment rate (% labour force 15-24)	20.8 e			21.2 e	21.4 e	21.6 e	25.3 e	28.2 e	30.2	38.0	38.1	34.7
Long-term unemployment rate (% labour force)	4.2 e			4.5 e	4.3 e	4.1 e	4.7 e	6.3 e	6.2 b	7.7	9.3	8.4
Share of long-term unemployment (% of total unemployment)	48.3			50.4	47.2	47.5	44.2	52.2	48.4 b	48.8	56.4	59.6
Youth unemployment ratio (% population aged 15-24)	6.8			6.9	6.9	6.8	7.9	8.2	11.5 b	14.1	13.3	11.9
Employment rate for low skilled 25-64 (ISCED 0-2)	71.4 b			71.5	71.4	71.6	68.9	68.1	65.7 b	62.9	61.6	63.0 b
Employment rate for medium skilled 25-64 (ISCED 3-4)	79.3 b			80.2	80.0	80.7	80.2	79.9	79.3 b	76.0	75.8	77.6 b
Employment rate for high skilled 25-64 (ISCED 5-8)	87.3 b			86.4	86.0	86.7	86.6	85.4	83.6 b	82.1	80.5	82.7 b
Employment rate (Nationals aged 15-64)	67.2 b			67.5	67.5	67.8	66.1	65.3	63.8 b	61.5	60.8	62.7
Employment rate (Other EU-28 aged 15-64)				69.2	71.1	79.0	70.7	64.2	70.0 b	63.6	56.7	60.7
Employment rate (Other than EU-28 aged 15-64)				71.1	71.5	72.0	65.7	65.4	62.4 b	57.5	54.4	59.0
Employment rate (Born in the same country aged 15-64)	66.9 b			67.3	67.2	67.5	65.7	64.9	63.4 b	60.9	60.4	62.2
Employment rate (Born in other EU-28 aged 15-64)		68.2	70.8	73.9	73.0	71.6	75.6 b	71.3	67.2	73.8		
Employment rate (Born outside EU-28 aged 15-64)		72.5	73.4	73.9	68.8	68.0	66.5 b	64.9	61.1	64.2		
Underemployment (% of labour force aged 15-74)				1.8	1.7	1.8	4.0 b	4.8	5.0	4.8		
Seeking but not available (% of labour force aged 15-74)	0.2 b	0.2	0.2	0.2	0.2	0.2	0.6 b	0.5	0.5	0.5		
Discouraged, available but not seeking (% of labour force aged 15-74)	1.4 b	1.6	1.4	1.3	1.3	1.3	3.2 b	4.3	5.3	5.3		



Portugal		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	5054	5061	5066	5067	5064	5056	5039 b	5009	4971	4925
		Population aged 15-64 (000)	3442	3445	3449	3446	3438	3426	3405 b	3376	3334	3289
		Total employment (000)	2707	2725	2725	2725	2612	2569	2487 b	2357	2288	2320
		Employment aged 15-64 (000)	2522	2538	2539	2542	2436	2390	2306 b	2177	2116	2164
		Employment rate (% population aged 20-64)	78.7	79.2	79.1	79.4	76.4	75.4	73.2 b	69.8	68.7	71.3
		Employment rate (% population aged 15-64)	73.3	73.7	73.6	73.8	70.8	69.8	67.7 b	64.5	63.5	65.8
		Employment rate (% population aged 15-24)	39.6	38.7	38.5	37.7	32.5	29.7	28.7 b	24.8	22.9	22.9
		Employment rate (% population aged 25-54)	86.8	87.5	87.2	87.6	84.7	84.1	81.7 b	78.6	77.1	80.6
		Employment rate (% population aged 55-64)	58.1	58.2	58.7	58.3	57.5	55.8	54.2 b	51.6	53.5	54.3
		FTE employment rate (% population aged 20-64)	79.0 b	79.1	78.9	79.6	76.3	74.8	71.5 b	67.6	66.6	69.3
		Self-employed (% total employment)	19.6	19.1	18.9	18.6	18.8	18.3	19.6 b	20.4	19.8	20.1
		Part-time employment (% total employment)	7.1	7.5	8.1	7.6	7.7	8.4	11.0 b	12.5	12.3	11.5
		Fixed-term contracts (% total employees)	18.6	19.3	21.7	21.5	20.8	22.2	21.7 b	20.7	21.3	21.7
		Employment in Services (% total employment)	49.9	50.5	50.5	51.3	52.7	53.4	53.4 b	53.9	55.2	55.3
		Employment in Industry (% total employment)	39.1	38.1	38.3	37.7	35.9	35.1	34.1 b	32.3	30.9	30.6
		Employment in Agriculture (% total employment)	11.1	11.4	11.3	11.0	11.5	11.5	12.6 b	13.8	13.9	14.1
		Activity rate (% population aged 15-64)	78.9	79.2	79.2	79.2	78.2	77.8	78.0 b	77.3	76.5	76.7
		Activity rate (% population aged 15-24)	46.0	45.5	44.7	43.6	40.1	38.0	40.4 b	39.2	36.2	34.8
		Activity rate (% population aged 25-54)	92.5	92.9	92.9	93.2	92.5	92.7	92.4 b	92.1	91.1	91.6
		Activity rate (% population aged 55-64)	62.4	62.7	63.2	62.9	62.6	62.0	61.6 b	60.4	62.7	64.0
		Total unemployment (000)	250 e	248 e	249 e	246 e	309 e	331 e	349	434	436	363
	Unemployment rate (% labour force)	8.7 e	8.6 e	8.7 e	8.6 e	11.0 e	11.9 e	12.6	15.9	16.3	13.8	
	Youth unemployment rate (% labour force 15-24)	18.7 e	19.9 e	18.9 e	19.0 e	24.6 e	27.3 e	29.0	36.7	36.7	33.9	
	Long-term unemployment rate (% labour force)	4.2 e	4.4 e	4.1 e	4.2 e	4.5 e	6.2 e	6.1 b	7.8	9.4	8.4	
	Share of long-term unemployment (% of total unemployment)	47.6	51.4	47.6	48.6	40.8	51.8	48.0 b	48.9	57.6	60.8	
	Youth unemployment ratio (% population aged 15-24)	6.4	6.8	6.2	5.9	7.7	8.2	11.7 b	14.4	13.3	11.9	
	Employment rate for low skilled 25-64 (ISCED 0-2)	79.9 b	80.4	80.0	79.8	76.5	75.4	72.7 b	68.9	67.2	69.1 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	82.3 b	82.7	82.5	83.9	83.8	83.5	81.2 b	77.8	77.9	81.1 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	88.9 b	88.5	89.3	90.3	87.6	86.1	83.7 b	82.6	82.7	85.5 b	
	Employment rate (Nationals aged 15-64)	73.1 b	73.5	73.4	73.5	70.8	69.7	67.7 b	64.6	63.7	65.9	
	Employment rate (Other EU-28 aged 15-64)		77.5	83.0	88.6	85.3	72.2	72.2 b	71.8	66.5	66.9	
	Employment rate (Other than EU-28 aged 15-64)		78.1	78.0	78.3	70.2	71.7	66.8 b	56.4	54.9	59.4	
	Employment rate (Born in the same country aged 15-64)	72.9 b	73.5	73.2	73.2	70.5	69.4	67.5 b	64.2	63.4	65.4	
	Employment rate (Born in other EU-28 aged 15-64)		73.6	78.7	83.9	79.9	78.2	77.4 b	76.9	73.0	77.7	
	Employment rate (Born outside EU-28 aged 15-64)		77.4	79.2	79.3	73.1	72.8	68.6 b	65.4	61.2	66.6	
	Underemployment (% of labour force aged 15-74)				0.9	0.9	0.9	2.8 b	3.6	3.7	3.6	
	Seeking but not available (% of labour force aged 15-74)				0.2			0.4 b	0.5	0.4	0.5	
	Discouraged, available but not seeking (% of labour force aged 15-74)	1.0 b	1.0	0.9	0.8	1.1	1.0	2.4 b	3.5	4.5	4.4	

Portugal		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	5445	5460	5476	5490	5502	5513	5515 b	5499	5478	5462
		Population aged 15-64 (000)	3575	3579	3586	3591	3591	3586	3574 b	3554	3525	3505
		Total employment (000)	2341	2354	2367	2391	2357	2329	2253 b	2190	2141	2180
		Employment aged 15-64 (000)	2201	2213	2217	2243	2209	2187	2147 b	2079	2042	2091
		Employment rate (% population aged 20-64)	66.0	66.3	66.3	67.1	66.1	65.6	64.6 b	63.0	62.3	64.2
		Employment rate (% population aged 15-64)	61.6	61.8	61.8	62.5	61.5	61.0	60.1 b	58.5	57.9	59.6
		Employment rate (% population aged 15-24)	30.8	30.7	30.1	30.3	29.2	26.0	24.5 b	21.2	20.4	21.9
		Employment rate (% population aged 25-54)	74.8	75.2	74.8	75.8	74.9	74.5	74.1 b	72.5	72.2	74.3
		Employment rate (% population aged 55-64)	43.6	42.8	44.3	44.0	42.8	43.8	42.0 b	42.0	41.0	42.1
		FTE employment rate (% population aged 20-64)	62.7 b	63.0	62.7	63.4	62.8	62.4	60.6 b	58.7	58.3	60.5
		Self-employed (% total employment)	17.4	17.0	16.3	16.3	15.4	14.6	13.3 b	13.7	13.2	12.2
		Part-time employment (% total employment)	16.4	16.0	17.1	17.4	16.6	15.7	16.5 b	17.0	16.4	14.8
		Fixed-term contracts (% total employees)	20.3	21.6	22.9	24.1	23.2	23.5	22.2 b	20.4	21.5	21.2
		Employment in Services (% total employment)	69.8	70.5	71.5	72.7	73.8	74.7	76.3 b	76.8	77.0	77.3
		Employment in Industry (% total employment)	17.5	17.3	16.6	15.4	14.6	14.6	14.3 b	13.6	14.2	14.4
	Employment in Agriculture (% total employment)	12.8	12.3	11.9	11.9	11.6	10.7	9.4 b	9.6	8.8	8.3	
	Activity rate (% population aged 15-64)	67.8	68.2	68.7	68.9	68.9	69.7	69.5 b	69.7	69.8	70.0	
	Activity rate (% population aged 15-24)	38.1	37.6	37.8	38.1	37.2	34.2	35.9 b	34.9	33.8	33.8	
	Activity rate (% population aged 25-54)	81.7	82.6	82.7	82.9	83.3	84.9	84.5 b	85.0	85.5	85.8	
	Activity rate (% population aged 55-64)	46.0	45.2	47.0	46.7	46.0	47.4	46.4 b	47.0	46.9	47.5	
	Total unemployment (000)	220 e	230 e	245 e	229 e	264 e	314 e	339	400	419	366	
	Unemployment rate (% labour force)	8.8 e	9.1 e	9.6 e	9.0 e	10.3 e	12.2 e	13.2	15.6	16.6	14.5	
	Youth unemployment rate (% labour force 15-24)	23.5 e	22.8 e	24.6 e	24.6 e	26.1 e	29.2 e	31.5	39.4	39.7	35.5	
	Long-term unemployment rate (% labour force)	4.3 e	4.5 e	4.5 e	4.2 e	4.9 e	6.4 e	6.4 b	7.6	9.1	8.5	
	Share of long-term unemployment (% of total unemployment)	48.9	49.6	46.9	46.5	47.5	52.7	48.7 b	48.6	55.0	58.5	
	Youth unemployment ratio (% population aged 15-24)	7.3	7.0	7.7	7.7	8.1	8.2	11.4 b	13.7	13.4	12.0	
	Employment rate for low skilled 25-64 (ISCED 0-2)	62.8 b	62.6	62.7	63.2	61.1	60.4	58.4 b	56.6	55.6	56.4 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	76.5 b	77.9	77.6	77.6	76.8	76.5	77.5 b	74.4	74.0	74.4 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	86.3 b	85.0	83.9	84.4	85.9	85.1	83.4 b	81.8	79.1	80.9 b	
	Employment rate (Nationals aged 15-64)	61.5 b	61.7	61.7	62.3	61.5	61.0	60.1 b	58.5	58.1	59.7	
	Employment rate (Other EU-28 aged 15-64)		61.1	59.7	69.7	59.2	59.0	68.3 b	57.6	48.8	54.9	
	Employment rate (Other than EU-28 aged 15-64)		64.6	65.5	66.2	61.6	60.1	58.7 b	58.3	54.0	58.7	
	Employment rate (Born in the same country aged 15-64)	61.1 b	61.4	61.4	61.9	61.1	60.7	59.4 b	57.9	57.6	59.1	
Employment rate (Born in other EU-28 aged 15-64)		63.1	63.6	65.4	67.9	66.4	74.1 b	66.0	62.1	70.5		
Employment rate (Born outside EU-28 aged 15-64)		68.1	68.0	68.9	65.0	63.7	64.7 b	64.4	61.1	62.3		
Underemployment (% of labour force aged 15-74)				2.7	2.6	2.7	5.4 b	6.0	6.3	6.0		
Seeking but not available (% of labour force aged 15-74)	0.3 b	0.2	0.2	0.3	0.3	0.3	0.8 b	0.6	0.6	0.6		
Discouraged, available but not seeking (% of labour force aged 15-74)	1.8 b	2.1	1.9	1.7	1.6	1.7	4.0 b	5.2	6.2	6.3		

Portugal		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	26.1	25.0	25.0	26.0	24.9	25.3	24.4	25.3	27.5	27.5
		At-risk-of-poverty (% of total population)	19.4	18.5	18.1	18.5	17.9	17.9	18.0	17.9	18.7	19.5
		At-risk-of-poverty threshold (PPS single person)	4942	5157	5349	5702	5655	5837	5773	5877	5892	6075
		Poverty gap (%)	26.0	23.5	24.3	23.2	23.6	22.7	23.2	24.1	27.4	30.3
		Persistent at-risk-of-poverty (% of total population)			14.1	13.1	9.8	13.2	13.6	11.4	11.7	12.0
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	25.7	25.1	24.2	24.9	24.3	26.4	25.4	25.3	25.5	26.7
		Impact of social transfers (excl. pensions) in reducing poverty (%)	24.5	26.3	25.2	25.7	26.3	32.2	29.1	29.3	26.7	27.0
		Severe Material Deprivation (% of total population)	9.3	9.1	9.6	9.7	9.1	9.0	8.3	8.6	10.9	10.6
		Share of people living in low work intensity households (% of people aged 0-59)	6.0	6.6	7.2	6.3	7.0	8.6	8.3	10.1	12.2	12.2
		Gross Household Disposable income adjusted for consumer prices (growth %)	0.8	0.2	1.4	1.2	1.5	1.0	-5.3	-5.3	-1.0	0.2
		Income quintile share ratio S80/S20	7.0	6.7	6.5	6.1	6.0	5.6	5.7	5.8	6.0	6.2
		GINI coefficient	38.1	37.7	36.8	35.8	35.4	33.7	34.2	34.5	34.2	34.5
		Early leavers from education and training (% of population aged 18-24)	38.3	38.5 b	36.5	34.9	30.9	28.3	23.0 b	20.5	18.9	17.4 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	11.1	10.6 b	11.2	10.2	11.2	11.4	12.6 b	13.9	14.1	12.3
		Male	At-risk-of-poverty or exclusion (% of male population)	25.2	23.9	24.0	25.0	24.0	24.8	23.8	24.6	27.5
	At-risk-of-poverty (% of male population)		18.7	17.7	17.2	17.9	17.3	17.3	17.6	17.5	18.8	18.9
	Poverty gap (%)		25.6	22.4	24.3	22.5	24.9	23.1	23.4	25.3	28.4	31.2
	Persistent at-risk-of-poverty (% of male population)				13.1	12.0	9.2	13.0	13.3	10.9	12.1	12.0
	Severe Material Deprivation (% of male population)		8.9	8.7	9.2	9.5	8.9	9.2	7.8	8.3	10.9	10.1
	Share of people living in low work intensity households (% of males aged 0-59)		5.6	6.1	6.7	5.8	6.6	8.4	7.9	9.9	12.3	11.9
Life expectancy at birth (years)	74.9		75.5	75.9	76.2	76.5	76.8	77.3	77.3 b	77.6		
Healthy life years at birth (years) - men	58.6 bd		60.0	58.5	59.2	58.3	59.3	60.7	64.5 b	63.9		
Early leavers from education and training (% of males aged 18-24)	46.2		46.1 b	42.8	41.4	35.8	32.4	28.1 b	26.9	23.4	20.7 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)	10.2		9.9 b	9.8	8.9	10.6	10.4	12.2 b	14.6	14.2	12.3	
Female	At-risk-of-poverty or exclusion (% of female population)	26.9	26.0	26.0	26.8	25.8	25.8	25.1	25.9	27.4	28.1	
	At-risk-of-poverty (% of female population)	20.1	19.1	19.0	19.1	18.4	18.4	18.4	18.2	18.7	20.0	
	Poverty gap (%)	26.3	23.9	24.2	23.6	23.0	22.6	23.0	23.2	27.0	29.3	
	Persistent at-risk-of-poverty (% of female population)			15.0	14.1	10.4	13.5	13.8	11.9	11.4	12.0	
	Severe Material Deprivation (% of female population)	9.7	9.4	9.9	9.9	9.2	8.8	8.7	8.9	11.0	11.1	
	Share of people living in low work intensity households (% of females aged 0-59)	6.3	7.2	7.8	6.8	7.3	8.9	8.6	10.3	12.1	12.4	
	Life expectancy at birth (years)	81.3	82.3	82.5	82.7	82.6	83.2	83.8	83.6 b	84.0		
	Healthy life years at birth (years) - women	57.1 bd	57.9	57.9	57.6	56.4	56.7	58.6	62.6 b	62.2		
	Early leavers from education and training (% of females aged 18-24)	30.2	30.7 b	30.0	28.2	25.8	24.0	17.7 b	14.0	14.3	14.1 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	12.0	11.4 b	12.6	11.6	11.8	12.5	12.9 b	13.2	13.9	12.3	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	28.8	25.5	26.9	29.5	28.7	28.7	28.6	27.8	31.7	31.4	
	At-risk-of-poverty (% of Children population)	23.7	20.8	20.9	22.8	22.9	22.4	22.4	21.8	24.4	25.6	
	Severe Material Deprivation (% of Children population)	9.9	9.6	11.8	11.8	10.5	10.8	11.3	10.3	13.9	12.9	
	Share of children living in low work intensity households (% of Children population)	3.8	4.4	5.1	5.9	6.2	8.0	7.2	8.5	9.7	9.8	
	Risk of poverty of children in households at work (Working Intensity > 0.2)	22.0	17.7	17.6	19.5	19.3	17.1	18.3	16.4	18.2	19.9	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	23.6	25.2	22.9	24.3	25.4	30.4	27.5	26.4	23.0	23.8	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	23.4	22.9	23.1	24.5	23.5	24.1	23.2	25.6	28.5	28.3	
	At-risk-of-poverty (% of Working age population)	15.9	15.7	15.2	16.3	15.8	15.7	16.2	16.9	18.4	19.1	
	Severe Material Deprivation (% of Working age population)	8.0	7.7	8.6	8.9	8.3	8.3	7.6	8.2	10.7	10.3	
	Very low work intensity (18-59)	6.7	7.3	7.9	6.5	7.2	8.8	8.6	10.6	13.0	12.9	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	11.5	10.4	9.3	11.3	10.3	9.6	10.2	9.9	10.4	10.7	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	29.3	31.1	30.9	30.3	30.7	37.7	33.6	34.0	30.0	30.3	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	33.2	32.2	30.0	27.7	26.0	26.1	24.5	22.2	20.3	21.1	
	At-risk-of-poverty (% of Elderly population)	27.6	26.1	25.5	22.3	20.1	21.0	20.0	17.4	14.6	15.1	
	Severe Material Deprivation (% of Elderly population)	13.4	13.3	10.7	10.1	10.6	9.6	7.7	8.4	9.0	9.8	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.77	0.79	0.80	0.83	0.85	0.82	0.87	0.92	0.94	0.94	
	Aggregate replacement ratio (ratio)	0.60	0.59	0.47	0.51	0.50	0.53	0.56	0.58	0.59	0.63	
Expenditure in social protection (% of GDP)	Sickness/Health care	6.9	6.7	6.4	6.5	7.3	7.0	6.3	6.4	6.4		
	Disability	2.3	2.3	2.3	2.1	2.1	2.1	2.1	1.9	2.1		
	Old age and survivors	11.0	11.3	11.3	11.9	12.9	13.1	13.8	13.9	15.0		
	Family/Children	1.2	1.2	1.2	1.3	1.4	1.4	1.2	1.2	1.2		
	Unemployment	1.3	1.3	1.1	1.0	1.4	1.4	1.4	1.7	1.8		
	Housing and Social exclusion n.e.c.	0.2	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.2		
	Total (including Admin and Other expenditures) of which: Means tested benefits	24.5 2.5	24.5 2.1	23.9 2.1	24.3 2.3	26.8 2.6	26.8 2.5	26.5 2.2	26.9 2.3	28.4 2.2		

## Macro economic indicators: Romania

Romania		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	4.2	8.1	6.9	8.5	-7.1	-0.8	1.1	0.6	3.5	2.8 p		
		Total employment	-1.5	0.7	0.4	0.0	-2.0	-0.3	-0.8	-4.8 b	-0.9 b	1.1 p		
		Labour productivity	5.8	7.3	6.5	8.4	-5.2	-0.5	1.9	5.7 b	4.4 b	1.7 p		
		Annual average hours worked	0.4	0.9	0.5	0.0	-0.6	-0.4	1.8	-4.3 b	-0.3 b	0.6 p		
		Productivity per hour worked	5.4	6.4	6.0	8.4	-4.7	-0.1	0.1	10.5 b	4.7 b	1.1 p		
		Harmonized CPI	9.1 d	6.6	4.9	7.9	5.6	6.1	5.8	3.4	3.2	1.4		
		Price deflator GDP	12.1	10.5	12.8	15.6	4.8	5.4	4.7	4.7	3.4	1.8 p		
		Nominal compensation per employee	29.1	12.4	15.4	32.9	-2.2	1.9	-4.1	9.4 b	3.0 pb	1.9 p		
		Real compensation per employee (GDP deflator)	15.1	1.7	2.3	15.0	-6.6	-3.4	-8.4	4.5 b	-0.4 pb	0.1 p		
		Real compensation per employee (private consumption deflator)	18.3 d	5.5	10.0	23.2	-7.4	-4.0	-9.3	5.8 b	-0.2 pb	0.5 p		
		Nominal unit labour costs	22.0	4.8	8.3	22.6	3.2	2.4	-5.8	3.5 b	-1.3 p	0.2 p		
		Real unit labour costs	8.7	-5.2	-4.0	6.1	-1.5	-2.9	-10.1	-1.2 b	-4.6 pb	-1.5 p		
		Labour Market Indicators	Total	Total population (000)	21609	21575	21551	21517	21484	20271 b	20173	20078	20002	19924
				Population aged 15-64 (000)	15021	15035	15046	15042	15028	13797 b	13726	13658	13606	13527
Total employment (000)	9115			9291	9353	9369	9244	8713 b	8528	8605	8549	8614		
Employment aged 15-64 (000)	8651			8838	8843	8882	8805	8307 b	8139	8222	8179	8254		
Employment rate (% population aged 20-64)	63.6			64.8	64.4	64.4	63.5	64.8 b	63.8	64.8	64.7	65.7		
Employment rate (% population aged 15-64)	57.6			58.8	58.8	59.0	58.6	60.2 b	59.3	60.2	60.1	61.0		
Employment rate (% population aged 15-24)	24.9			24.0	24.4	24.8	24.5	24.3 b	23.4	23.7	22.9	22.5		
Employment rate (% population aged 25-54)	73.3			74.7	74.6	74.4	73.7	76.8 b	75.8	76.6	76.3	77.1		
Employment rate (% population aged 55-64)	39.4			41.7	41.4	43.1	42.6	40.7 b	39.9	41.6	41.8	43.1		
FTE employment rate (% population aged 20-64)	62.7 b			63.8	63.7	63.5	62.6	63.5 b	62.5	63.5	63.3	64.2		
Self-employed (% total employment)	33.5			31.3	31.3	30.5	32.0	34.2 b	32.4	31.7 b	31.1 p	30.5 p		
Part-time employment (% total employment)	10.2			9.7	9.7	9.9	9.8	11.2 b	10.7	10.5	10.3	10.0		
Fixed-term contracts (% total employees)	2.4			1.8	1.6	1.3	1.0	1.0 b	1.4	1.5	1.4	1.5		
Employment in Services (% total employment)	35.1			37.0	37.9	38.9	40.1	39.6	41.0	41.6 b	42.0 p	42.2 p		
Employment in Industry (% total employment)	32.0			32.3	31.5	31.5	29.8	28.8	29.1	27.8 b	27.9 p	28.5 p		
Employment in Agriculture (% total employment)	32.9			30.7	30.6	29.6	30.1	31.6	30.0	30.6 b	30.2 p	29.3 p		
Activity rate (% population aged 15-64)	62.3			63.6	63.0	62.9	63.1	64.9 b	64.1	64.8	64.9	65.7		
Activity rate (% population aged 15-24)	31.2			30.6	30.5	30.4	30.9	31.2 b	30.7	30.5	30.1	29.6		
Activity rate (% population aged 25-54)	78.2			79.9	79.0	78.3	78.5	81.9 b	80.9	81.5	81.5	82.1		
Activity rate (% population aged 55-64)	40.4			42.8	42.4	44.2	43.9	42.1 b	41.4	43.0	43.4	44.6		
Total unemployment (000)	701			719	634	549	624	652	659	627	653	629		
Unemployment rate (% labour force)	7.1			7.2	6.4	5.6	6.5	7.0	7.2	6.8	7.1	6.8		
Youth unemployment rate (% labour force 15-24)	19.1			20.2	19.3	17.6	20.0	22.1	23.9	22.6	23.7	24.0		
Long-term unemployment rate (% labour force)	4.0			4.1	3.2	2.3	2.1	2.4	2.9	3.0	3.2	2.8		
Share of long-term unemployment (% of total unemployment)	56.3			57.8	50.0	41.3	31.6	34.5 b	41.0	44.2	45.2	41.1		
Youth unemployment ratio (% population aged 15-24)	6.3			6.6	6.1	5.7	6.4	6.9 b	7.3	6.9	7.1	7.1		
Employment rate for low skilled 25-64 (ISCED 0-2)	53.2 b			53.4	53.8	54.6	54.7	55.8 b	51.9	53.5	54.0	55.5 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	69.6 b			71.0	70.1	69.5	68.5	69.6 b	69.2	69.7	68.8	70.4 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	85.1 b			87.4	86.9	86.9	86.0	85.8 b	85.9	85.4	85.8	86.0 b		
Employment rate (Nationals aged 15-64)	57.6 b			58.8	58.8	59.0	58.6	60.2 b	59.3	60.2	60.1	61.0		
Employment rate (Other EU-28 aged 15-64)														
Employment rate (Other than EU-28 aged 15-64)				67.9	64.3	58.7	60.8 u							
Employment rate (Born in the same country aged 15-64)	57.6 b			58.8	58.8	59.0	58.6	60.2 b	59.3	60.2	60.1	61.0		
Employment rate (Born in other EU-28 aged 15-64)														
Employment rate (Born outside EU-28 aged 15-64)					62.4 u	64.5 u	74.3 u			69.4 u	61.7 u	53.9 u		
Underemployment (% of labour force aged 15-74)						2.2	2.0	2.4 b	2.3	2.3	2.5	2.6		
Seeking but not available (% of labour force aged 15-74)		0.1 u												
Discouraged, available but not seeking (% of labour force aged 15-74)	5.5 b	3.7	3.5	2.9	3.8	4.4 b	4.9	4.5	4.4	4.1				

Romania		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	10521	10506	10504	10484	10465	9869 b	9819	9774	9756	9729
		Population aged 15-64 (000)	7467	7481	7502	7501	7495	6906 b	6869	6838	6836	6812
		Total employment (000)	4979	5052	5116	5157	5101	4881 b	4734	4800	4791	4844
		Employment aged 15-64 (000)	4760	4835	4863	4925	4890	4689 b	4555	4622	4621	4677
		Employment rate (% population aged 20-64)	70.4	71.2	71.0	71.6	70.7	73.1 b	71.5	72.8	72.8	74.0
		Employment rate (% population aged 15-64)	63.7	64.6	64.8	65.7	65.2	67.9 b	66.3	67.6	67.6	68.7
		Employment rate (% population aged 15-24)	28.2	27.3	28.3	29.1	28.3	28.5 b	26.8	27.5	27.0	26.6
		Employment rate (% population aged 25-54)	80.0	80.8	80.6	80.9	80.5	84.8 b	83.1	84.1	83.8	84.6
		Employment rate (% population aged 55-64)	46.7	50.0	50.3	53.0	52.3	49.9 b	48.6	51.2	51.4	53.2
		FTE employment rate (% population aged 20-64)	69.6 b	70.4	70.5	70.9	70.1	72.0 b	70.5	71.8	71.6	72.7
		Self-employed (% total employment)	34.0	32.0	31.5	30.6	32.3	34.8 b	32.3	31.7	31.2	30.7
		Part-time employment (% total employment)	10.0	9.5	9.2	9.1	9.1	10.8 b	9.8	9.7	9.6	9.1
		Fixed-term contracts (% total employees)	2.8	2.0	1.7	1.3	1.1	1.2 b	1.6	1.9	1.7	1.7
		Employment in Services (% total employment)	31.1	33.2	33.7	34.1	35.0	34.1 b	35.5	36.1	36.5	36.6
		Employment in Industry (% total employment)	36.8	36.9	37.0	37.8	36.3	35.4 b	36.1	34.3	34.3	34.9
		Employment in Agriculture (% total employment)	32.1	29.9	29.3	28.1	28.7	30.5 b	28.4	29.6	29.3	28.5
		Activity rate (% population aged 15-64)	69.4	70.7	70.1	70.6	70.9	73.7 b	72.1	73.2	73.4	74.3
		Activity rate (% population aged 15-24)	35.9	35.1	35.9	35.9	35.9	36.5 b	35.3	35.3	35.1	34.8
		Activity rate (% population aged 25-54)	85.8	87.1	85.9	85.8	86.3	90.9 b	89.0	89.9	90.0	90.5
		Activity rate (% population aged 55-64)	48.4	52.0	52.1	55.1	54.5	52.3 b	51.3	53.6	53.9	55.4
		Total unemployment (000)	423	452	405	362	398	399	397	381	400	384
		Unemployment rate (% labour force)	7.7	8.1	7.2	6.5	7.3	7.6	7.7	7.4	7.7	7.3
		Youth unemployment rate (% labour force 15-24)	19.9	20.5	20.3	17.7	20.5	22.1	24.0	22.2	23.2	23.6
		Long-term unemployment rate (% labour force)	4.6	4.7	3.6	2.8	2.4	2.8 b	3.2	3.3	3.4	3.1
		Share of long-term unemployment (% of total unemployment)	59.0	57.6	49.9	42.9	32.2	36.7 b	41.8	44.2	44.1	41.8
		Youth unemployment ratio (% population aged 15-24)	7.7	7.8	7.6	6.8	7.6	8.1 b	8.5	7.9	8.1	8.2
		Employment rate for low skilled 25-64 (ISCED 0-2)	64.6 b	65.7	66.3	67.2	67.2	70.0 b	62.9	65.2	66.7	67.9 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	75.1 b	75.8	75.2	75.7	75.2	77.2 b	76.7	77.7	76.7	78.5 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	86.1 b	88.3	87.6	87.8	86.5	86.8 b	87.5	87.4	87.8	88.0 b
		Employment rate (Nationals aged 15-64)	63.7 b	64.6	64.8	65.6	65.2	67.9 b	66.3	67.6	67.6	68.7
		Employment rate (Other EU-28 aged 15-64)										
		Employment rate (Other than EU-28 aged 15-64)		76.2 u	71.6 u	72.3 u						
		Employment rate (Born in the same country aged 15-64)	63.7 b	64.6	64.8	65.6	65.2	67.9 b	66.3	67.6	67.6	68.7
		Employment rate (Born in other EU-28 aged 15-64)										
		Employment rate (Born outside EU-28 aged 15-64)										
		Underemployment (% of labour force aged 15-74)				2.6	2.4	3.0 b	2.8	2.7	2.9	3.0
		Seeking but not available (% of labour force aged 15-74)										
		Discouraged, available but not seeking (% of labour force aged 15-74)	4.2 b	2.1	1.8	1.0	1.8	3.0 b	4.1	3.9	3.9	3.7



Romania		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	11 089	11 069	11 047	11 032	11 019	10 402 b	10 354	10 304	10 246	10 195
		Population aged 15-64 (000)	7 554	7 554	7 545	7 541	7 533	6 891 b	6 858	6 820	6 770	6 715
		Total employment (000)	4 135	4 239	4 237	4 212	4 143	3 832 b	3 794	3 805	3 758	3 770
		Employment aged 15-64 (000)	3 891	4 003	3 980	3 958	3 915	3 618 b	3 584	3 600	3 558	3 577
		Employment rate (% population aged 20-64)	56.9	58.5	57.9	57.3	56.3	56.5 b	56.2	56.7	56.5	57.3
		Employment rate (% population aged 15-64)	51.5	53.0	52.8	52.5	52.0	52.5 b	52.3	52.8	52.6	53.3
		Employment rate (% population aged 15-24)	21.6	20.6	20.2	20.2	20.6	19.9 b	19.7	19.6	18.6	18.0
		Employment rate (% population aged 25-54)	66.5	68.6	68.5	67.8	66.9	68.6 b	68.3	68.9	68.6	69.3
		Employment rate (% population aged 55-64)	33.1	34.5	33.6	34.4	34.1	32.6 b	32.2	33.1	33.2	34.2
		FTE employment rate (% population aged 20-64)	55.8 b	57.3	56.9	56.0	55.1	55.1 b	54.5	55.2	55.0	55.7
		Self-employed (% total employment)	33.0	30.4	31.0	30.2	31.7	33.4 b	32.5	31.7	31.0	30.2
		Part-time employment (% total employment)	10.5	9.8	10.4	10.8	10.6	11.6 b	11.8	11.5	11.2	11.1
		Fixed-term contracts (% total employees)	1.9	1.6	1.5	1.2	1.0	0.9 b	1.2	1.1	1.1	1.2
		Employment in Services (% total employment)	39.9	41.6	43.1	44.9	46.5	46.6 b	47.8	48.4	49.0	49.4
		Employment in Industry (% total employment)	26.2	26.7	24.7	23.8	21.8	20.3 b	20.3	19.7	19.8	20.3
		Employment in Agriculture (% total employment)	33.9	31.7	32.2	31.3	31.8	33.1 b	32.0	32.0	31.3	30.2
		Activity rate (% population aged 15-64)	55.3	56.6	56.0	55.2	55.4	56.2 b	56.1	56.4	56.3	56.9
		Activity rate (% population aged 15-24)	26.5	25.9	24.9	24.7	25.8	25.6 b	25.8	25.5	24.7	24.0
		Activity rate (% population aged 25-54)	70.7	72.6	72.0	70.7	70.6	72.7 b	72.6	72.9	72.7	73.3
		Activity rate (% population aged 55-64)	33.5	34.8	33.9	34.7	34.7	33.1 b	32.7	33.7	34.1	35.0
		Total unemployment (000)	277	266	229	187	226	252	262	246	253	245
		Unemployment rate (% labour force)	6.4	6.0	5.2	4.4	5.4	6.2	6.5	6.1	6.3	6.1
		Youth unemployment rate (% labour force 15-24)	17.8	19.7	17.6	17.3	19.2	22.1	23.7	23.0	24.6	24.7
		Long-term unemployment rate (% labour force)	3.3	3.5	2.6	1.7	1.7	1.9 b	2.6	2.7	3.0	2.4
		Share of long-term unemployment (% of total unemployment)	52.3	58.1	50.2	38.4	30.6	31.1 b	39.8	44.1	46.8	40.0
		Youth unemployment ratio (% population aged 15-24)	4.9	5.2	4.7	4.5	5.2	5.7 b	6.1	5.9	6.1	5.9
		Employment rate for low skilled 25-64 (ISCED 0-2)	45.8 b	45.3	45.8	46.1	46.0	45.8 b	44.0	45.1	44.5	45.2 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	63.2 b	65.6	64.3	62.6	61.0	60.9 b	60.6	60.5	59.7	61.2 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	84.1 b	86.5	86.1	86.1	85.4	84.9 b	84.4	83.5	83.8	84.1 b
		Employment rate (Nationals aged 15-64)	51.5 b	53.0	52.7	52.5	52.0	52.5 b	52.3	52.8	52.6	53.3
		Employment rate (Other EU-28 aged 15-64)										
		Employment rate (Other than EU-28 aged 15-64)			56.3 u							
		Employment rate (Born in the same country aged 15-64)	51.5 b	53.0	52.8	52.5	52.0	52.5 b	52.3	52.8	52.6	53.3
		Employment rate (Born in other EU-28 aged 15-64)										
Employment rate (Born outside EU-28 aged 15-64)												
Underemployment (% of labour force aged 15-74)				1.7	1.5	1.6 b	1.7	1.8	1.9	2.0		
Seeking but not available (% of labour force aged 15-74)												
Discouraged, available but not seeking (% of labour force aged 15-74)	7.2 b	5.6	5.5	5.2	6.4	6.1 b	5.8	5.3	5.0	4.5		

Romania		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)			45.9	44.2	43.1	41.4	40.3	41.7	40.4	40.2
		At-risk-of-poverty (% of total population)			24.8	23.4	22.4	21.1	22.2	22.6	22.4	25.4
		At-risk-of-poverty threshold (PPS single person)			1726	1838	2056	2124	2213	2157	2361	2439
		Poverty gap (%)			34.8	32.3	32.0	30.6	31.8	30.9	32.6	35.2
		Persistent at-risk-of-poverty (% of total population)						18.2	16.7	18.2		
		At-risk-of-poverty before social transfers excl. pensions (% of total population)			30.9	30.7	29.1	27.5	29.1	28.0	27.8	28.5
		Impact of social transfers (excl. pensions) in reducing poverty (%)			19.7	23.8	23.0	23.3	23.7	19.3	19.4	10.9
		Severe Material Deprivation (% of total population)			36.5	32.9	32.2	31.0	29.4	29.9	28.5	26.3
		Share of people living in low work intensity households (% of people aged 0-59)			8.4	8.3	7.7	6.9	6.7	7.4	6.4	6.4
		Gross Household Disposable income adjusted for consumer prices (growth %)	9.3	10.4	17.6	12.7	-6.7	-3.1	-3.1	-3.2		
		Income quintile share ratio S80/S20			7.8	7.0	6.7	6.0	6.2	6.3	6.6	7.2
		GINI coefficient			37.8 b	36.0	34.9	33.3	33.2	33.2	34.0	34.7
		Early leavers from education and training (% of population aged 18-24)	19.6	17.9 b	17.3	15.9	16.6	19.3 b	18.1	17.8	17.3	18.1 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	16.8	14.8 b	13.3	11.6	13.9	16.6 b	17.5	16.8	17.0	17.0
	Male	At-risk-of-poverty or exclusion (% of male population)			45.1	43.0	41.9	40.8	39.5	40.7	39.4	39.8
		At-risk-of-poverty (% of male population)			24.3	22.4	21.4	20.7	21.9	21.9	22.3	25.5
		Poverty gap (%)			35.4	32.6	32.4	31.5	33.7	31.9	33.2	37.9
		Persistent at-risk-of-poverty (% of male population)						18.0	17.0	17.9		
		Severe Material Deprivation (% of male population)			36.1	32.4	31.8	30.7	29.2	29.8	28.5	26.9
		Share of people living in low work intensity households (% of males aged 0-59)			7.6	7.2	6.5	6.0	5.8	6.5	5.3	5.6
Life expectancy at birth (years)		68.7	69.2	69.5	69.7	69.8	70.0 b	71.1	70.9	71.6		
Healthy life years at birth (years) - men				60.5	60.0	59.8	57.3 b	57.4	57.6	58.6		
Early leavers from education and training (% of males aged 18-24)		20.1	17.8 b	17.1	15.9	16.1	19.5 b	19.1	18.5	18.7	19.5 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)		14.9	13.0 b	11.6	8.8	11.2	14.2 b	16.3	15.2	15.3	15.3	
Female		At-risk-of-poverty or exclusion (% of female population)			46.7	45.3	44.2	42.1	41.1	42.6	41.3	40.6
		At-risk-of-poverty (% of female population)			25.3	24.3	23.4	21.4	22.5	23.2	22.5	25.2
		Poverty gap (%)			34.8	31.7	31.3	30.3	29.3	30.3	32.0	33.3
		Persistent at-risk-of-poverty (% of female population)						18.5	16.3	18.4		
	Severe Material Deprivation (% of female population)			36.9	33.4	32.6	31.2	29.5	30.0	28.5	25.8	
	Share of people living in low work intensity households (% of females aged 0-59)			9.3	9.3	8.9	7.7	7.6	8.3	7.6	7.1	
	Life expectancy at birth (years)	75.7	76.2	76.8	77.5	77.4	77.7 b	78.2	78.1	78.7		
	Healthy life years at birth (years) - women			62.5	62.9	61.7	57.5 b	57.0	57.7	57.9		
	Early leavers from education and training (% of females aged 18-24)	19.1	18.0 b	17.4	16.0	17.2	19.0 b	17.2	16.9	15.9	16.7 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	18.8	16.6 b	15.1	14.5	16.8	19.2 b	18.7	18.5	18.7	18.8	
	Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)			50.5	51.2	52.0	48.7	49.1	52.2	48.5	51.0
		At-risk-of-poverty (% of Children population)			32.8	32.9	32.9	31.3	32.9	34.6	32.1	39.4
		Severe Material Deprivation (% of Children population)			40.4	39.2	40.3	36.7	35.8	37.9	34.1	31.5
		Share of children living in low work intensity households (% of Children population)			6.5	6.3	5.6	4.3	4.6	5.1	4.8	5.7
Risk of poverty of children in households at work (Working Intensity > 0.2)				29.1	29.5	29.8	29.9	30.7	32.6	30.3	36.2	
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)				20.4	24.2	21.9	20.6	22.0	18.0	19.8	8.8	
Working age (18-64)		At-risk-of-poverty or exclusion (% of Working age population)			42.0	41.0	40.5	39.7	39.0	40.2	39.4	38.7
	At-risk-of-poverty (% of Working age population)			21.1	20.0	19.8	19.2	21.0	21.0	21.5	23.8	
	Severe Material Deprivation (% of Working age population)			32.7	29.8	29.6	29.0	27.7	27.9	27.2	24.9	
	Very low work intensity (18-59)			9.0	8.9	8.4	7.6	7.3	8.1	6.9	6.5	
	In-work at-risk-of poverty rate (% of persons employed 18-64)			17.3	16.8	17.3	17.0	18.6	18.9	17.7	19.5	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)			21.9	26.5	25.0	26.2	25.8	21.1	20.1	12.2	
	Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)			57.7	49.2	43.1	39.9	35.3	35.7	35.0	34.0
At-risk-of-poverty (% of Elderly population)				30.6	26.0	21.0	16.7	14.1	15.4	15.0	15.5	
Severe Material Deprivation (% of Elderly population)				48.9	38.9	33.8	32.4	28.6	28.6	27.5	26.2	
Relative median income of elderly (ratio with median income of people younger than 65)				0.76	0.85	0.93	0.97	1.01	1.01	1.04	1.04	
Aggregate replacement ratio (ratio)				0.43	0.49	0.55	0.65	0.64	0.67	0.65	0.64	
Expenditure in social protection (% of GDP)	Sickness/Health care	3.8	3.3	3.5	3.5	4.2	4.4	4.1	4.1			
	Disability	1.1	1.1	1.3	1.4	1.6	1.6	1.5	1.3			
	Old age and survivors	5.8	5.7	6.0	7.2	8.8	8.9	8.7	8.4			
	Family/Children	1.9	1.8	1.7	1.5	1.7	1.7	1.7	1.3			
	Unemployment	0.4	0.3	0.3	0.2	0.4	0.6	0.3	0.2			
	Housing and Social exclusion n.e.c.	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2			
	Total (including Admin and Other expenditures)	13.5	12.9	13.6	14.4	17.2	17.6	16.6	15.6			
of which: Means tested benefits	0.9	0.8	0.8	0.7	1.0	1.3	0.8	0.6				

## Macro economic indicators: Slovenia

Slovenia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Macro Economic Indicators	Annual percentage growth	Real GDP	4.0	5.7	6.9	3.3	-7.8	1.2	0.6	-2.7	-1.1	3.0
		Total employment	-0.5	1.6	3.4	2.6	-1.8	-2.1	-1.7	-0.9	-1.4	0.6
		Labour productivity	4.5	4.0	3.5	0.7	-6.1	3.4	2.4	-1.8	0.3	2.5
		Annual average hours worked	-2.3	-1.7	-0.8	1.1	0.3	0.1	-1.0	-1.7	1.2	1.3
		Productivity per hour worked	7.0	5.8	4.3	-0.4	-6.4	3.3	3.4	-0.2	-0.9	1.2
		Harmonized CPI	2.5	2.5	3.8	5.5	0.9	2.1	2.1	2.8	1.9	0.4
		Price deflator GDP	1.6	2.2	4.2	4.5	3.4	-1.0	1.1	0.3	0.8	0.8
		Nominal compensation per employee	6.0	5.4	6.2	7.2	1.8	4.0	1.5	-1.0	0.6	1.1
		Real compensation per employee (GDP deflator)	4.4	3.1	1.9	2.6	-1.5	5.1	0.4	-1.2	-0.3	0.3
		Real compensation per employee (private consumption deflator)	3.5	2.8	2.3	1.6	1.0	1.9	-0.5	-3.7	-1.3	0.8
		Nominal unit labour costs	1.5	1.3	2.6	6.4	8.5	0.6	-0.8	0.8	0.2	-1.3
		Real unit labour costs	-0.1	-1.0	-1.5	1.8	5.0	1.6	-1.9	0.5	-0.5	-2.1
		Labour Market Indicators	Total	Total population (000)	1999	2006	2015	2033	2037	2048	2051	2056
Population aged 15-64 (000)	1402			1407	1412	1422	1414	1422	1421	1415	1404	1397
Total employment (000)	949			961	985	996	981	966	936	924	906	917
Employment aged 15-64 (000)	925			937	957	975	955	942	915	907	888	893
Employment rate (% population aged 20-64)	71.1			71.5	72.4	73.0	71.9	70.3	68.4	68.3	67.2	67.8
Employment rate (% population aged 15-64)	66.0			66.6	67.8	68.6	67.5	66.2	64.4	64.1	63.3	63.9
Employment rate (% population aged 15-24)	34.1			35.0	37.6	38.4	35.3	34.1	31.5	27.3	26.5	26.8
Employment rate (% population aged 25-54)	83.8			84.2	85.3	86.8	84.8	83.7	83.1	83.3	81.9	81.9
Employment rate (% population aged 55-64)	30.7			32.6	33.5	32.8	35.6	35.0	31.2	32.9	33.5	35.4
FTE employment rate (% population aged 20-64)	69.5 b			69.9	71.0	71.6	69.9	68.1	66.4	66.4	65.2	65.7
Self-employed (% total employment)	17.2			17.1	16.9	16.8	17.5	18.0	18.3	18.6	19.8	19.8
Part-time employment (% total employment)	9.0			9.2	9.3	9.0	10.6	11.4	10.4	9.8	10.1	11.2
Fixed-term contracts (% total employees)	17.4			17.3	18.5	17.4	16.4	17.3	18.2	17.1	16.5	16.7
Employment in Services (% total employment)	55.7			56.6	57.1	57.4	59.1	60.6	61.2	61.7	62.2	62.4
Employment in Industry (% total employment)	34.6			34.2	34.2	34.3	32.6	31.1	30.6	30.0	29.5	29.3
Employment in Agriculture (% total employment)	9.7			9.2	8.7	8.3	8.3	8.3	8.2	8.2	8.4	8.3
Activity rate (% population aged 15-64)	70.7			70.9	71.3	71.8	71.8	71.5	70.3	70.4	70.5	70.9
Activity rate (% population aged 15-24)	40.5			40.6	41.8	42.9	40.9	39.9	37.4	34.4	33.8	33.6
Activity rate (% population aged 25-54)	88.8			89.0	89.3	90.1	89.6	90.0	90.1	90.8	90.7	90.3
Activity rate (% population aged 55-64)	32.1			33.4	34.6	34.2	36.9	36.5	33.3	35.1	36.0	38.4
Total unemployment (000)	66			61	50	46	61	75	83	90	102	98
Unemployment rate (% labour force)	6.5			6.0	4.9	4.4	5.9	7.3	8.2	8.9	10.1	9.7
Youth unemployment rate (% labour force 15-24)	15.9			13.9	10.1	10.4	13.6	14.7	15.7	20.6	21.6	20.2
Long-term unemployment rate (% labour force)	3.1			2.9	2.2	1.9	1.8	3.2	3.6	4.3	5.2	5.3
Share of long-term unemployment (% of total unemployment)	47.3			49.3	45.7	42.2	30.1	43.3	44.2	47.9	51.0	54.5
Youth unemployment ratio (% population aged 15-24)	6.5			5.6	4.2	4.5	5.6	5.9	5.9	7.1	7.3	6.8
Employment rate for low skilled 25-64 (ISCED 0-2)	56.1 b			55.9	56.2	55.0	53.7	51.1	46.7	47.2	45.5	48.5 b
Employment rate for medium skilled 25-64 (ISCED 3-4)	74.6 b			74.1	75.1	76.4	74.6	73.0	70.6	70.7	69.5	69.5 b
Employment rate for high skilled 25-64 (ISCED 5-8)	87.0 b			88.2	87.7	87.9	88.4	87.3	86.4	85.1	83.8	83.2 b
Employment rate (Nationals aged 15-64)	66.0 b			66.6	67.8	68.6	67.7	66.3	64.4	64.1	63.5	64.2
Employment rate (Other EU-28 aged 15-64)				67.1 u	82.7 u	76.8 u	70.5 u	59.8 u	58.9 u	73.1	57.3 u	60.4
Employment rate (Other than EU-28 aged 15-64)				51.9 u	60.3	65.3	52.2	59.3	65.4	60.9	56.5	54.1
Employment rate (Born in the same country aged 15-64)	65.9 b			66.6	67.8	68.6	67.7	66.3	64.7	64.1	63.5	64.5
Employment rate (Born in other EU-28 aged 15-64)		62.1	65.2	66.8	66.9	63.9	57.7	60.6	59.3	56.9		
Employment rate (Born outside EU-28 aged 15-64)		69.5	69.2	69.0	65.7	65.8	63.4	64.9	61.0	58.6		
Underemployment (% of labour force aged 15-74)				1.3	1.8	1.9	1.9	1.8	2.3	2.5		
Seeking but not available (% of labour force aged 15-74)	0.5 b	0.5	0.4	0.4	0.5	0.5	0.4	0.4 u	0.4 u	0.3 u		
Discouraged, available but not seeking (% of labour force aged 15-74)	2.3 b	2.4	2.1	1.4	2.0	1.7	1.8	1.8	2.5	3.4		

Slovenia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	979	984	991	1007	1008	1014	1015	1017	1019	1021
		Population aged 15-64 (000)	713	716	721	732	727	732	731	727	722	719
		Total employment (000)	516	524	540	543	531	524	506	500	495	499
		Employment aged 15-64 (000)	502	510	525	532	516	509	495	490	484	486
		Employment rate (% population aged 20-64)	75.8	76.3	77.5	77.4	75.6	74.0	71.8	71.8	71.2	71.6
		Employment rate (% population aged 15-64)	70.4	71.1	72.7	72.7	71.0	69.6	67.7	67.4	67.1	67.5
		Employment rate (% population aged 15-24)	38.1	39.2	43.2	43.0	39.1	37.6	35.7	30.4	29.7	29.5
		Employment rate (% population aged 25-54)	86.4	87.1	88.1	88.6	86.4	85.2	84.8	85.4	84.3	84.6
		Employment rate (% population aged 55-64)	43.1	44.5	45.3	44.7	46.4	45.5	39.5	40.7	41.8	41.8
		FTE employment rate (% population aged 20-64)	75.0 b	75.6	77.0	76.8	74.6	72.9	70.7	71.0	70.3	70.9
		Self-employed (% total employment)	19.5	19.7	19.2	19.6	20.6	20.9	21.5	22.0	23.1	22.1
		Part-time employment (% total employment)	7.2	7.2	7.7	7.1	8.4	8.6	7.9	7.0	7.3	8.1
		Fixed-term contracts (% total employees)	15.7	15.5	16.5	15.3	15.1	15.4	16.5	15.7	15.8	16.2
		Employment in Services (% total employment)	45.9	46.4	47.1	46.8	49.2	50.2	49.4	50.6	51.5	51.5
		Employment in Industry (% total employment)	44.3	44.0	44.4	44.7	42.3	41.2	41.8	40.7	39.9	40.1
		Employment in Agriculture (% total employment)	9.8	9.6	8.5	8.5	8.4	8.6	8.8	8.7	8.7	8.4
		Activity rate (% population aged 15-64)	75.1	74.9	75.8	75.8	75.6	75.4	73.9	73.7	74.2	74.3
		Activity rate (% population aged 15-24)	44.5	44.4	47.6	47.7	45.4	44.4	42.0	38.1	37.1	36.6
		Activity rate (% population aged 25-54)	91.1	91.0	91.3	91.6	91.3	91.7	91.8	92.4	92.6	92.3
		Activity rate (% population aged 55-64)	45.4	45.8	46.7	46.4	48.2	47.5	42.7	43.6	45.1	45.7
		Total unemployment (000)	33	27	22	23	33	42	45	46	51	49
		Unemployment rate (% labour force)	6.1	4.9	4.0	4.0	5.9	7.5	8.2	8.4	9.5	9.0
		Youth unemployment rate (% labour force 15-24)	14.5	11.6	9.4	9.9	13.8	15.2	15.0	20.3	20.1	19.4
		Long-term unemployment rate (% labour force)	2.9	2.5	1.8	1.6	1.7	3.4	3.7	4.1	4.9	4.9
		Share of long-term unemployment (% of total unemployment)	48.4	49.7	45.3	41.4	28.3	45.0	45.1	48.8	51.9	55.0
		Youth unemployment ratio (% population aged 15-24)	6.5	5.2	4.5	4.7	6.2	6.8	6.3	7.7	7.5	7.1
		Employment rate for low skilled 25-64 (ISCED 0-2)	65.3 b	64.1	65.4	63.4	62.5	60.8	55.5	56.1	55.1	55.6 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	78.8 b	79.3	80.2	80.8	78.0	76.1	74.0	74.5	73.9	73.5 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	88.1 b	89.5	88.9	88.7	90.3	89.6	87.4	87.4	86.3	86.5 b
		Employment rate (Nationals aged 15-64)	70.4 b	71.2	72.6	72.4	70.9	69.6	67.4	66.9	66.7	67.3
		Employment rate (Other EU-28 aged 15-64)		61.1 u	92.3 u	88.9 u	89.1 u	70.4 u	67.3 u	85.2 u	79.2 u	70.5 u
		Employment rate (Other than EU-28 aged 15-64)		69.1 u	76.5	87.8	75.1	73.5	83.6	84.9	78.0	75.1
		Employment rate (Born in the same country aged 15-64)	70.2 b	71.1	72.6	72.6	71.0	69.6	67.6	67.0	66.6	67.6
		Employment rate (Born in other EU-28 aged 15-64)		67.8	71.5	73.3	70.7	70.9	64.9	64.1	66.1	63.4
		Employment rate (Born outside EU-28 aged 15-64)		73.0	75.4	74.3	70.9	70.0	69.7	73.3	72.9	67.8
		Underemployment (% of labour force aged 15-74)				0.9	1.4	1.3	1.4	1.5	1.8	1.9
		Seeking but not available (% of labour force aged 15-74)	0.5 b u	0.4 u	0.4 u	0.4 u	0.4 u	0.4 u	0.4 u	0.2 u	0.3 u	0.3 u
		Discouraged, available but not seeking (% of labour force aged 15-74)	1.9 b	2.0	1.8	1.1	1.7	1.5	1.5	1.5	2.3	3.0

Slovenia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	1021	1022	1024	1026	1030	1034	1036	1039	1040	1040
		Population aged 15-64 (000)	690	691	691	691	687	691	690	688	682	678
		Total employment (000)	434	438	446	453	450	443	430	424	411	418
		Employment aged 15-64 (000)	423	427	432	443	439	432	420	416	404	407
		Employment rate (% population aged 20-64)	66.2	66.5	67.1	68.5	67.9	66.5	64.8	64.6	63.0	63.6
		Employment rate (% population aged 15-64)	61.3	61.8	62.6	64.2	63.8	62.6	60.9	60.5	59.2	60.0
		Employment rate (% population aged 15-24)	29.8	30.3	31.4	33.2	31.0	30.0	26.9	23.7	23.0	24.0
		Employment rate (% population aged 25-54)	81.1	81.2	82.4	84.8	83.2	82.1	81.3	81.0	79.3	79.1
		Employment rate (% population aged 55-64)	18.5	21.0	22.2	21.1	24.8	24.5	22.7	25.0	25.2	29.0
		FTE employment rate (% population aged 20-64)	63.9 b	64.0	64.9	66.1	65.1	63.1	61.9	61.6	59.9	60.4
		Self-employed (% total employment)	14.3	14.1	14.1	13.4	13.9	14.7	14.6	14.7	16.0	17.1
		Part-time employment (% total employment)	11.1	11.6	11.3	11.4	13.2	14.7	13.3	13.1	13.5	14.9
		Fixed-term contracts (% total employees)	19.3	19.3	20.8	19.7	17.8	19.3	19.9	18.7	17.2	17.2
		Employment in Services (% total employment)	67.0	68.6	69.0	70.0	70.6	72.6	74.9	74.7	74.8	75.1
		Employment in Industry (% total employment)	23.4	22.6	22.1	22.0	21.3	19.5	17.6	17.6	17.2	16.7
		Employment in Agriculture (% total employment)	9.6	8.8	8.9	8.1	8.2	8.0	7.6	7.7	8.0	8.2
		Activity rate (% population aged 15-64)	66.1	66.7	66.6	67.5	67.9	67.4	66.5	66.9	66.6	67.3
		Activity rate (% population aged 15-24)	36.3	36.4	35.4	37.4	35.8	34.8	32.3	30.0	30.2	30.5
		Activity rate (% population aged 25-54)	86.4	87.0	87.3	88.5	87.9	88.1	88.4	89.1	88.7	88.3
		Activity rate (% population aged 55-64)	18.9	21.4	23.1	22.2	25.6	25.5	23.7	26.5	27.0	31.1
		Total unemployment (000)	33	34	28	23	28	33	38	44	50	49
		Unemployment rate (% labour force)	7.1	7.2	5.9	4.8	5.8	7.1	8.2	9.4	10.9	10.6
		Youth unemployment rate (% labour force 15-24)	17.8	16.8	11.2	11.3	13.4	13.8	16.8	21.0	23.7	21.3
		Long-term unemployment rate (% labour force)	3.3	3.5	2.7	2.1	1.9	2.9	3.5	4.4	5.5	5.7
		Share of long-term unemployment (% of total unemployment)	46.3	48.9	46.1	43.0	32.1	41.2	43.1	47.0	50.0	53.9
		Youth unemployment ratio (% population aged 15-24)	6.4	6.1	4.0	4.2	4.8	4.8	5.4	6.3	7.1	6.5
		Employment rate for low skilled 25-64 (ISCED 0-2)	49.0 b	49.4	48.9	47.9	46.4	43.0	39.5	39.3	36.4	42.2 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	69.5 b	67.8	68.6	71.0	70.3	68.9	66.0	65.7	63.8	64.0 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	86.1 b	87.2	86.7	87.3	87.1	85.7	85.7	83.5	82.0	80.8 b
		Employment rate (Nationals aged 15-64)	61.4 b	61.9	62.8	64.5	64.3	62.9	61.3	61.1	60.0	60.9
		Employment rate (Other EU-28 aged 15-64)				61.8 u	48.1 u	45.0 u	41.9 u	60.4 u	34.8 u	48.4 u
		Employment rate (Other than EU-28 aged 15-64)		30.2 u	35.3 u	26.9 u	23.4 u	40.8 u	40.0	30.5 u	29.8	27.8
		Employment rate (Born in the same country aged 15-64)	61.3 b	61.8	62.7	64.4	64.1	62.8	61.6	61.0	60.3	61.2
Employment rate (Born in other EU-28 aged 15-64)		56.3	59.0	60.8	63.5	57.5	50.0	57.3	53.6	51.0		
Employment rate (Born outside EU-28 aged 15-64)		65.9	62.2	62.7	59.8	60.8	55.9	54.5	46.9	48.4		
Underemployment (% of labour force aged 15-74)				1.8	2.2	2.5	2.4	2.2	2.9	3.3		
Seeking but not available (% of labour force aged 15-74)	0.5 bu	0.5 u	0.5 u	0.5 u	0.6 u	0.7 u	0.5 u	0.5 u	0.6 u	0.4 u		
Discouraged, available but not seeking (% of labour force aged 15-74)	2.8 b	2.9	2.4	1.7	2.3	2.0	2.0	2.1	2.8	3.8		



Slovenia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	185	171	171	185	171	183	193	196	204	204
		At-risk-of-poverty (% of total population)	122	116		123	113	127	136	135	145	145
		At-risk-of-poverty threshold (PPS single person)	6946 b	7292	7753	8287	8599	8009	8364	8563	8527	8597
		Poverty gap (%)	19.1	18.6	19.4	19.3	20.2	20.2	19.9	19.1	20.4	22.0
		Persistent at-risk-of-poverty (% of total population)				7.7	7.0	6.9	7.5	6.1	7.5	9.5
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	25.9	24.2	23.1	23.0	22.0	24.2	24.2	25.2	25.3	25.1
		Impact of social transfers (excl. pensions) in reducing poverty (%)	52.9	52.1		46.5	48.6	47.5	43.8	46.4	42.7	42.2
		Severe Material Deprivation (% of total population)	5.1	5.1	5.1	6.7	6.1	5.9	6.1	6.6	6.7	6.6
		Share of people living in low work intensity households (% of people aged 0-59)	8.6	6.9	7.3	6.7	5.6	7.0	7.6	7.5	8.0	8.7
		Gross Household Disposable income adjusted for consumer prices (growth %)	4.8	3.1	4.5	2.6	-0.4	-0.4	0.2	-3.8	-1.9	1.4
		Income quintile share ratio S80/S20	3.4	3.4	3.3	3.4	3.2	3.4	3.5	3.4	3.6	3.7
		GINI coefficient	23.8 b	23.7	23.2	23.4	22.7	23.8	23.8	23.7	24.4	25.0
		Early leavers from education and training (% of population aged 18-24)	4.9	5.6 b	4.1	5.1	5.3	5.0	4.2	4.4	3.9	4.4 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	8.9	8.5 b	6.7	6.5	7.5	7.1	7.1	9.3	9.2	9.4
	Male	At-risk-of-poverty or exclusion (% of male population)	16.4	15.3	15.0	16.6	15.1	16.5	17.4	18.3	19.4	19.3
		At-risk-of-poverty (% of male population)	10.6	10.3		11.0	9.8	11.3	12.2	12.5	13.5	13.7
		Poverty gap (%)	20.3	20.0	19.2	20.8	21.1	20.9	20.1	19.8	20.9	23.2
		Persistent at-risk-of-poverty (% of male population)				6.3	5.8	5.6	5.9	4.9	5.7	8.5
		Severe Material Deprivation (% of male population)	4.9	5.1	4.9	6.4	5.9	5.6	5.8	6.8	6.6	6.7
		Share of people living in low work intensity households (% of males aged 0-59)	8.0	6.1	6.4	6.2	4.8	6.0	6.7	6.8	7.4	7.7
		Life expectancy at birth (years)	73.9	74.5	74.6	75.5	75.9	76.4 b	76.8	77.1	77.2	
		Healthy life years at birth (years) - men	56.4 d	57.7	58.7	59.4	60.6	53.4 b	54.0	56.5	57.6	
		Early leavers from education and training (% of males aged 18-24)	6.5	7.1 b	5.8	7.2	7.2	6.4	5.7	5.4	5.0	6.0 b
		NEET: Young people not in employment, education or training (% of males aged 15-24)	8.2	8.4 b	6.8	6.7	7.9	8.1	7.8	9.7	9.8	9.7
Female	At-risk-of-poverty or exclusion (% of female population)	20.5	18.8	19.2	20.3	19.1	20.1	21.1	20.8	21.4	21.5	
	At-risk-of-poverty (% of female population)	13.7	12.9		13.6	12.8	14.1	15.0	14.6	15.4	15.2	
	Poverty gap (%)	18.5	18.3	19.7	18.7	20.2	19.1	19.5	18.4	20.1	20.8	
	Persistent at-risk-of-poverty (% of female population)				9.0	8.1	8.0	9.1	7.3	9.2	10.5	
	Severe Material Deprivation (% of female population)	5.4	5.1	5.3	6.9	6.3	6.3	6.4	6.5	6.7	6.6	
	Share of people living in low work intensity households (% of females aged 0-59)	9.2	7.7	8.2	7.3	6.5	8.0	8.6	8.3	8.5	9.8	
	Life expectancy at birth (years)	80.9	82.0	82.0	82.6	82.7	83.1 b	83.3	83.3	83.6		
	Healthy life years at birth (years) - women	60.1 d	61.0	62.3	60.9	61.5	54.6 b	53.8	55.6	59.5		
	Early leavers from education and training (% of females aged 18-24)	3.2 u	4.0 bu	2.2 u	2.6 u	3.2 u	3.3 u	2.5 u	3.2 u	2.6 u	2.7 bu	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	9.7	8.6 b	6.6	6.2	6.9	6.0	6.3	8.8	8.6	9.2	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	15.3	14.3	14.7	15.3	15.1	15.2	17.3	16.4	17.5	17.7	
	At-risk-of-poverty (% of Children population)	12.1	11.5		11.6	11.2	12.6	14.7	13.5	14.7	14.8	
	Severe Material Deprivation (% of Children population)	4.2	3.9	4.4	5.2	5.4	5.1	5.3	5.9	6.0	4.9	
	Share of children living in low work intensity households (% of Children population)	4.1	3.5	4.5	3.7	2.5	3.4	4.4	3.2	4.0	4.6	
	Risk of poverty of children in households at work (Working Intensity > 0.2)	9.3	9.0	8.4	9.0	9.5	9.9	11.3	11.1	11.4	11.0	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	57.1	56.1		50.4	53.7	51.4	45.4	47.7	45.2	46.2	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	18.2	16.5	16.6	18.0	16.2	18.1	18.7	19.7	20.6	21.3	
	At-risk-of-poverty (% of Working age population)	10.4	9.7		10.5	9.2	11.0	11.7	12.2	13.0	13.7	
	Severe Material Deprivation (% of Working age population)	5.0	5.1	5.0	6.9	6.2	6.1	6.2	6.9	6.8	7.1	
	Very low work intensity (18-59)	9.9	7.9	8.1	7.7	6.5	8.0	8.6	8.8	9.2	10.1	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	4.6	4.8	4.7	5.1	4.8	5.3	6.0	6.5	7.1	6.4	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	56.1	55.5		49.0	52.1	49.8	45.8	49.0	44.9	42.7	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	23.8	22.5	22.4	24.4	23.3	22.8	24.2	22.8	23.0	20.1	
	At-risk-of-poverty (% of Elderly population)	20.3	19.9		21.3	20.0	20.2	20.9	19.6	20.5	17.1	
	Severe Material Deprivation (% of Elderly population)	6.9	6.3	6.6	7.4	6.5	6.3	6.8	6.6	6.7	6.7	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.86 b	0.85	0.87	0.84	0.86	0.87	0.87	0.87	0.87	0.91	
	Aggregate replacement ratio (ratio)	0.42	0.41	0.44	0.44	0.45	0.45	0.47	0.47	0.46	0.45	
Expenditure in social protection (% of GDP)	Sickness/Health care	7.3	7.1	6.7	7.0	7.8	7.9	7.8	8.0	7.7 p		
	Disability	1.9	1.9	1.7	1.6	1.8	1.8	1.7	1.6	1.6 p		
	Old age and survivors	10.0	10.1	9.7	9.6	10.9	11.4	11.6	11.7	12.2 p		
	Family/Children	1.9	1.9	1.7	1.8	2.1	2.2	2.2	2.1	2.0 p		
	Unemployment	0.7	0.6	0.4	0.4	0.6	0.7	0.8	0.8	0.9 p		
	Housing and Social exclusion n.e.c.	0.7	0.6	0.5	0.4	0.5	0.6	0.6	0.7	0.7 p		
	Total (including Admin and Other expenditures) of which: Means tested benefits	23.0	22.7	21.3	21.4	24.2	25.0	25.0	25.4	25.4 p		

## Macro economic indicators: Slovakia

Slovakia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	6.4	8.5	10.8	5.7	-5.5	5.1	2.8	1.5	1.4	2.5		
		Total employment	1.6	2.1	2.1	3.2	-2.0	-1.5	1.8	0.1	-0.8	1.4		
		Labour productivity	4.7	6.3	8.6	2.4	-3.6	6.7	1.0	1.5	2.2	1.1		
		Annual average hours worked	1.6	0.3	0.9	0.1	-0.7	1.4	-0.7	-0.2	-1.0	-0.7		
		Productivity per hour worked	3.1	6.0	7.5	2.2	-2.9	5.2	1.7	1.7	3.2	1.8		
		Harmonized CPI	2.8	4.3	1.9	3.9	0.9	0.7	4.1	3.7	1.5	-0.1		
		Price deflator GDP	2.4	2.9	1.1	2.8	-1.2	0.5	1.6	1.3	0.5	-0.2		
		Nominal compensation per employee	9.1	7.9	8.7	6.6	2.6	5.5	2.0	2.6	2.6	1.8		
		Real compensation per employee (GDP deflator)	6.5	4.9	7.5	3.7	3.8	5.0	0.4	1.3	2.0	2.0		
		Real compensation per employee (private consumption deflator)	6.1	3.5	6.7	2.6	1.6	4.7	-2.0	-1.1	1.1	1.9		
		Nominal unit labour costs	4.2	1.6	0.2	4.1	6.4	-1.2	1.0	1.1	0.3	0.7		
		Real unit labour costs	1.7	-1.3	-1.0	1.3	7.7	-1.7	-0.6	-0.2	-0.2	0.9		
		Labour Market Indicators	Total	Total population (000)	5379	5389	5391	5396	5409	5422	5392 b	5404	5411	5416
				Population aged 15-64 (000)	3824	3862	3873	3892	3917	3926	3882 b	3881	3870	3853
Total employment (000)	2215			2302	2358	2434	2366	2318	2315 b	2329	2329	2363		
Employment aged 15-64 (000)	2207			2295	2351	2423	2357	2307	2303 b	2317	2318	2349		
Employment rate (% population aged 20-64)	64.5			66.0	67.2	68.8	66.4	64.6	65.0 b	65.1	65.0	65.9		
Employment rate (% population aged 15-64)	57.7			59.4	60.7	62.3	60.2	58.8	59.3 b	59.7	59.9	61.0		
Employment rate (% population aged 15-24)	25.6			25.9	27.6	26.2	22.8	20.6	20.0 b	20.1	20.4	21.8		
Employment rate (% population aged 25-54)	75.3			77.2	78.0	80.1	77.8	75.8	76.5 b	76.4	76.0	76.8		
Employment rate (% population aged 55-64)	30.3			33.1	35.6	39.2	39.5	40.5	41.3 b	43.1	44.0	44.8		
FTE employment rate (% population aged 20-64)	64.0 b			65.4	66.7	68.2	65.6	63.8	63.9 b	64.0	63.8	64.4		
Self-employed (% total employment)	13.7			14.0	14.5	15.5	16.6	16.6	16.0 b	15.6	15.4	14.7		
Part-time employment (% total employment)	2.5			2.8	2.6	2.7	3.6	3.9	4.2 b	4.1	4.8	5.2		
Fixed-term contracts (% total employees)	5.0			5.1	5.1	4.7	4.4	5.8	6.7 b	6.8	7.0	8.9		
Employment in Services (% total employment)	61.5			62.0	62.3	62.0	63.9	64.6	64.7	65.3	65.4	65.6		
Employment in Industry (% total employment)	33.9			34.0	33.9	34.4	32.6	32.1	32.0	31.5	31.2	31.1		
Employment in Agriculture (% total employment)	4.6			4.0	3.8	3.6	3.5	3.4	3.3	3.2	3.4	3.3		
Activity rate (% population aged 15-64)	68.9			68.6	68.3	68.8	68.4	68.7	68.7 b	69.4	69.9	70.3		
Activity rate (% population aged 15-24)	36.6			35.3	34.6	32.4	31.4	31.1	30.1 b	30.5	30.8	31.0		
Activity rate (% population aged 25-54)	88.0			87.6	86.9	87.8	87.2	86.9	87.0 b	87.1	87.2	87.3		
Activity rate (% population aged 55-64)	35.0			36.7	38.8	41.9	42.8	45.1	46.0 b	48.5	49.5	50.1		
Total unemployment (000)	427			353	293	254	321	386	363 i	378	386	359		
Unemployment rate (% labour force)	16.4			13.5	11.2	9.6	12.1	14.5	13.7 i	14.0	14.2	13.2		
Youth unemployment rate (% labour force 15-24)	30.4			27.0	20.6	19.3	27.6	33.9	33.7 i	34.0	33.7	29.7		
Long-term unemployment rate (% labour force)	11.8			10.3	8.3	6.7	6.5	9.3	9.3	9.4	10.0	9.3		
Share of long-term unemployment (% of total unemployment)	71.9			76.3	74.2	69.6	54.0	64.0	67.9 b	67.3	70.2	70.2		
Youth unemployment ratio (% population aged 15-24)	11.0			9.4	7.0	6.2	8.6	10.4	10.1 b	10.4	10.4	9.2		
Employment rate for low skilled 25-64 (ISCED 0-2)	26.3 b			28.9	29.1	32.3	30.3	29.7	30.3 b	30.7	31.3	32.7 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	70.8 b			71.9	73.2	74.8	72.0	69.9	70.1 b	70.3	69.9	71.0 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	84.0 b			84.8	84.2	85.6	83.2	82.2	81.5 b	80.1	79.5	80.0 b		
Employment rate (Nationals aged 15-64)	57.7 b			59.4	60.7	62.2	60.1	58.8	59.3 b	59.7	59.9	60.9		
Employment rate (Other EU-28 aged 15-64)				82.5	61.0 u	77.4	70.9	63.7	64.6 bu	70.1	78.6	80.3		
Employment rate (Other than EU-28 aged 15-64)														
Employment rate (Born in the same country aged 15-64)	57.8 b			59.5	60.7	62.2	60.2	58.8	59.3 b	59.7	59.8	60.9		
Employment rate (Born in other EU-28 aged 15-64)				53.7	67.4	70.8	58.8	54.3	54.7 b	64.2	65.7	64.4		
Employment rate (Born outside EU-28 aged 15-64)			60.9 u	59.5	67.9	64.2	69.3 b	62.5	68.2	70.3				
Underemployment (% of labour force aged 15-74)				0.7	0.9	1.3	1.4 b	1.4	1.6	1.7				
Seeking but not available (% of labour force aged 15-74)	0.4 b	0.5	0.4	0.3	0.5	0.5	0.5 b	0.5	0.6	0.6				
Discouraged, available but not seeking (% of labour force aged 15-74)	1.6 b	2.0	2.2	1.8	1.7	1.7	1.6 b	1.5	1.8	1.7				

Slovakia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	2609	2616	2617	2621	2628	2635	2625 b	2632	2636	2639
		Population aged 15-64 (000)	1899	1922	1928	1940	1954	1961	1944 b	1945	1941	1934
		Total employment (000)	1232	1292	1322	1364	1326	1285	1292 b	1304	1295	1316
		Employment aged 15-64 (000)	1227	1288	1319	1357	1320	1279	1285 b	1296	1288	1308
		Employment rate (% population aged 20-64)	72.5	74.6	76.0	77.4	74.6	71.9	72.5 b	72.8	72.2	73.2
		Employment rate (% population aged 15-64)	64.6	67.0	68.4	70.0	67.6	65.2	66.1 b	66.7	66.4	67.6
		Employment rate (% population aged 15-24)	28.1	29.2	30.9	30.8	26.8	23.8	24.8 b	24.1	24.4	26.8
		Employment rate (% population aged 25-54)	81.4	84.1	85.0	86.4	84.2	81.4	82.5 b	83.0	82.2	83.2
		Employment rate (% population aged 55-64)	47.8	49.8	52.5	56.7	54.9	54.0	52.5 b	53.6	53.3	53.1
		FTE employment rate (% population aged 20-64)	72.3 b	74.4	75.9	77.2	74.0	71.2	71.7 b	71.9	71.2	72.0
		Self-employed (% total employment)	18.6	18.5	19.4	20.7	21.5	22.2	21.0 b	20.0	20.0	18.9
		Part-time employment (% total employment)	1.3	1.3	1.1	1.4	2.7	2.8	2.8 b	2.9	3.4	3.9
		Fixed-term contracts (% total employees)	5.1	5.0	4.9	4.6	4.6	5.6	6.4 b	6.4	6.7	9.1
		Employment in Services (% total employment)	49.1	49.6	49.1	48.4	50.6	50.8	50.9 b	51.3	51.1	52.1
		Employment in Industry (% total employment)	44.5	44.8	45.6	46.5	44.6	44.5	44.3 b	44.1	44.0	43.1
		Employment in Agriculture (% total employment)	6.3	5.6	5.4	5.1	4.9	4.7	4.9 b	4.6	4.8	4.8
		Activity rate (% population aged 15-64)	76.5	76.4	75.9	76.4	76.3	76.1	76.6 b	77.1	77.2	77.6
		Activity rate (% population aged 15-24)	40.7	39.7	38.9	37.8	37.1	36.4	37.2 b	37.1	37.6	38.0
		Activity rate (% population aged 25-54)	93.8	94.0	93.1	93.4	93.6	92.9	93.5 b	93.8	93.6	94.0
		Activity rate (% population aged 55-64)	55.1	55.2	57.0	59.9	58.7	59.7	58.8 b	60.3	59.5	58.9
		Total unemployment (000)	224	180	144	124	169	211	203 i	204	210	194
	Unemployment rate (% labour force)	15.6	12.4	10.0	8.4	11.5	14.3	13.7 i	13.5	14.0	12.8	
	Youth unemployment rate (% labour force 15-24)	31.2	26.6	20.6	18.6	27.9	34.8	33.3 i	35.0	34.9	29.5	
	Long-term unemployment rate (% labour force)	11.3	9.5	7.5	5.8	5.9	9.0	9.5 b	9.3	10.0	9.4	
	Share of long-term unemployment (% of total unemployment)	72.3	76.8	75.2	69.1	50.9	63.2	69.2 b	68.8	71.7	72.9	
	Youth unemployment ratio (% population aged 15-24)	12.6	10.5	7.9	7.0	10.3	12.6	12.3 b	13.0	13.1	11.2	
	Employment rate for low skilled 25-64 (ISCED 0-2)	29.8 b	32.5	33.6	39.1	39.0	37.0	35.3 b	36.0	36.9	37.0 b	
	Employment rate for medium skilled 25-64 (ISCED 3-4)	78.5 b	80.5	82.1	82.9	80.0	77.2	77.5 b	78.2	76.9	78.1 b	
	Employment rate for high skilled 25-64 (ISCED 5-8)	89.7 b	90.8	89.9	91.7	89.5	88.1	87.1 b	85.9	85.7	87.4 b	
	Employment rate (Nationals aged 15-64)	64.6 b	67.0	68.4	69.9	67.5	65.2	66.1 b	66.7	66.3	67.6	
	Employment rate (Other EU-28 aged 15-64)		97.4 u		90.3 u	93.5 u	82.0 u	75.4 bu		84.0 u	100.0	
	Employment rate (Other than EU-28 aged 15-64)											
	Employment rate (Born in the same country aged 15-64)	64.6 b	67.0	68.4	69.9	67.5	65.2	66.1 b	66.7	66.3	67.6	
	Employment rate (Born in other EU-28 aged 15-64)		66.7	75.0	79.5	73.7	71.1	67.8 b	64.5	67.9	77.5	
	Employment rate (Born outside EU-28 aged 15-64)				60.8 u		87.8 u	84.2 bu	75.8 u	85.7 u	81.6 u	
	Underemployment (% of labour force aged 15-74)				0.5	0.8	1.2	1.2 b	1.3	1.4	1.6	
	Seeking but not available (% of labour force aged 15-74)	0.3 b	0.3	0.2	0.2 u	0.3	0.4	0.4 b	0.4	0.4	0.4	
	Discouraged, available but not seeking (% of labour force aged 15-74)	1.3 b	1.4	1.7	1.6	1.4	1.3	1.3 b	1.1	1.5	1.3	

Slovakia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	2770	2773	2774	2775	2781	2787	2767 b	2773	2775	2777
		Population aged 15-64 (000)	1926	1940	1946	1952	1963	1966	1939 b	1937	1930	1919
		Total employment (000)	983	1010	1036	1070	1040	1033	1023 b	1026	1034	1047
		Employment aged 15-64 (000)	980	1008	1032	1066	1036	1029	1018 b	1021	1029	1041
		Employment rate (% population aged 20-64)	56.7	57.5	58.7	60.3	58.2	57.4	57.4 b	57.3	57.8	58.6
		Employment rate (% population aged 15-64)	50.9	51.9	53.0	54.6	52.8	52.3	52.5 b	52.7	53.4	54.3
		Employment rate (% population aged 15-24)	23.1	22.5	24.1	21.5	18.7	17.4	15.0 b	15.9	16.2	16.5
		Employment rate (% population aged 25-54)	69.2	70.2	71.0	73.7	71.2	70.1	70.4 b	69.6	69.6	70.2
		Employment rate (% population aged 55-64)	15.6	18.9	21.2	24.2	26.1	28.7	31.4 b	33.6	35.7	37.2
		FTE employment rate (% population aged 20-64)	55.9 b	56.6	57.8	59.4	57.3	56.4	56.1 b	56.0	56.3	56.9
		Self-employed (% total employment)	7.5	8.1	8.2	8.8	10.4	9.8	9.8 b	10.0	9.7	9.5
		Part-time employment (% total employment)	4.1	4.7	4.5	4.2	4.7	5.4	5.9 b	5.7	6.4	6.9
		Fixed-term contracts (% total employees)	4.9	5.2	5.3	4.8	4.1	5.9	7.0 b	7.3	7.3	8.6
		Employment in Services (% total employment)	76.2	76.9	77.9	78.0	79.7	80.6	81.0 b	81.7	82.2	81.5
		Employment in Industry (% total employment)	21.4	21.0	20.1	20.1	18.4	17.6	17.5 b	16.8	16.2	16.9
		Employment in Agriculture (% total employment)	2.4	2.1	2.0	1.9	1.9	1.8	1.5 b	1.6	1.6	1.5
		Activity rate (% population aged 15-64)	61.5	60.9	60.8	61.3	60.6	61.3	60.8 b	61.7	62.5	62.9
		Activity rate (% population aged 15-24)	32.4	30.9	30.2	26.7	25.4	25.5	22.7 b	23.6	23.7	23.6
		Activity rate (% population aged 25-54)	82.1	81.2	80.7	82.1	80.7	80.9	80.4 b	80.4	80.5	80.4
		Activity rate (% population aged 55-64)	18.1	20.9	23.3	26.4	29.0	32.3	34.6 b	38.0	40.4	42.1
		Total unemployment (000)	203	173	149	130	152	175	160 i	174	176	165
		Unemployment rate (% labour force)	17.4	14.8	12.8	11.0	12.9	14.7	13.7 i	14.5	14.5	13.6
		Youth unemployment rate (% labour force 15-24)	29.4	27.5	20.7	20.3	27.1	32.6	34.3 i	32.5	31.6	30.1
		Long-term unemployment rate (% labour force)	12.4	11.3	9.4	7.7	7.4	9.6	9.1 b	9.5	9.9	9.1
		Share of long-term unemployment (% of total unemployment)	71.5	75.9	73.3	70.0	57.4	65.1	66.3 b	65.4	68.5	67.1
		Youth unemployment ratio (% population aged 15-24)	9.3	8.3	6.1	5.3	6.7	8.1	7.7 b	7.7	7.5	7.1
		Employment rate for low skilled 25-64 (ISCED 0-2)	24.3 b	27.0	26.4	28.5	25.2	24.9	27.1 b	27.3	27.7	29.6 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	62.7 b	63.0	63.7	66.2	63.5	62.1	62.1 b	61.4	62.2	63.3 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	77.9 b	78.5	79.0	79.7	77.7	77.5	76.9 b	75.6	74.4	73.9 b
		Employment rate (Nationals aged 15-64)	50.9 b	51.9	53.0	54.6	52.8	52.4	52.5 b	52.7	53.3	54.3
		Employment rate (Other EU-28 aged 15-64)										
		Employment rate (Other than EU-28 aged 15-64)										
		Employment rate (Born in the same country aged 15-64)	51.0 b	52.0	53.0	54.6	52.8	52.4	52.6 b	52.7	53.3	54.3
Employment rate (Born in other EU-28 aged 15-64)		40.8	61.0	61.0	45.4	37.2	42.1 bu	64.0	63.6	52.3		
Employment rate (Born outside EU-28 aged 15-64)				58.2 u	69.2 u					60.8 u		
Underemployment (% of labour force aged 15-74)				0.9	1.0	1.4	1.6 b	1.5	1.9	1.8		
Seeking but not available (% of labour force aged 15-74)	0.7 b	0.8	0.5	0.5	0.7	0.7	0.6 b	0.6	0.9	0.8		
Discouraged, available but not seeking (% of labour force aged 15-74)	2.0 b	2.7	2.7	2.1	2.1	2.2	1.9 b	2.0	2.2	2.1		

Slovakia		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	32.0	26.7	21.3	20.6	19.6	20.6	20.6	20.5	19.8	18.4
		At-risk-of-poverty (% of total population)	13.3	11.6		10.9	11.0	12.0	13.0	13.2	12.8	12.6
		At-risk-of-poverty threshold (PPS single person)	2394 b	2772	3365	4058	4694	5016	5385	5879	5743	5883
		Poverty gap (%)	23.5	20.0	19.2	18.1	23.2	25.7	22.8	20.5	24.1	29.0
		Persistent at-risk-of-poverty (% of total population)				4.9	5.4	6.0	7.8	8.6	7.1	
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	21.9	20.0	18.2	18.4	17.1	19.8	19.5	20.0	20.1	19.6
		Impact of social transfers (excl. pensions) in reducing poverty (%)	39.3	42.0		40.8	35.7	39.4	33.3	34.0	36.3	35.7
		Severe Material Deprivation (% of total population)	22.1	18.2	13.7	11.8	11.1	11.4	10.6	10.5	10.2	9.9
		Share of people living in low work intensity households (% of people aged 0-59)	6.6	6.2	6.4	5.2	5.6	7.9	7.7	7.2	7.6	7.1
		Gross Household Disposable income adjusted for consumer prices (growth %)	5.6	3.5	9.2	4.9	1.4	2.9	-2.2	-1.7	1.7	3.2
		Income quintile share ratio S80/S20	3.9	4.1	3.5	3.4	3.6	3.8	3.8	3.7	3.6	3.9
		GINI coefficient	26.2 b	28.1	24.5	23.7	24.8	25.9	25.7	25.3	24.2	26.1
		Early leavers from education and training (% of population aged 18-24)	6.3	6.6 b	6.5	6.0	4.9	4.7	5.1 b	5.3	6.4	6.7 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	15.8	14.4 b	12.5	11.1	12.5	14.1	13.8 b	13.8	13.7	12.8
		Male	At-risk-of-poverty or exclusion (% of male population)	30.7	25.6	19.4	18.9	18.0	19.6	19.5	19.7	19.3
	At-risk-of-poverty (% of male population)		13.2	11.8		10.1	10.1	11.7	12.8	13.2	12.8	12.7
	Poverty gap (%)		25.5	20.8	22.4	21.0	24.7	28.0	24.5	20.5	25.5	30.7
	Persistent at-risk-of-poverty (% of male population)					4.6	5.1	4.6	7.6	8.5	6.7	
	Severe Material Deprivation (% of male population)		21.6	17.8	12.8	11.1	10.5	11.1	10.1	10.1	10.0	9.7
	Share of people living in low work intensity households (% of males aged 0-59)		5.8	5.8	5.7	4.5	5.1	7.4	7.5	7.0	7.2	7.2
Life expectancy at birth (years)	70.2		70.4	70.6	70.9 b	71.4	71.8	72.3	72.5	72.9		
Healthy life years at birth (years) - men	55.2 d		54.5 bd	55.6	52.1 b	52.4	52.4	52.1	53.4	54.5		
Early leavers from education and training (% of males aged 18-24)	6.7		7.3 b	7.2	7.1	5.7	4.6	5.4 b	6.0	6.7	6.9 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)	14.4		12.8 b	11.0	9.6	12.2	13.8	13.9 b	14.5	14.2	12.8	
Female	At-risk-of-poverty or exclusion (% of female population)	33.2	27.6	23.1	22.0	21.1	21.6	21.7	21.3	20.2	18.7	
	At-risk-of-poverty (% of female population)	13.5	11.5		11.5	11.8	12.2	13.1	13.3	12.9	12.6	
	Poverty gap (%)	22.8	19.6	17.2	16.5	21.8	24.3	21.0	20.6	23.0	26.1	
	Persistent at-risk-of-poverty (% of female population)				5.2	5.6	7.3	8.0	8.7	7.4		
	Severe Material Deprivation (% of female population)	22.5	18.6	14.5	12.3	11.6	11.8	11.0	10.8	10.5	10.0	
	Share of people living in low work intensity households (% of females aged 0-59)	7.4	6.6	7.2	5.9	6.0	8.4	7.8	7.5	7.9	7.0	
	Life expectancy at birth (years)	78.1	78.4	78.4	79.0 b	79.1	79.3	79.8	79.9	80.1		
	Healthy life years at birth (years) - women	56.6 d	54.6 bd	56.1	52.5 b	52.6	52.0	52.3	53.1	54.3		
	Early leavers from education and training (% of females aged 18-24)	5.9	5.8 b	5.8	4.9	4.1	4.9	4.6 b	4.6	6.1	6.6 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	17.3	16.0 b	14.1	12.5	12.9	14.4	13.7 b	13.1	13.1	12.8	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	35.0	30.4	25.8	24.3	23.7	25.3	26.0	26.6	25.5	23.6	
	At-risk-of-poverty (% of Children population)	18.9	17.1		16.7	16.8	18.8	21.2	21.9	20.3	19.2	
	Severe Material Deprivation (% of Children population)	23.6	19.9	16.3	12.6	12.7	13.5	12.4	11.9	13.0	12.1	
	Share of children living in low work intensity households (% of Children population)	4.8	4.4	5.5	4.4	5.4	8.1	7.3	7.2	8.4	8.1	
	Risk of poverty of children in households at work (Working Intensity > 0.2)	15.8	14.4	13.0	13.7	12.7	13.0	16.1	16.4	13.4	12.7	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	35.7	39.6		38.2	30.3	35.8	28.6	29.8	33.7	36.2	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	31.6	25.8	20.1	19.3	18.5	20.2	20.6	19.9	19.4	18.1	
	At-risk-of-poverty (% of Working age population)	12.7	10.6		9.5	9.6	11.2	12.4	12.3	12.1	12.3	
	Severe Material Deprivation (% of Working age population)	21.2	17.1	12.3	10.8	10.6	11.0	10.3	10.1	9.7	9.4	
	Very low work intensity (18-59)	7.2	6.7	6.7	5.4	5.6	7.9	7.8	7.2	7.3	6.9	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	9.0	6.3	4.9	5.8	5.2	5.7	6.3	6.2	5.8	5.7	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	40.4	43.6		43.5	39.2	41.4	34.7	35.6	37.3	35.6	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	29.0	25.6	22.0	21.9	19.7	16.7	14.5	16.3	13.6	13.4	
	At-risk-of-poverty (% of Elderly population)	7.1	8.5		9.9	10.8	7.7	6.3	7.8	6.0	6.2	
	Severe Material Deprivation (% of Elderly population)	24.6	21.0	17.7	15.3	11.7	11.1	9.7	10.8	9.2	9.2	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.85 b	0.85	0.81	0.79	0.81	0.83	0.86	0.81	0.90	0.91	
	Aggregate replacement ratio (ratio)	0.55	0.57	0.54	0.54	0.55	0.61	0.62	0.56	0.61	0.62	
Expenditure in social protection (% of GDP)	Sickness/Health care	4.8	4.8	4.7	5.1	5.8	5.5	5.4	5.5	5.6 p		
	Disability	1.3	1.3	1.3	1.4	1.5	1.6	1.6	1.6	1.6 p		
	Old age and survivors	7.1	6.9	6.8	6.6	7.8	7.8	7.7	7.9	8.1 p		
	Family/Children	1.7	1.6	1.5	1.5	1.7	1.8	1.8	1.8	1.8 p		
	Unemployment	0.5	0.5	0.6	0.6	1.0	1.0	0.8	0.7	0.6 p		
	Housing and Social exclusion n.e.c.	0.5	0.6	0.5	0.4	0.5	0.5	0.5	0.5	0.5 p		
	Total (including Admin and Other expenditures) of which: Means tested benefits	16.5 0.9	16.4 1.0	16.1 1.0	16.1 0.8	18.8 0.9	18.7 1.0	18.3 0.9	18.4 0.9	18.8 p 0.9 p		



## Macro economic indicators: Finland

Finland		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Macro Economic Indicators	Annual percentage growth	Real GDP	2.8	4.1	5.2	0.7	-8.3	3.0	2.6	-1.4	-1.1	-0.4
		Total employment	1.6	1.8	2.1	2.2	-2.4	-0.7	1.3	0.9	-0.7	-0.8
		Labour productivity	1.2	2.2	3.0	-1.5	-6.0	3.7	1.3	-2.3	-0.4	0.4
		Annual average hours worked	-0.6	-0.3	-0.1	-0.4	-1.4	0.4	-0.3	-0.7	-0.7	0.2
		Productivity per hour worked	1.8	2.4	3.1	-1.1	-4.7	3.3	1.6	-1.6	0.2	0.3
		Harmonized CPI	0.8	1.3	1.6	3.9	1.6	1.7	3.3	3.2	2.2	1.2
		Price deflator GDP	0.9	0.9	2.8	3.1	1.9	0.4	2.6	3.0	2.6	1.6
		Nominal compensation per employee	3.5	3.4	3.3	4.3	2.0	2.2	3.6	2.8	1.4	1.4
		Real compensation per employee (GDP deflator)	2.6	2.5	0.5	1.2	0.0	1.9	1.0	-0.2	-1.3	-0.2
		Real compensation per employee (private consumption deflator)	2.7	2.1	1.7	0.4	0.3	0.5	0.3	-0.4	-0.9	0.2
		Nominal unit labour costs	2.3	1.2	0.3	5.8	8.5	-1.4	2.3	5.2	1.8	0.9
		Real unit labour costs	1.3	0.4	-2.5	2.8	6.4	-1.7	-0.3	2.2	-0.9	-0.7
		Labour Market Indicators	Total	Total population (000)	5225	5242	5266	5289	5317	5343	5365	5392
Population aged 15-64 (000)	3476			3484	3497	3514	3527	3537	3518	3505	3489	3472
Total employment (000)	2401			2444	2492	2531	2457	2448	2474	2483	2457	2447
Employment aged 15-64 (000)	2378			2416	2459	2497	2423	2410	2429	2431	2403	2386
Employment rate (% population aged 20-64)	73.0			73.9	74.8	75.8	73.5	73.0	73.8	74.0	73.3	73.1
Employment rate (% population aged 15-64)	68.4			69.3	70.3	71.1	68.7	68.1	69.0	69.4	68.9	68.7
Employment rate (% population aged 15-24)	40.5			42.1	44.6	44.7	39.6	38.8	40.4	41.8	41.5	41.4
Employment rate (% population aged 25-54)	81.7			82.4	83.4	84.3	82.4	81.6	82.3	82.0	81.0	80.5
Employment rate (% population aged 55-64)	52.7			54.5	55.0	56.5	55.5	56.2	57.0	58.2	58.5	59.1
FTE employment rate (% population aged 20-64)	69.9 b			70.7	71.7	72.6 b	70.2	69.6	70.2	70.4	69.9	69.6
Self-employed (% total employment)	11.2			11.4	11.4	11.4	12.0	11.9	12.0	12.1	11.8	12.1
Part-time employment (% total employment)	13.7			14.0	14.1	13.3	14.0	14.6	14.9	15.1	15.1	15.4
Fixed-term contracts (% total employees)	16.5			16.4	15.9	15.0	14.6	15.5	15.6	15.6	15.5	15.5
Employment in Services (% total employment)	69.4			69.5	69.5	69.6	71.1	71.6	71.8	72.1	72.7	73.1
Employment in Industry (% total employment)	25.5			25.5	25.6	25.6	24.1	23.6	23.6	23.4	22.9	22.4
Employment in Agriculture (% total employment)	5.1			5.0	4.9	4.8	4.9	4.8	4.6	4.5	4.5	4.5
Activity rate (% population aged 15-64)	74.7			75.2	75.6	76.0	75.0	74.5	74.9	75.2	75.2	75.4
Activity rate (% population aged 15-24)	50.7			51.8	53.4	53.5	50.4	49.4	50.5	51.6	51.8	52.1
Activity rate (% population aged 25-54)	87.7			87.8	88.0	88.6	88.2	87.5	87.7	87.3	86.8	86.6
Activity rate (% population aged 55-64)	56.6			58.5	58.8	59.7	59.1	60.2	60.9	62.3	62.9	63.8
Total unemployment (000)	220			204	183	172	221	224	209	207	219	232
Unemployment rate (% labour force)	8.4			7.7	6.9	6.4	8.2	8.4	7.8	7.7	8.2	8.7
Youth unemployment rate (% labour force 15-24)	20.1			18.7	16.5	16.5	21.5	21.4	20.1	19.0	19.9	20.5
Long-term unemployment rate (% labour force)	2.2			1.9	1.6	1.2	1.4	2.0	1.7	1.6	1.7	1.9
Share of long-term unemployment (% of total unemployment)	25.8			25.2	22.9	18.4	16.8	24.0	22.2	21.4	20.7	22.4
Youth unemployment ratio (% population aged 15-24)	10.2			9.7	8.8	8.8	10.9	10.6	10.1	9.8	10.3	10.7
Employment rate for low skilled 25-64 (ISCED 0-2)	57.9 b			58.4	58.6	59.3 b	56.8	55.0	55.5	55.2	54.1	53.5 b
Employment rate for medium skilled 25-64 (ISCED 3-4)	75.2 b			75.6	76.2	77.3 b	74.8	74.1	74.7	74.6	73.6	73.2 b
Employment rate for high skilled 25-64 (ISCED 5-8)	84.1 b			85.0	85.2	85.6 b	84.4	84.1	84.3	84.4	83.8	83.5 b
Employment rate (Nationals aged 15-64)	68.7 b			69.6	70.5	71.3 b	68.9	68.5	69.4	69.7	69.2	69.2
Employment rate (Other EU-28 aged 15-64)				68.7	73.9	76.2 b	72.0	70.7	70.8	73.8	69.5	70.7
Employment rate (Other than EU-28 aged 15-64)				47.7	49.4	51.6 b	51.5	46.9	47.4	48.8	50.9	47.6
Employment rate (Born in the same country aged 15-64)	68.8 b			69.7	70.5	71.3 b	68.9	68.5	69.4	69.6	69.2	69.2
Employment rate (Born in other EU-28 aged 15-64)				69.5	74.7	75.9 b	72.9	71.6	71.9	75.5	74.0	72.4
Employment rate (Born outside EU-28 aged 15-64)				53.3	55.8	58.3 b	57.9	53.5	54.1	55.9	56.3	54.0
Underemployment (% of labour force aged 15-74)						2.7 b	3.0	3.0	2.9	2.8	3.0	3.4
Seeking but not available (% of labour force aged 15-74)	2.3 b	2.3	2.3	2.1 b	2.1	2.3	2.4	2.3	2.3	2.4		
Discouraged, available but not seeking (% of labour force aged 15-74)	3.4 b	3.4	3.0	2.8 b	3.4	3.7	3.7	4.1	4.6	5.1		

Finland		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	2547	2555	2569	2581	2598	2613	2624	2639	2653	2667
		Population aged 15-64 (000)	1747	1750	1758	1766	1774	1779	1770	1764	1756	1749
		Total employment (000)	1243	1266	1290	1315	1255	1259	1278	1277	1261	1254
		Employment aged 15-64 (000)	1228	1249	1268	1291	1233	1234	1249	1244	1228	1215
		Employment rate (% population aged 20-64)	75.1	76.3	77.2	78.4	74.7	74.5	75.6	75.5	74.7	74.0
		Employment rate (% population aged 15-64)	70.3	71.4	72.1	73.1	69.5	69.4	70.6	70.5	69.9	69.5
		Employment rate (% population aged 15-24)	40.4	42.6	44.5	44.3	37.7	37.7	39.5	41.0	39.1	39.8
		Employment rate (% population aged 25-54)	84.4	85.2	86.0	87.3	84.3	83.9	84.8	84.4	83.9	82.7
		Employment rate (% population aged 55-64)	52.8	54.8	55.1	57.1	54.6	55.6	56.8	56.6	56.5	56.8
		FTE employment rate (% population aged 20-64)	73.5 b	74.6	75.5	76.6 b	72.8	72.6	73.3	73.4	72.8	71.9
		Self-employed (% total employment)	14.7	15.0	15.0	14.8	15.8	15.6	15.8	16.0	15.7	16.0
		Part-time employment (% total employment)	9.2	9.3	9.3	8.9	9.2	10.0	10.6	10.3	10.2	10.9
		Fixed-term contracts (% total employees)	12.9	12.6	12.4	11.2	10.6	12.4	12.7	12.7	12.4	12.5
		Employment in Services (% total employment)	55.1	54.9	54.4	54.2	56.0	57.3	57.1	57.2	57.8	58.4
		Employment in Industry (% total employment)	37.9	38.2	38.7	39.2	37.4	36.2	36.5	36.4	35.8	35.2
		Employment in Agriculture (% total employment)	7.0	6.9	6.9	6.5	6.6	6.5	6.4	6.4	6.4	6.4
		Activity rate (% population aged 15-64)	76.6	77.1	77.2	77.9	76.4	76.4	77.2	77.1	76.8	76.8
		Activity rate (% population aged 15-24)	50.9	52.6	53.3	53.4	49.7	49.4	50.5	51.2	50.8	51.5
		Activity rate (% population aged 25-54)	90.3	90.3	90.4	91.2	90.6	90.5	90.9	90.4	90.1	89.5
		Activity rate (% population aged 55-64)	56.9	58.9	59.1	60.6	58.7	60.1	61.4	61.6	61.5	61.9
		Total unemployment (000)	111	101	90	85	122	126	117	115	122	129
		Unemployment rate (% labour force)	8.2	7.4	6.5	6.1	8.9	9.1	8.4	8.3	8.8	9.3
		Youth unemployment rate (% labour force 15-24)	20.6	19.0	16.4	17.1	24.1	23.8	21.8	19.9	22.9	22.8
		Long-term unemployment rate (% labour force)	2.4	2.1	1.7	1.3	1.6	2.5	2.2	2.1	2.1	2.3
		Share of long-term unemployment (% of total unemployment)	29.0	28.4	26.4	20.5	18.3	27.8	26.2	25.1	23.4	24.4
		Youth unemployment ratio (% population aged 15-24)	10.5	10.0	8.8	9.2	12.0	11.8	11.0	10.2	11.6	11.7
		Employment rate for low skilled 25-64 (ISCED 0-2)	61.4 b	62.4	62.7	63.5 b	60.0	59.1	60.3	59.0	58.2	58.1 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	78.4 b	78.5	79.1	80.4 b	76.6	76.1	77.3	76.9	76.3	75.0 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	86.4 b	87.7	87.5	88.8 b	86.9	86.8	87.2	86.9	86.3	85.6 b
		Employment rate (Nationals aged 15-64)	70.4 b	71.5	72.2	73.2 b	69.6	69.5	70.7	70.7	70.1	69.6
		Employment rate (Other EU-28 aged 15-64)		74.4	78.1	79.9 b	72.0	74.1	77.0	76.8	70.9	73.0
		Employment rate (Other than EU-28 aged 15-64)		59.6	60.7	61.3 b	60.4	56.8	57.5	58.1	60.8	60.1
		Employment rate (Born in the same country aged 15-64)	70.5 b	71.5	72.2	73.2 b	69.6	69.5	70.8	70.6	70.0	69.7
Employment rate (Born in other EU-28 aged 15-64)		74.8	78.6	76.7 b	71.5	73.1	74.7	78.5	75.4	72.6		
Employment rate (Born outside EU-28 aged 15-64)		60.7	62.0	66.7 b	65.0	61.6	61.1	62.2	64.4	62.1		
Underemployment (% of labour force aged 15-74)				1.6 b	2.0	2.0	1.9	1.9	2.0	2.4		
Seeking but not available (% of labour force aged 15-74)	2.0 b	2.0	2.0	1.8 b	1.9	1.9	2.0	2.0	2.1	2.1		
Discouraged, available but not seeking (% of labour force aged 15-74)	3.3 b	3.3	3.0	2.8 b	3.7	3.9	3.9	4.4	4.9	5.5		

Finland		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	2678	2687	2697	2708	2719	2731	2741	2753	2764	2774
		Population aged 15-64 (000)	1728	1734	1739	1748	1753	1758	1749	1741	1733	1723
		Total employment (000)	1158	1178	1202	1216	1202	1188	1196	1206	1195	1193
		Employment aged 15-64 (000)	1150	1167	1191	1206	1191	1176	1179	1187	1176	1171
		Employment rate (% population aged 20-64)	70.8	71.5	72.5	73.1	72.4	71.5	71.9	72.5	71.9	72.1
		Employment rate (% population aged 15-64)	66.5	67.3	68.5	69.0	67.9	66.9	67.4	68.2	67.8	68.0
		Employment rate (% population aged 15-24)	40.6	41.6	44.7	45.1	41.5	39.9	41.2	42.7	43.9	43.0
		Employment rate (% population aged 25-54)	79.0	79.6	80.6	81.2	80.5	79.2	79.6	79.4	78.1	78.1
		Employment rate (% population aged 55-64)	52.7	54.3	55.0	55.8	56.3	56.9	57.2	59.7	60.5	61.4
		FTE employment rate (% population aged 20-64)	66.5 b	67.1	68.2	69.0 b	67.8	67.0	67.4	67.8	67.3	67.5
		Self-employed (% total employment)	7.5	7.5	7.4	7.6	7.9	8.0	7.9	7.9	7.8	8.1
		Part-time employment (% total employment)	18.6	19.2	19.3	18.2	19.0	19.6	19.6	20.1	20.2	20.2
		Fixed-term contracts (% total employees)	20.0	20.0	19.4	18.7	18.3	18.4	18.4	18.3	18.4	18.4
		Employment in Services (% total employment)	84.7	85.2	85.7	86.5	87.0	86.9	87.7	88.1	88.4	88.6
		Employment in Industry (% total employment)	12.2	11.8	11.5	10.7	10.0	10.1	9.6	9.4	9.1	8.9
		Employment in Agriculture (% total employment)	3.1	3.0	2.8	2.9	3.0	3.0	2.6	2.5	2.4	2.5
		Activity rate (% population aged 15-64)	72.8	73.3	73.8	73.9	73.5	72.5	72.7	73.4	73.4	73.9
		Activity rate (% population aged 15-24)	50.4	51.0	53.6	53.5	51.2	49.3	50.5	52.0	52.9	52.6
		Activity rate (% population aged 25-54)	85.1	85.3	85.6	85.9	85.7	84.4	84.3	84.1	83.3	83.6
		Activity rate (% population aged 55-64)	56.4	58.2	58.4	58.8	59.5	60.3	60.4	62.9	64.3	65.5
		Total unemployment (000)	109	104	93	87	99	98	91	92	97	103
		Unemployment rate (% labour force)	8.6	8.1	7.2	6.7	7.6	7.6	7.1	7.1	7.5	8.0
		Youth unemployment rate (% labour force 15-24)	19.5	18.4	16.6	15.8	19.0	19.0	18.4	18.0	17.1	18.4
		Long-term unemployment rate (% labour force)	2.0	1.8	1.4	1.1	1.1	1.5	1.2	1.2	1.3	1.6
		Share of long-term unemployment (% of total unemployment)	22.6	22.1	19.5	16.2	14.8	19.1	17.1	16.7	17.5	19.8
		Youth unemployment ratio (% population aged 15-24)	9.8	9.4	8.9	8.4	9.7	9.4	9.3	9.4	9.0	9.7
		Employment rate for low skilled 25-64 (ISCED 0-2)	53.6 b	53.4	53.5	53.7 b	52.5	49.4	48.9	49.8	48.3	46.5 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	71.5 b	72.1	72.8	73.5 b	72.7	71.6	71.6	71.8	70.4	70.9 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	82.4 b	83.0	83.4	83.3 b	82.6	82.1	82.2	82.5	82.0	81.9 b
		Employment rate (Nationals aged 15-64)	66.9 b	67.7	68.9	69.3 b	68.3	67.4	68.0	68.6	68.4	68.7
		Employment rate (Other EU-28 aged 15-64)		62.2	68.8	71.5 b	71.9	67.4	64.2	70.4	68.0	68.1
		Employment rate (Other than EU-28 aged 15-64)		38.3	39.8	42.3 b	42.7	37.7	37.8	39.3	40.4	33.9
		Employment rate (Born in the same country aged 15-64)	67.0 b	67.8	68.9	69.3 b	68.2	67.5	68.0	68.6	68.4	68.8
Employment rate (Born in other EU-28 aged 15-64)		63.8	70.3	74.9 b	74.4	70.0	69.0	72.7	72.7	72.3		
Employment rate (Born outside EU-28 aged 15-64)		47.4	50.5	50.8 b	51.4	46.4	48.0	49.9	48.9	46.4		
Underemployment (% of labour force aged 15-74)				3.9 b	4.0	4.0	3.8	3.7	4.0	4.5		
Seeking but not available (% of labour force aged 15-74)	2.6 b	2.6	2.6	2.5 b	2.4	2.6	2.8	2.8	2.6	2.7		
Discouraged, available but not seeking (% of labour force aged 15-74)	3.5 b	3.6	3.1	2.8 b	3.1	3.5	3.5	3.8	4.2	4.6		

Finland		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	17.2	17.1	17.4	17.4	16.9	16.9	17.9	17.2	16.0	17.3
		At-risk-of-poverty (% of total population)	11.7	12.6	13.0	13.6	13.8	13.1	13.7	13.2	11.8	12.8
		At-risk-of-poverty threshold (PPS single person)	8474	8886	9145	9933	10421	10327	10760	11146	11507	11549
		Poverty gap (%)	13.8	14.5	14.1	15.7	15.1	13.8	13.5	15.0	15.0	13.9
		Persistent at-risk-of-poverty (% of total population)			7.6	6.8	6.5	7.7	7.5	7.4	7.0	7.0
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	28.0	28.6	28.9	27.3	26.2	27.0	27.4	26.9	26.4	27.6
		Impact of social transfers (excl. pensions) in reducing poverty (%)	58.2	55.9	55.0	50.2	47.3	51.5	50.0	50.9	55.3	53.6
		Severe Material Deprivation (% of total population)	3.8	3.3	3.6	3.5	2.8	2.8	3.2	2.9	2.5	2.8
		Share of people living in low work intensity households (% of people aged 0-59)	10.0	9.1	8.8	7.5	8.4	9.3	10.0	9.3	9.0	10.0
		Gross Household Disposable income adjusted for consumer prices (growth %)	1.6	2.8	3.8	2.3	0.8	2.6	1.0	0.1	0.4	-0.9
		Income quintile share ratio S80/S20	3.6	3.6	3.7	3.8	3.7	3.6	3.7	3.7	3.6	3.6
		GINI coefficient	26.0	25.9	26.2	26.3	25.9	25.4	25.8	25.9	25.4	25.6
		Early leavers from education and training (% of population aged 18-24)	10.3	9.7	9.1	9.8	9.9	10.3	9.8	8.9	9.3	9.5 b
		NEET: Young people not in employment, education or training (% of total population aged 15-24)	7.8	7.7	7.0	7.8	9.9	9.0	8.4	8.6	9.3	10.2
	Male	At-risk-of-poverty or exclusion (% of male population)	16.2	16.3	15.8	15.9	15.8	16.0	17.3	17.0	15.7	16.9
		At-risk-of-poverty (% of male population)	10.6	12.0	12.1	12.7	12.9	12.4	13.2	12.9	11.3	12.3
		Poverty gap (%)	15.1	14.6	14.7	17.1	16.6	14.7	15.2	16.4	17.2	15.3
		Persistent at-risk-of-poverty (% of male population)			6.5	6.2	5.1	7.4	6.8	6.6	6.5	6.6
		Severe Material Deprivation (% of male population)	3.8	3.0	3.0	3.2	2.9	2.6	3.2	3.0	2.5	2.7
		Share of people living in low work intensity households (% of males aged 0-59)	10.3	9.3	8.6	7.3	8.7	9.6	10.4	10.2	10.0	11.0
Life expectancy at birth (years)		75.6	75.9	76.0 b	76.5	76.6	76.9	77.3	77.7			
Healthy life years at birth (years) - men		51.7	53.2	56.8 b	58.6	58.2	58.5	57.7	57.3			
Early leavers from education and training (% of males aged 18-24)		12.4	11.8	11.2	12.1	10.7	11.6	11.2	9.8	10.4	11.9 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)		7.9	7.2	6.4	7.7	10.5	9.4	8.7	8.6	10.6	11.9	
Female	At-risk-of-poverty or exclusion (% of female population)	18.1	17.9	19.0	18.9	17.9	17.7	18.5	17.4	16.2	17.6	
	At-risk-of-poverty (% of female population)	12.8	13.1	13.8	14.5	14.7	13.8	14.2	13.6	12.3	13.3	
	Poverty gap (%)	13.2	14.1	13.5	14.1	14.6	12.9	12.4	13.9	13.2	13.0	
	Persistent at-risk-of-poverty (% of female population)			8.5	7.4	7.7	8.1	8.1	8.1	7.4	7.3	
	Severe Material Deprivation (% of female population)	3.8	3.6	4.1	3.8	2.7	3.1	3.2	2.9	2.5	2.9	
	Share of people living in low work intensity households (% of females aged 0-59)	9.7	8.8	9.0	7.6	8.0	9.0	9.5	8.3	8.0	9.0	
	Life expectancy at birth (years)	82.5	83.1	83.1 b	83.3	83.5	83.5	83.8	83.7			
	Healthy life years at birth (years) - women	52.5	52.8	58.0 b	59.5	58.6	57.9	58.3	56.2			
	Early leavers from education and training (% of females aged 18-24)	8.2	7.8	7.2	7.7	9.0	9.0	8.4	8.1	8.3	7.2 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	7.8	8.1	7.7	7.9	9.2	8.6	8.2	8.6	8.1	8.5	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	15.0	13.8	15.1	15.1	14.0	14.2	16.1	14.9	13.0	15.6	
	At-risk-of-poverty (% of Children population)	10.0	9.8	10.9	12.0	12.1	11.4	11.8	11.1	9.3	10.9	
	Severe Material Deprivation (% of Children population)	3.8	2.6	3.4	3.1	2.5	2.3	3.2	2.8	1.8	2.0	
	Share of children living in low work intensity households (% of Children population)	7.5	6.5	6.0	4.9	5.8	5.9	7.6	5.9	6.1	6.6	
	Risk of poverty of children in households at work (Working Intensity > 0.2)	6.1	6.5	8.2	9.1	7.9	7.6	7.5	7.7	6.3	8.5	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	67.6	67.3	65.3	59.6	56.5	61.6	60.9	63.0	68.2	66.3	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	17.2	16.8	16.8	16.5	16.2	17.1	18.0	17.3	16.7	17.9	
	At-risk-of-poverty (% of Working age population)	10.5	11.2	11.5	11.8	12.2	12.3	12.8	12.4	11.3	12.5	
	Severe Material Deprivation (% of Working age population)	4.1	3.8	3.9	3.7	3.1	3.3	3.5	3.4	3.1	3.4	
	Very low work intensity (18-59)	10.9	10.0	9.8	8.4	9.3	10.6	10.9	10.6	10.1	11.3	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	3.7	4.4	5.0	5.1	3.7	3.7	3.9	3.8	3.8	3.7	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	61.4	59.3	58.2	54.1	50.8	53.8	52.9	53.4	57.8	54.9	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	20.1	23.0	23.1	23.9	23.1	19.5	19.8	19.5	16.8	17.0	
	At-risk-of-poverty (% of Elderly population)	18.7	21.8	21.6	22.5	22.1	18.3	18.9	18.4	16.1	16.0	
	Severe Material Deprivation (% of Elderly population)	2.5	2.2	2.6	3.2	2.2	1.7	2.1	1.5	1.1	1.7	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.74	0.73	0.74	0.72	0.73	0.78	0.78	0.78	0.78	0.79	
Aggregate replacement ratio (ratio)	0.46	0.47	0.47	0.49	0.48	0.50	0.50	0.49	0.49	0.51		
Expenditure in social protection (% of GDP)	Sickness/Health care	6.7	6.7	6.5	6.8	7.6	7.5	7.5	7.7	7.8		
	Disability	3.3	3.2	3.1	3.2	3.6	3.6	3.5	3.5	3.6		
	Old age and survivors	9.6	9.7	9.5	9.6	11.4	11.7	11.7	12.4	13.2		
	Family/Children	3.0	3.0	2.9	2.9	3.3	3.3	3.3	3.4	3.4		
	Unemployment	2.4	2.2	1.9	1.8	2.4	2.4	2.1	2.1	2.4		
	Housing and Social exclusion n.e.c.	0.8	0.8	0.8	1.0	1.2	1.2	1.3	1.4	1.5		
	Total (including Admin and Other expenditures)	26.7	26.4	25.4	26.2	30.4	30.6	30.0	31.2	32.7		
of which: Means tested benefits	1.3	1.2	1.1	1.1	1.3	1.3	1.4	1.5	1.7			

## Macro economic indicators: Sweden

Sweden		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	2.8	4.7	3.4	-0.6	-5.2	6.0	2.7	-0.3	1.2	2.3		
		Total employment	0.3	1.7	2.3	0.9	-2.4	1.0	2.1	0.7	1.0	1.4		
		Labour productivity	2.5	2.9	1.1	-1.4	-2.8	5.0	0.5	-1.0	0.3	0.9		
		Annual average hours worked	0.0	-0.4	0.8	0.3	-0.5	1.6	-0.2	-0.9	-0.6	0.1		
		Productivity per hour worked	2.6	3.3	0.3	-1.8	-2.4	3.3	0.7	-0.1	0.9	0.7		
		Harmonized CPI	0.8	1.5	1.7	3.3	1.9	1.9	1.4	0.9	0.4	0.2		
		Price deflator GDP	0.8	1.8	2.9	3.3	2.4	1.0	1.2	1.1	1.1	1.6		
		Nominal compensation per employee	3.1	3.1	5.3	3.7	2.7	2.2	3.2	3.1	1.9	2.2		
		Real compensation per employee (GDP deflator)	2.3	1.3	2.4	0.3	0.3	1.2	2.0	2.0	0.9	0.5		
		Real compensation per employee (private consumption deflator)	2.2	1.6	3.6	0.3	0.8	0.3	1.8	2.1	1.5	2.0		
		Nominal unit labour costs	0.5	0.2	4.2	5.2	5.7	-2.6	2.6	4.1	1.7	1.3		
		Real unit labour costs	-0.2	-1.7	1.4	1.8	3.2	-3.6	1.4	3.1	0.5	-0.3		
		Labour Market Indicators	Total	Total population (000)	9039 b	9084	9147	9203	9297	9364	9419	9460	9502	9551
				Population aged 15-64 (000)	5896 b	5951	6002	6046	6080	6103	6115	6114	6120	6141
Total employment (000)	4347 b			4429	4541	4593	4499	4524	4626	4657	4705	4772		
Employment aged 15-64 (000)	4272 b			4352	4453	4494	4391	4403	4498	4510	4554	4598		
Employment rate (% population aged 20-64)	78.1 b			78.8	80.1	80.4	78.3	78.1	79.4	79.4	79.8	80.0		
Employment rate (% population aged 15-64)	72.5 b			73.1	74.2	74.3	72.2	72.1	73.6	73.8	74.4	74.9		
Employment rate (% population aged 15-24)	38.7 b			40.3	42.2	42.2	38.3	38.8	40.9	40.2	41.7	42.8		
Employment rate (% population aged 25-54)	83.9 b			84.7	86.1	86.5	84.5	84.0	85.1	85.2	85.4	85.4		
Employment rate (% population aged 55-64)	69.4 b			69.6	70.0	70.1	70.0	70.4	72.0	73.0	73.6	74.0		
FTE employment rate (% population aged 20-64)	72.2 b			72.6	74.0	74.3	72.6	72.2	73.6	73.9	74.3	74.8		
Self-employed (% total employment)	5.7			5.7	5.7	5.4	5.6	5.6	5.3	5.1	5.0	4.9		
Part-time employment (% total employment)	24.7 b			25.1	25.0	26.6	27.0	27.0	26.5	26.5	26.2	26.2		
Fixed-term contracts (% total employees)	16.0 b			17.3	17.5	16.1	15.3	16.4	17.0	16.4	16.9	17.5		
Employment in Services (% total employment)	75.5			75.8	75.5	75.2	76.1	76.3	76.1	76.3	76.7	77.1		
Employment in Industry (% total employment)	22.3			22.1	22.5	22.8	21.8	21.5	21.6	21.3	20.9	20.6		
Employment in Agriculture (% total employment)	2.2			2.1	2.0	2.0	2.1	2.2	2.3	2.3	2.3	2.3		
Activity rate (% population aged 15-64)	78.7 b			78.8	79.1	79.3	78.9	79.1	79.9	80.3	81.1	81.5		
Activity rate (% population aged 15-24)	50.2 b			51.3	52.2	52.8	51.0	51.6	53.0	52.6	54.5	55.4		
Activity rate (% population aged 25-54)	89.5 b			89.4	90.0	90.4	90.0	89.8	90.3	90.6	90.9	90.8		
Activity rate (% population aged 55-64)	72.6 b			72.8	72.8	72.8	73.9	74.8	76.0	77.0	77.5	78.2		
Total unemployment (000)	361			336	298	305	408	425	390	403	411	411		
Unemployment rate (% labour force)	7.7			7.1	6.1	6.2	8.3	8.6	7.8	8.0	8.0	7.9		
Youth unemployment rate (% labour force 15-24)	22.6			21.5	19.2	20.2	25.0	24.8	22.8	23.7	23.6	22.9		
Long-term unemployment rate (% labour force)	1.0 b			1.0	0.9	0.8	1.1	1.6	1.5	1.5	1.5	1.5		
Share of long-term unemployment (% of total unemployment)	13.1 b			14.7	13.8	12.6	13.3	18.6	19.6	18.9	18.5	18.9		
Youth unemployment ratio (% population aged 15-24)	11.5 b			11.0	10.1	10.7	12.8	12.8	12.1	12.4	12.8	12.7		
Employment rate for low skilled 25-64 (ISCED 0-2)	66.0 b			68.1 b	68.0	67.6	65.2	64.7	65.8	65.4	63.8	63.6 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	81.2 b			82.9 b	84.2	84.4	82.6	82.4	83.9	84.1	84.4	84.5 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	87.3 b			87.3 b	88.5	89.1	88.1	87.7	88.3	88.7	89.2	89.0 b		
Employment rate (Nationals aged 15-64)	73.3 b			73.9	75.0	75.1	73.0	73.1	74.8	75.1	75.8	76.2		
Employment rate (Other EU-28 aged 15-64)				70.7	69.9	73.0	74.4	73.1	72.3	71.8	72.6	73.9		
Employment rate (Other than EU-28 aged 15-64)				48.1	49.9	50.3	47.1	44.6	44.1	44.2	46.3	47.8		
Employment rate (Born in the same country aged 15-64)	74.4 b			75.1	76.2	76.3	74.2	74.4	76.0	76.2	77.2	77.7		
Employment rate (Born in other EU-28 aged 15-64)				72.0	72.4	72.2	73.1	72.7	73.4	73.9	74.7	74.9		
Employment rate (Born outside EU-28 aged 15-64)				56.6	58.9	60.5	57.4	56.6	58.2	58.6	58.5	59.5		
Underemployment (% of labour force aged 15-74)						4.4	4.8	4.6	4.5	4.7	4.9	4.6		
Seeking but not available (% of labour force aged 15-74)	1.7 b	1.9	1.9	1.8	1.8	2.0	2.0	2.0	2.0	2.0				
Discouraged, available but not seeking (% of labour force aged 15-74)	2.6 b	2.4	2.2	2.1	2.8	2.7	2.4	2.6	2.8	2.6				



Sweden		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	4479 b	4504	4540	4567	4628	4664	4694	4715	4736	4763
		Population aged 15-64 (000)	2993 b	3020	3048	3071	3088	3100	3108	3107	3110	3124
		Total employment (000)	2281 b	2331	2390	2422	2359	2394	2438	2442	2468	2502
		Employment aged 15-64 (000)	2228 b	2280	2333	2357	2291	2312	2355	2350	2373	2391
		Employment rate (% population aged 20-64)	80.7 b	81.7	83.1	83.5	80.9	81.1	82.1	81.9	82.2	82.2
		Employment rate (% population aged 15-64)	74.4 b	75.5	76.5	76.7	74.2	74.6	75.8	75.6	76.3	76.5
		Employment rate (% population aged 15-24)	37.7 b	40.2	42.0	42.2	37.7	38.5	40.8	38.8	40.5	41.6
		Employment rate (% population aged 25-54)	86.6 b	87.8	89.1	89.4	86.9	87.0	87.9	87.8	88.0	87.8
		Employment rate (% population aged 55-64)	72.0 b	72.3	72.9	73.4	73.2	74.0	75.2	76.3	76.9	76.5
		FTE employment rate (% population aged 20-64)	78.4 b	79.2	80.7	81.1	78.6	78.6	79.7	79.5	79.9	80.0
		Self-employed (% total employment)	8.0 b	8.1	8.0	7.4	7.7	7.7	7.3	7.1	6.9	6.7
		Part-time employment (% total employment)	11.5 b	11.8	11.8	13.3	14.2	14.5	14.2	14.6	14.9	15.1
		Fixed-term contracts (% total employees)	14.2 b	15.4	15.0	13.4	13.0	14.5	15.0	14.3	14.7	15.5
		Employment in Services (% total employment)	62.9 b	63.2	62.8	62.0	63.3	63.9	63.5	64.0	64.8	65.1
		Employment in Industry (% total employment)	33.9 b	33.6	34.1	34.9	33.7	32.9	33.1	32.6	31.8	31.6
		Employment in Agriculture (% total employment)	3.3 b	3.2	3.1	3.1	3.1	3.2	3.4	3.4	3.4	3.3
		Activity rate (% population aged 15-64)	80.9 b	81.2	81.4	81.7	81.4	81.9	82.4	82.6	83.3	83.6
		Activity rate (% population aged 15-24)	49.1 b	50.8	51.8	52.6	51.1	52.0	53.2	51.8	53.9	54.9
		Activity rate (% population aged 25-54)	92.4 b	92.5	92.9	93.1	92.8	92.9	93.2	93.5	93.6	93.5
		Activity rate (% population aged 55-64)	76.2 b	76.0	76.2	76.5	77.8	79.3	79.9	80.9	81.6	81.5
		Total unemployment (000)	191	173	149	152	222	227	207	218	220	222
		Unemployment rate (% labour force)	7.7	6.9	5.9	5.9	8.6	8.7	7.8	8.2	8.2	8.2
		Youth unemployment rate (% labour force 15-24)	22.6	21.0	18.7	19.7	26.3	25.9	23.3	25.0	24.8	24.3
		Long-term unemployment rate (% labour force)	1.2 b	1.2	0.9	0.8	1.2	1.8	1.7	1.7	1.7	1.7
		Share of long-term unemployment (% of total unemployment)	15.3 b	17.1	15.7	14.2	13.8	20.6	21.6	20.8	20.4	20.3
		Youth unemployment ratio (% population aged 15-24)	11.4 b	10.7	9.7	10.4	13.4	13.4	12.4	13.0	13.3	13.3
		Employment rate for low skilled 25-64 (ISCED 0-2)	73.0 b	74.5 b	74.6	74.6	71.6	72.6	73.1	72.8	71.5	71.0 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	84.4 b	86.0 b	87.3	87.3	85.1	85.5	86.8	86.9	87.2	87.1 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	88.1 b	87.9 b	89.3	90.2	89.2	88.8	89.4	89.7	90.4	90.2 b
		Employment rate (Nationals aged 15-64)	75.1 b	76.1	77.1	77.2	74.7	75.1	76.6	76.6	77.3	77.5
		Employment rate (Other EU-28 aged 15-64)		73.1	73.0	77.0	78.2	79.1	78.0	76.3	76.5	78.6
		Employment rate (Other than EU-28 aged 15-64)		54.7	57.6	59.3	55.4	54.9	53.9	52.5	54.0	55.6
		Employment rate (Born in the same country aged 15-64)	76.2 b	77.1	78.0	77.9	75.6	76.0	77.5	77.4	78.3	78.5
Employment rate (Born in other EU-28 aged 15-64)		75.9	76.1	77.3	76.1	76.8	77.1	77.7	77.6	78.2		
Employment rate (Born outside EU-28 aged 15-64)		61.0	64.8	66.5	62.8	63.3	63.9	63.7	63.8	64.7		
Underemployment (% of labour force aged 15-74)				2.2	2.8	2.7	2.6	2.9	3.2	3.0		
Seeking but not available (% of labour force aged 15-74)	1.5 b	1.6	1.7	1.6	1.6	1.7	1.7	1.8	1.7	1.7		
Discouraged, available but not seeking (% of labour force aged 15-74)	2.6 b	2.3	1.9	2.0	2.6	2.5	2.2	2.5	2.7	2.5		

Sweden		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	4559 b	4580	4607	4637	4668	4700	4725	4745	4766	4788
		Population aged 15-64 (000)	2903 b	2931	2954	2975	2992	3003	3007	3007	3010	3018
		Total employment (000)	2066 b	2099	2150	2171	2140	2130	2188	2215	2237	2270
		Employment aged 15-64 (000)	2044 b	2072	2121	2137	2101	2092	2143	2160	2181	2207
		Employment rate (% population aged 20-64)	75.5 b	75.8	77.1	77.2	75.7	75.0	76.5	76.8	77.2	77.6
		Employment rate (% population aged 15-64)	70.4 b	70.7	71.8	71.8	70.2	69.7	71.3	71.8	72.5	73.1
		Employment rate (% population aged 15-24)	39.8 b	40.4	42.3	42.1	38.9	39.2	41.0	41.6	42.9	44.0
		Employment rate (% population aged 25-54)	81.1 b	81.5	83.0	83.5	81.9	80.9	82.2	82.5	82.7	82.8
		Employment rate (% population aged 55-64)	66.7 b	66.9	67.0	66.7	66.7	66.9	68.9	69.6	70.3	71.5
		FTE employment rate (% population aged 20-64)	67.4 b	67.2	68.4	68.7	67.5	66.8	68.4	69.1	69.6	70.2
		Self-employed (% total employment)	3.1 b	3.1	3.1	3.0	3.2	3.3	3.0	2.9	3.0	2.9
		Part-time employment (% total employment)	39.6 b	40.2	40.0	41.4	41.2	41.0	40.1	39.6	38.8	38.3
		Fixed-term contracts (% total employees)	17.7 b	19.1	19.9	18.7	17.6	18.3	19.0	18.5	19.1	19.4
		Employment in Services (% total employment)	89.5 b	89.7	89.6	90.2	90.6	90.7	90.6	90.3	90.3	90.8
		Employment in Industry (% total employment)	9.5 b	9.4	9.5	8.9	8.4	8.3	8.3	8.5	8.6	8.1
		Employment in Agriculture (% total employment)	1.0 b	0.9	0.9	0.8	0.9	1.0	1.1	1.1	1.1	1.1
		Activity rate (% population aged 15-64)	76.3 b	76.3	76.8	76.9	76.4	76.2	77.3	77.9	78.8	79.3
		Activity rate (% population aged 15-24)	51.3 b	51.9	52.7	53.1	51.0	51.3	52.8	53.4	55.2	56.0
		Activity rate (% population aged 25-54)	86.5 b	86.3	87.1	87.6	87.1	86.6	87.3	87.6	88.1	88.0
		Activity rate (% population aged 55-64)	69.0 b	69.6	69.4	69.0	69.9	70.2	72.1	73.0	73.4	74.9
		Total unemployment (000)	170	164	148	152	186	198	184	185	191	189
		Unemployment rate (% labour force)	7.6	7.2	6.5	6.6	8.0	8.5	7.7	7.7	7.9	7.7
		Youth unemployment rate (% labour force 15-24)	22.5	22.0	19.8	20.8	23.7	23.6	22.2	22.3	22.3	21.5
		Long-term unemployment rate (% labour force)	0.8 b	0.9	0.8	0.7	1.0	1.4	1.3	1.3	1.3	1.3
		Share of long-term unemployment (% of total unemployment)	10.7 b	12.8	12.0	11.1	12.6	16.2	17.2	16.7	16.3	17.3
		Youth unemployment ratio (% population aged 15-24)	11.5 b	11.4	10.4	11.0	12.1	12.1	11.8	11.9	12.3	12.0
		Employment rate for low skilled 25-64 (ISCED 0-2)	56.6 b	61.7 b	61.4	60.5	58.7	56.7	58.2	57.3	55.2	55.2 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	77.7 b	79.1 b	80.4	80.7	79.3	78.4	80.2	80.4	80.9	81.1 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	86.7 b	86.8 b	87.9	88.4	87.2	86.8	87.4	88.0	88.3	88.0 b
		Employment rate (Nationals aged 15-64)	71.5 b	71.6	72.7	72.8	71.3	71.1	72.9	73.5	74.1	74.9
		Employment rate (Other EU-28 aged 15-64)		68.3	67.1	69.0	70.5	67.1	66.4	67.1	68.6	69.3
		Employment rate (Other than EU-28 aged 15-64)		41.9	42.3	41.8	39.4	35.2	34.5	36.1	38.4	40.0
		Employment rate (Born in the same country aged 15-64)	72.6 b	73.1	74.3	74.5	72.8	72.8	74.4	75.0	75.9	76.8
Employment rate (Born in other EU-28 aged 15-64)		68.8	69.4	67.8	70.5	69.1	70.1	70.5	72.1	72.1		
Employment rate (Born outside EU-28 aged 15-64)		52.2	53.3	55.1	52.5	50.5	52.9	53.7	53.2	54.4		
Underemployment (% of labour force aged 15-74)				6.8	7.0	6.8	6.6	6.7	6.7	6.4		
Seeking but not available (% of labour force aged 15-74)	2.0 b	2.3	2.2	2.0	2.1	2.2	2.3	2.2	2.3	2.4		
Discouraged, available but not seeking (% of labour force aged 15-74)	2.7 b	2.6	2.4	2.3	3.0	2.9	2.7	2.8	3.0	2.8		

Sweden		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	14.4	16.3	13.9	14.9	15.9	15.0	16.1	15.6	16.4	16.9
		At-risk-of-poverty (% of total population)	9.5	12.3	10.5	12.2	13.3	12.9	14.0	14.1	14.8	15.1
		At-risk-of-poverty threshold (PPS single person)	8648	9068	9545	10680	11295	10987	11284	11799	12310	12368
		Poverty gap (%)	17.9	22.7	20.3	18.0	20.3	19.7	18.5	18.9	19.8	20.4
		Persistent at-risk-of-poverty (% of total population)			2.1	2.6	3.7	4.9	4.1	7.2	7.6	
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	28.7	29.0	27.5	28.5	26.6	26.7	27.9	27.4	27.1	28.5
		Impact of social transfers (excl. pensions) in reducing poverty (%)	66.9	57.6	61.8	57.2	50.0	51.7	49.8	48.5	45.4	47.0
		Severe Material Deprivation (% of total population)	2.3	2.1	2.2	1.4	1.6	1.3	1.2	1.3	1.4	0.7
		Share of people living in low work intensity households (% of people aged 0-59)	7.6	6.8	6.0	5.5	6.4	6.0	6.9	5.7	7.1	6.4
		Gross Household Disposable income adjusted for consumer prices (growth %)	2.3	4.2	5.6	2.1	2.7	1.8	4.0	3.6	1.7	2.2
	Income quintile share ratio S80/S20	3.3	3.6	3.3	3.5	3.7	3.5	3.6	3.7	3.7	3.9	
	GINI coefficient	23.4	24.0	23.4	24.0	24.8	24.1	24.4	24.8	24.9	25.4	
	Early leavers from education and training (% of population aged 18-24)	10.8 b	8.6 b	8.0 b	7.9 b	7.0	6.5	6.6	7.5	7.1	6.7 b	
	NEET: Young people not in employment, education or training (% of total population aged 15-24)	10.5 b	9.3 b	7.5 b	7.8 b	9.6	7.7	7.5	7.8	7.5	7.2	
	Male	At-risk-of-poverty or exclusion (% of male population)	13.4	15.9	13.6	13.7	14.4	13.4	14.2	14.1	14.9	15.6
		At-risk-of-poverty (% of male population)	9.0	12.3	10.5	11.3	12.0	11.4	12.2	12.6	13.4	13.9
		Poverty gap (%)	19.1	26.4	22.7	20.1	22.1	22.9	19.3	23.4	21.4	22.3
		Persistent at-risk-of-poverty (% of male population)			1.9	2.5	3.1	4.4	2.9	6.1	6.9	
		Severe Material Deprivation (% of male population)	1.7	2.1	2.2	1.3	1.5	1.2	1.1	1.3	1.4	0.8
		Share of people living in low work intensity households (% of males aged 0-59)	7.2	6.3	5.6	5.1	6.0	5.8	6.7	5.7	7.1	6.2
Life expectancy at birth (years)		78.5	78.8	79.0	79.2 b	79.4	79.6 b	79.9		80.2		
Healthy life years at birth (years) - men		64.5	67.3 bd	67.7	69.4 b	70.7	67.0 b	67.0		66.9		
Early leavers from education and training (% of males aged 18-24)		11.9 b	10.1 b	9.5 b	9.0 b	8.0	7.5	7.8	8.5	7.9	7.3 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)		11.0 b	9.6 b	7.5 b	7.5 b	9.8	7.8	7.6	7.9	7.7	7.5	
Female	At-risk-of-poverty or exclusion (% of female population)	15.4	16.7	14.2	16.1	17.5	16.7	18.0	17.2	17.9	18.2	
	At-risk-of-poverty (% of female population)	10.0	12.3	10.6	13.0	14.5	14.3	15.7	15.6	16.1	16.3	
	Poverty gap (%)	17.0	20.9	18.3	17.0	17.8	16.8	17.9	16.7	18.2	19.5	
	Persistent at-risk-of-poverty (% of female population)			2.2	2.7	4.3	5.2	5.2	8.2	8.2		
	Severe Material Deprivation (% of female population)	3.0	2.1	2.1	1.6	1.6	1.4	1.2	1.2	1.5	0.7	
	Share of people living in low work intensity households (% of females aged 0-59)	8.0	7.3	6.4	6.0	6.8	6.3	7.1	5.6	7.1	6.5	
	Life expectancy at birth (years)	82.9	83.1	83.1	83.3 b	83.5	83.6 b	83.8		83.8		
	Healthy life years at birth (years) - women	63.2	67.5 bd	66.8	69.0 b	69.6	66.4 b	65.5		66.0		
	Early leavers from education and training (% of females aged 18-24)	9.7 b	7.1 b	6.5 b	6.8 b	6.0	5.5	5.4	6.3	6.2	6.0 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	10.1 b	9.0 b	7.4 b	8.2 b	9.5	7.6	7.5	7.8	7.2	6.8	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	14.9	18.5	14.9	14.6	15.1	14.5	15.9	15.4	16.2	16.7	
	At-risk-of-poverty (% of Children population)	10.2	15.0	12.0	12.9	13.1	13.1	14.5	14.6	15.4	15.1	
	Severe Material Deprivation (% of Children population)	3.2	2.8	3.2	1.7	1.7	1.3	1.3	1.4	1.9	1.1	
	Share of children living in low work intensity households (% of Children population)	6.1	5.5	5.5	4.1	4.3	4.8	5.5	4.9	6.2	5.4	
	Risk of poverty of children in households at work (Working Intensity > 0.2)	7.4	11.6	8.4	9.6	9.9	9.0	10.1	10.2	9.6	11.1	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	71.5	59.0	64.7	62.2	56.9	58.4	54.7	54.7	50.6	55.2	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	15.1	16.5	14.5	14.8	15.6	15.0	15.4	15.1	16.5	17.2	
	At-risk-of-poverty (% of Working age population)	9.1	11.4	10.2	11.2	12.1	11.9	12.5	12.9	14.0	14.7	
	Severe Material Deprivation (% of Working age population)	2.3	2.1	2.2	1.5	1.8	1.5	1.3	1.5	1.6	0.8	
	Very low work intensity (18-59)	8.3	7.4	6.2	6.2	7.2	6.6	7.5	6.0	7.5	6.7	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	5.5	7.4	6.5	6.8	7.0	6.6	6.9	6.7	7.1	7.8	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	67.0	59.3	61.8	59.1	52.2	54.1	52.8	50.2	47.8	47.9	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	11.3	11.9	10.4	15.5	18.0	15.9	18.6	17.9	16.5	16.5	
	At-risk-of-poverty (% of Elderly population)	10.1	11.3	9.9	15.0	17.7	15.5	18.2	17.7	16.4	16.5	
	Severe Material Deprivation (% of Elderly population)	1.3	0.9	0.6	0.8	0.5	0.7	0.6	0.4	0.2	0.2	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.81	0.85	0.81	0.78	0.77	0.79	0.77	0.78	0.81	0.83	
	Aggregate replacement ratio (ratio)	0.60	0.62	0.63	0.62	0.60	0.60	0.58	0.56	0.58	0.60	
Expenditure in social protection (% of GDP)	Sickness/Health care	7.9	7.8	7.5	7.5	7.9	7.4	7.5	7.6	7.8 p		
	Disability	4.6	4.4	4.3	4.3	4.4	4.0	3.8	3.7	3.7 p		
	Old age and survivors	11.9	11.6	11.5	11.9	13.2	12.5	12.5	12.9	13.3 p		
	Family/Children	2.9	3.0	2.9	3.0	3.2	3.1	3.1	3.1	3.2 p		
	Unemployment	1.8	1.6	1.1	0.9	1.3	1.4	1.2	1.2	1.3 p		
	Housing and Social exclusion n.e.c.	1.1	1.1	1.1	1.1	1.2	1.2	1.1	1.2	1.2 p		
	Total (including Admin and Other expenditures) of which: Means tested benefits	31.0	30.1	28.9	29.3	31.9	30.1	29.7	30.4	31.1 p		

## Macro economic indicators: United Kingdom

United Kingdom		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014			
Macro Economic Indicators	Annual percentage growth	Real GDP	3.0	2.7	2.6	-0.5	-4.2	1.5	2.0	1.2	2.2	2.9		
		Total employment	1.1	1.0	0.8	0.8	-1.6	0.2	0.5	1.1	1.2	2.3		
		Labour productivity	1.9	1.6	1.8	-1.3	-2.6	1.3	1.5	0.1	1.0	0.7		
		Annual average hours worked	1.1	-0.3	0.1	-1.3	-0.3	-0.7	0.8	0.9	0.6	0.4		
		Productivity per hour worked	0.8	2.0	1.6	0.0	-2.3	2.0	0.6	-0.8	0.4	0.2		
		Harmonized CPI	2.1	2.3	2.3	3.6	2.2	3.3	4.5	2.8	2.6	1.5		
		Price deflator GDP	2.9	3.0	2.9	2.9	2.0	3.1	2.1	1.6	2.0	1.7		
		Nominal compensation per employee	3.5	5.9	5.4	0.5	2.4	3.2	1.1	1.7	1.4	0.4		
		Real compensation per employee (GDP deflator)	0.6	2.9	2.5	-2.3	0.3	0.1	-1.0	0.1	-0.6	-1.3		
		Real compensation per employee (private consumption deflator)	1.4	3.5	3.0	-3.0	0.3	-0.1	-3.2	-1.1	-1.1	-1.1		
		Nominal unit labour costs	1.6	4.2	3.6	1.9	5.2	1.9	-0.4	1.6	0.4	-0.2		
		Real unit labour costs	-1.2	1.1	0.7	-1.0	3.0	-1.1	-2.4	0.1	-1.6	-2.0		
		Labour Market Indicators	Total	Total population (000)	59156	59795 b	60240	60750	61204	61679	62183	62594	62988	63415
				Population aged 15-64 (000)	39153	39681 b	40043	40325	40537	40765	40980	40971	40994	41073
Total employment (000)	28666			29041 b	29261	29520	29059	29125	29282	29596	29953	30642		
Employment aged 15-64 (000)	28090			28417 b	28622	28827	28319	28290	28404	28651	28917	29531		
Employment rate (% population aged 20-64)	75.2			75.2 b	75.2	75.2	73.9	73.5	73.5	74.1	74.8	76.2		
Employment rate (% population aged 15-64)	71.7			71.6 b	71.5	71.5	69.9	69.4	69.3	69.9	70.5	71.9		
Employment rate (% population aged 15-24)	54.4			53.6 b	52.6	52.0	47.9	46.8	45.8	46.2	46.3	48.1		
Employment rate (% population aged 25-54)	81.2			81.2 b	81.3	81.3	80.1	79.8	80.1	80.5	80.8	82.1		
Employment rate (% population aged 55-64)	56.8			57.3 b	57.4	58.0	57.5	57.2	56.7	58.1	59.8	61.0		
FTE employment rate (% population aged 20-64)	66.5 b			66.5	66.5 b	66.6 b	65.0 b	64.5	64.4	64.8	65.5	66.9		
Self-employed (% total employment)	12.0			12.2 b	12.3	12.3	12.6	13.1	13.3	13.6	13.6	14.0		
Part-time employment (% total employment)	25.2			25.2 b	25.1	25.3	26.1	26.9	26.9	27.3	27.0	26.8		
Fixed-term contracts (% total employees)	5.8			5.8 b	5.8	5.4	5.6	6.1	6.2	6.3	6.2	6.4		
Employment in Services (% total employment)	80.2			80.5	80.7	81.0	81.6	82.1	82.3	82.5	82.8	82.8		
Employment in Industry (% total employment)	18.5			18.3	18.1	17.8	17.1	16.5	16.4	16.2	16.0	15.8		
Employment in Agriculture (% total employment)	1.2			1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.2	1.4		
Activity rate (% population aged 15-64)	75.4			75.7 b	75.5	75.8	75.7	75.4	75.5	76.1	76.4	76.7		
Activity rate (% population aged 15-24)	62.3			62.3 b	61.4	61.2	59.2	58.4	58.2	58.6	58.4	57.9		
Activity rate (% population aged 25-54)	84.1			84.5 b	84.5	84.8	85.0	84.9	85.3	85.5	85.7	86.0		
Activity rate (% population aged 55-64)	58.4			59.1 b	59.3	59.8	60.3	60.0	59.7	61.1	62.8	63.6		
Total unemployment (000)	1441			1640	1624	1757	2369	2459	2559	2534	2441	1995		
Unemployment rate (% labour force)	4.8			5.4	5.3	5.6	7.6	7.8	8.1	7.9	7.6	6.1		
Youth unemployment rate (% labour force 15-24)	12.8			13.9	14.3	15.0	19.1	19.9	21.3	21.2	20.7	16.9		
Long-term unemployment rate (% labour force)	1.0			1.2	1.3	1.4	1.9	2.5	2.7	2.7	2.7	2.2		
Share of long-term unemployment (% of total unemployment)	21.1			22.4 b	23.8	24.2	24.6	32.6	33.5	34.7	36.2	35.8		
Youth unemployment ratio (% population aged 15-24)	8.0			8.7 b	8.8	9.2	11.3	11.6	12.4	12.4	12.1	9.8		
Employment rate for low skilled 25-64 (ISCED 0-2)	64.8 b			64.4	64.2 b	59.4 b	57.8	56.0 b	56.4 b	57.4	57.5	59.6 b		
Employment rate for medium skilled 25-64 (ISCED 3-4)	81.1 b			80.8	81.1 b	79.2 b	77.3	76.7 b	77.6 b	77.3	77.8	78.8 b		
Employment rate for high skilled 25-64 (ISCED 5-8)	88.2 b			88.1	88.0 b	86.0 b	85.4	85.1 b	83.8 b	84.1	84.9	85.3 b		
Employment rate (Nationals aged 15-64)	72.3 b			72.0	71.9 b	71.8 b	70.2	69.7	69.6	70.2	70.9	72.2		
Employment rate (Other EU-28 aged 15-64)				75.0	76.2 b	77.0 b	75.6	74.9	75.7	75.7	76.4	77.9		
Employment rate (Other than EU-28 aged 15-64)				62.1	60.4 b	61.7 b	60.0	60.1	59.7	58.9	59.0	59.9		
Employment rate (Born in the same country aged 15-64)	72.6 b			72.3	72.2 b	72.1 b	70.5	70.0	69.8	70.6	71.1	72.4		
Employment rate (Born in other EU-28 aged 15-64)				75.5	75.9 b	76.8 b	75.5	74.6	75.5	74.7	75.9	77.9		
Employment rate (Born outside EU-28 aged 15-64)				62.9	62.8 b	63.5 b	61.9	62.3	62.0	62.4	63.3	64.9		
Underemployment (% of labour force aged 15-74)						4.1 b	5.0	5.4	5.6	6.0	6.0	5.6		
Seeking but not available (% of labour force aged 15-74)	0.9 b			0.9 b	1.0 b	0.9 b	1.0	1.1	1.0	1.1	1.0	1.1		
Discouraged, available but not seeking (% of labour force aged 15-74)	2.1 b			2.2 b	2.1 b	2.3 b	2.5	2.7	2.5	2.5	2.4	2.1		

United Kingdom		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Male	Total population (000)	28995	29265 b	29493	29762	30001	30264	30538	30755	30981	31209
		Population aged 15-64 (000)	19448	19659 b	19828	19969	20083	20192	20308	20312	20332	20382
		Total employment (000)	15474	15636 b	15790	15890	15483	15527	15618	15809	15957	16318
		Employment aged 15-64 (000)	15116	15247 b	15385	15447	15037	15027	15089	15234	15327	15655
		Employment rate (% population aged 20-64)	82.0	82.1 b	82.2	81.9	79.7	79.3	79.3	80.0	80.4	81.9
		Employment rate (% population aged 15-64)	77.7	77.6 b	77.6	77.4	74.9	74.4	74.3	75.0	75.4	76.8
		Employment rate (% population aged 15-24)	56.0	54.7 b	54.0	53.3	47.9	47.6	46.3	46.4	46.4	48.3
		Employment rate (% population aged 25-54)	87.8	87.9 b	88.2	87.7	85.7	85.4	85.9	86.6	86.7	88.0
		Employment rate (% population aged 55-64)	65.9	65.9 b	66.2	67.2	66.1	65.1	64.1	65.4	66.8	67.8
		FTE employment rate (% population aged 20-64)	79.4 b	79.4	79.4 b	78.9 b	76.6 b	75.9	75.7	76.1	76.5	78.1
		Self-employed (% total employment)	16.0	16.2 b	16.4	16.4	16.7	17.2	17.3	17.7	17.5	17.9
		Part-time employment (% total employment)	10.4	10.5 b	10.7	11.2	11.7	12.6	12.7	13.4	13.3	13.1
		Fixed-term contracts (% total employees)	5.3	5.1 b	5.3	4.8	5.2	5.7	5.8	5.9	5.8	6.0
		Employment in Services (% total employment)	69.9	70.3 b	70.6	71.2	71.5	72.2	72.6	73.0	73.6	73.8
		Employment in Industry (% total employment)	28.3	27.9 b	27.7	27.2	26.6	25.8	25.5	25.2	24.8	24.3
		Employment in Agriculture (% total employment)	1.8	1.8 b	1.7	1.6	1.9	2.0	1.9	1.8	1.7	2.0
		Activity rate (% population aged 15-64)	82.0	82.3 b	82.2	82.4	82.0	81.5	81.5	82.0	82.1	82.2
		Activity rate (% population aged 15-24)	65.3	64.9 b	64.2	64.3	61.3	60.9	60.7	60.9	60.3	59.6
		Activity rate (% population aged 25-54)	91.1	91.7 b	91.6	91.6	91.7	91.4	91.7	92.0	92.0	92.2
		Activity rate (% population aged 55-64)	68.3	68.3 b	68.9	69.8	70.3	69.2	68.4	69.5	70.6	70.9
		Total unemployment (000)	841	943	921	1026	1437	1455	1477	1434	1380	1109
		Unemployment rate (% labour force)	5.2	5.7	5.5	6.1	8.5	8.6	8.7	8.4	8.0	6.4
		Youth unemployment rate (% labour force 15-24)	14.3	15.6	15.8	17.1	21.9	22.0	23.8	23.9	23.0	18.9
		Long-term unemployment rate (% labour force)	1.3	1.5 b	1.6	1.7	2.3	3.2	3.3	3.2	3.2	2.6
		Share of long-term unemployment (% of total unemployment)	25.1	26.9 b	28.5	28.5	26.6	37.2	37.9	38.1	39.7	40.3
		Youth unemployment ratio (% population aged 15-24)	9.3	10.2 b	10.2	11.0	13.4	13.4	14.4	14.6	13.9	11.3
		Employment rate for low skilled 25-64 (ISCED 0-2)	71.0 b	70.7	70.8 b	70.5 b	68.3	66.3 b	66.9 b	67.8	68.0	70.3 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	85.0 b	84.7	85.1 b	85.0 b	82.4	81.8 b	82.4 b	82.8	83.5	84.5 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	89.9 b	90.0	89.9 b	89.7 b	88.8	88.6 b	87.9 b	88.7	88.9	89.4 b
		Employment rate (Nationals aged 15-64)	78.2 b	77.6	77.6 b	77.3 b	74.8	74.4	74.2	74.8	75.3	76.6
		Employment rate (Other EU-28 aged 15-64)		82.5	84.3 b	85.7 b	83.9	81.9	81.8	83.1	83.9	85.5
		Employment rate (Other than EU-28 aged 15-64)		72.9	72.2 b	73.2 b	69.4	70.4	70.2	70.8	68.9	71.7
		Employment rate (Born in the same country aged 15-64)	78.3 b	77.7	77.6 b	77.3 b	74.8	74.4	74.1	74.7	75.2	76.4
Employment rate (Born in other EU-28 aged 15-64)		82.3	84.1 b	85.2 b	82.9	80.7	81.3	82.1	83.3	84.6		
Employment rate (Born outside EU-28 aged 15-64)		74.8	74.7 b	74.6 b	72.1	72.3	72.7	74.1	73.6	76.1		
Underemployment (% of labour force aged 15-74)				2.4 b	3.1	3.5	3.7	4.1	4.2	3.8		
Seeking but not available (% of labour force aged 15-74)	0.7 b	0.7 b	0.8 b	0.7 b	0.8	0.8	0.8	0.9	0.8	0.9		
Discouraged, available but not seeking (% of labour force aged 15-74)	1.7 b	1.8 b	1.8 b	1.9 b	2.2	2.4	2.2	2.1	2.2	1.9		



United Kingdom		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Labour Market Indicators	Female	Total population (000)	30161	30530 b	30747	30988	31204	31415	31645	31839	32006	32205
		Population aged 15-64 (000)	19705	20022 b	20216	20355	20454	20573	20673	20659	20662	20691
		Total employment (000)	13192	13405 b	13471	13630	13576	13598	13664	13788	13995	14323
		Employment aged 15-64 (000)	12974	13170 b	13237	13380	13281	13263	13315	13417	13590	13876
		Employment rate (% population aged 20-64)	68.5	68.6 b	68.4	68.8	68.2	67.9	67.8	68.4	69.3	70.6
		Employment rate (% population aged 15-64)	65.8	65.8 b	65.5	65.7	64.9	64.5	64.4	64.9	65.8	67.1
		Employment rate (% population aged 15-24)	52.7	52.5 b	51.3	50.7	47.9	46.1	45.3	46.0	46.2	47.8
		Employment rate (% population aged 25-54)	74.8	74.6 b	74.6	75.1	74.6	74.3	74.4	74.5	75.1	76.2
		Employment rate (% population aged 55-64)	48.0	49.0 b	48.8	49.0	49.2	49.5	49.5	51.0	53.0	54.4
		FTE employment rate (% population aged 20-64)	54.9 b	54.9	55.0 b	55.5 b	54.7 b	54.3	54.5	54.8	55.8	56.9
		Self-employed (% total employment)	7.2	7.5 b	7.6	7.6	7.9	8.4	8.7	9.0	9.1	9.7
		Part-time employment (% total employment)	42.6	42.4 b	42.1	41.7	42.5	43.3	43.1	43.3	42.7	42.5
		Fixed-term contracts (% total employees)	6.3	6.5 b	6.4	6.0	6.1	6.5	6.5	6.8	6.7	6.9
		Employment in Services (% total employment)	91.7	91.8 b	91.9	91.8	92.8	93.1	93.0	92.8	92.9	92.8
		Employment in Industry (% total employment)	7.6	7.6 b	7.5	7.4	6.6	6.3	6.3	6.4	6.4	6.5
		Employment in Agriculture (% total employment)	0.6	0.6 b	0.6	0.8	0.6	0.7	0.7	0.7	0.7	0.8
		Activity rate (% population aged 15-64)	68.8	69.2 b	68.9	69.3	69.5	69.3	69.6	70.2	70.9	71.3
		Activity rate (% population aged 15-24)	59.2	59.7 b	58.6	58.2	57.1	55.9	55.7	56.3	56.4	56.1
		Activity rate (% population aged 25-54)	77.3	77.6 b	77.5	78.2	78.6	78.6	79.0	79.2	79.5	79.9
		Activity rate (% population aged 55-64)	48.9	50.1 b	49.9	50.2	50.6	51.1	51.3	53.0	55.3	56.4
		Total unemployment (000)	600	697	703	731	931	1004	1083	1100	1061	886
		Unemployment rate (% labour force)	4.3	4.9	5.0	5.1	6.4	6.9	7.4	7.4	7.1	5.8
		Youth unemployment rate (% labour force 15-24)	11.0	12.0	12.5	12.7	16.1	17.6	18.5	18.2	18.1	14.8
		Long-term unemployment rate (% labour force)	0.7	0.8 b	0.9	0.9	1.4	1.8	2.0	2.2	2.2	1.8
		Share of long-term unemployment (% of total unemployment)	15.2	16.2 b	17.6	18.1	21.4	25.9	27.6	30.3	31.7	30.2
		Youth unemployment ratio (% population aged 15-24)	6.5	7.2 b	7.4	7.4	9.2	9.8	10.3	10.3	10.2	8.3
		Employment rate for low skilled 25-64 (ISCED 0-2)	60.0 b	59.4	58.8 b	51.0 b	49.7	48.0 b	48.0 b	48.6	48.2	50.4 b
		Employment rate for medium skilled 25-64 (ISCED 3-4)	76.2 b	76.0	76.1 b	72.6 b	71.6	71.0 b	72.2 b	71.2	71.6	72.5 b
		Employment rate for high skilled 25-64 (ISCED 5-8)	86.4 b	86.1	86.1 b	82.4 b	82.1	81.8 b	79.9 b	79.8	81.3	81.5 b
		Employment rate (Nationals aged 15-64)	66.5 b	66.4	66.2 b	66.5 b	65.6	65.1	65.0	65.7	66.4	67.8
		Employment rate (Other EU-28 aged 15-64)		67.8	67.9 b	68.5 b	67.9	68.3	70.3	69.0	69.8	71.3
		Employment rate (Other than EU-28 aged 15-64)		51.9	48.8 b	50.6 b	50.9	50.2	49.2	47.7	49.7	48.4
		Employment rate (Born in the same country aged 15-64)	67.1 b	67.1	66.9 b	67.0 b	66.2	65.6	65.6	66.4	67.1	68.4
		Employment rate (Born in other EU-28 aged 15-64)		69.1	67.9 b	68.9 b	69.0	69.0	70.5	68.1	69.5	72.0
		Employment rate (Born outside EU-28 aged 15-64)		51.7	51.4 b	52.8 b	52.1	52.7	51.9	51.5	53.6	54.3
		Underemployment (% of labour force aged 15-74)				6.0 b	7.1	7.5	7.8	8.2	8.0	7.7
Seeking but not available (% of labour force aged 15-74)	1.1 b	1.1 b	1.1 b	1.1 b	1.2	1.3	1.2	1.2	1.3	1.3		
Discouraged, available but not seeking (% of labour force aged 15-74)	2.6 b	2.7 b	2.6 b	2.7 b	2.9	3.0	2.8	2.9	2.7	2.4		

United Kingdom		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Social Indicators	All	At-risk-of-poverty or exclusion (% of total population)	24.8	23.7	22.6	23.2	22.0	23.2	22.7	24.1 b	24.8	24.1
		At-risk-of-poverty (% of total population)	19.0	19.0		18.7	17.3	17.1	16.2	16.0 b	15.9	16.8
		At-risk-of-poverty threshold (PPS single person)	10137 b	10578	11267	11126	10091	9521	9466	9868 b	10096	10160
		Poverty gap (%)	22.3	22.8	22.4	21.0	20.6	21.4	21.3	20.9 b	19.6	19.6
		Persistent at-risk-of-poverty (% of total population)				8.5	8.0	7.4	6.9	8.6	7.8	
		At-risk-of-poverty before social transfers excl. pensions (% of total population)	30.6	30.1	29.7	28.9	30.4	31.0	30.5	29.7 b	30.1	29.3
		Impact of social transfers (excl. pensions) in reducing poverty (%)	37.9	36.9		35.3	43.1	44.8	46.9	46.1 b	47.2	42.7
		Severe Material Deprivation (% of total population)	5.3	4.5	4.2	4.5	3.3 u	4.8	5.1	7.8 b	8.3	7.3
		Share of people living in low work intensity households (% of people aged 0-59)	12.9	12.0	10.4	10.4	12.7	13.2	11.5	13.0 b	13.2	12.2
		Gross Household Disposable income adjusted for consumer prices (growth %)	2.0	1.9	2.8	-0.8	2.5	0.6	-2.0	2.6	-0.7	-0.2
	Income quintile share ratio S80/S20	5.9	5.4	5.3	5.6	5.3	5.4	5.3	5.0 b	4.6	5.1	
	GINI coefficient	34.6 b	32.5	32.6	33.9	32.4	32.9	33.0	31.3 b	30.2	31.6	
	Early leavers from education and training (% of population aged 18-24)	11.6	11.3	16.6 b	16.9 b	15.7	14.8 b	14.9 b	13.4	12.3	11.8 b	
	NEET: Young people not in employment, education or training (% of total population aged 15-24)	8.4	8.5	11.9 b	12.1 b	13.2	13.6	14.2	13.9	13.2	11.9	
	Male	At-risk-of-poverty or exclusion (% of male population)	23.6	22.1	21.1	21.7	21.1	22.1	21.4	23.4 b	23.6	23.0
		At-risk-of-poverty (% of male population)	18.6	18.0		17.4	16.7	16.4	14.8	15.8 b	15.4	16.1
		Poverty gap (%)	23.9	22.8	22.9	21.1	20.9	23.0	22.2	21.9 b	19.9	19.7
		Persistent at-risk-of-poverty (% of male population)				7.7	7.6	7.0	6.1	8.1	7.0	
		Severe Material Deprivation (% of male population)	4.9	4.4	3.9	4.3	3.4 u	4.8	5.0	7.5 b	8.0	7.2
		Share of people living in low work intensity households (% of males aged 0-59)	11.9	10.8	9.6	9.7	12.0	12.5	10.8	12.5 b	12.5	11.8
Life expectancy at birth (years)		77.1	77.3	77.6	77.7	78.3	78.6	79.0	79.1	79.2		
Healthy life years at birth (years) - men		64.2 d	64.8	64.6	65.0	65.0	64.9	65.2	64.6	64.4		
Early leavers from education and training (% of males aged 18-24)		12.6	12.3	17.6 b	18.2 b	16.9	15.6 b	16.1 b	14.5	13.6	12.8 b	
NEET: Young people not in employment, education or training (% of males aged 15-24)		7.3	7.5	10.1 b	10.1 b	11.9	12.1	13.1	12.8	12.2	10.7	
Female	At-risk-of-poverty or exclusion (% of female population)	25.9	25.4	24.1	24.7	22.8	24.2	24.1	24.9 b	25.8	25.2	
	At-risk-of-poverty (% of female population)	19.4	19.9		20.0	17.8	17.8	17.6	16.3 b	16.4	17.6	
	Poverty gap (%)	21.5	22.7	21.9	20.9	20.5	19.3	20.5	19.5 b	19.2	19.6	
	Persistent at-risk-of-poverty (% of female population)				9.2	8.3	7.7	7.8	9.1	8.6		
	Severe Material Deprivation (% of female population)	5.6	4.7	4.4	4.8	3.2 u	4.9	5.1	8.1 b	8.6	7.4	
	Share of people living in low work intensity households (% of females aged 0-59)	14.0	13.2	11.1	11.2	13.4	13.9	12.3	13.6 b	14.0	12.6	
	Life expectancy at birth (years)	81.3	81.7	81.8	81.8	82.5	82.6	83.0	82.8	82.9		
	Healthy life years at birth (years) - women	65.5 d	64.9	66.0	66.3	66.1	65.6	65.2	64.5	64.8		
	Early leavers from education and training (% of females aged 18-24)	10.6	10.2	15.6 b	15.6 b	14.5	13.9 b	13.8 b	12.2	11.1	10.7 b	
	NEET: Young people not in employment, education or training (% of females aged 15-24)	9.5	9.6	13.7 b	14.1 b	14.5	15.1	15.4	15.0	14.4	13.1	
Children (0-17)	At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	31.2	30.1	27.6	29.6	27.4	29.7	26.9	31.2 b	32.6	31.3	
	At-risk-of-poverty (% of Children population)	22.9	23.8		24.0	20.7	20.4	18.0	18.0 b	18.9	19.9	
	Severe Material Deprivation (% of Children population)	8.0	7.1	6.3	6.5	4.4 u	7.3	7.1	12.5 b	12.3	10.5	
	Share of children living in low work intensity households (% of Children population)	16.7	15.4	13.8	13.9	16.1	17.1	14.1	16.3 b	16.7	14.7	
	Risk of poverty of children in households at work (Working Intensity > 0.2)	14.4	15.1	14.7	16.2	12.2	12.7	12.1	13.2 b	14.8	15.3	
	Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	44.7	42.8		39.6	51.6	54.2	57.6	57.0 b	57.2	52.7	
Working age (18-64)	At-risk-of-poverty or exclusion (% of Working age population)	22.2	20.7	19.6	19.7	19.8	21.2	21.4	23.7 b	24.1	23.2	
	At-risk-of-poverty (% of Working age population)	16.2	15.5		14.7	14.8	14.9	14.1	15.3 b	14.7	15.5	
	Severe Material Deprivation (% of Working age population)	5.2	4.3	4.0	4.7	3.6 u	5.0	5.5	8.0 b	8.7	7.8	
	Very low work intensity (18-59)	11.5	10.8	9.1	9.2	11.4	11.7	10.6	11.9 b	12.0	11.3	
	In-work at-risk-of poverty rate (% of persons employed 18-64)	8.1	7.7	7.9	8.0	6.3	6.7	7.8	8.7 b	8.2	8.7	
	Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	37.7	38.3		38.0	44.4	45.2	48.0	44.0 b	46.6	41.3	
Elderly (65+)	At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	25.9	27.5	27.9	28.5	23.1	22.3	22.7	17.3 b	18.1	19.3	
	At-risk-of-poverty (% of Elderly population)	24.8	26.1		27.3	22.3	21.3	21.8	16.4 b	16.6	17.9	
	Severe Material Deprivation (% of Elderly population)	1.8	2.1	1.9	1.4	1.2 u	1.3	1.3	1.4 b	2.1	1.9	
	Relative median income of elderly (ratio with median income of people younger than 65)	0.74 b	0.73	0.74	0.74	0.80	0.81	0.81	0.88 b	0.87	0.86	
	Aggregate replacement ratio (ratio)	0.42	0.45	0.44	0.43	0.44	0.48	0.48	0.50 b	0.53	0.50	
Expenditure in social protection (% of GDP)	Sickness/Health care	7.8	7.9	7.7	7.8	8.7	8.8	9.0	9.2 p	9.1 p		
	Disability	2.3	2.4	1.9	2.0	2.1	2.1	2.0	1.9 p	1.9 p		
	Old age and survivors	11.4	11.2	10.6	11.0	12.3	12.2	12.3	12.8 p	12.8 p		
	Family/Children	1.6	1.5	2.6	2.9	3.2	3.3	3.3	3.3 p	3.2 p		
	Unemployment	0.7	0.6	0.5	0.6	0.8	0.7	0.7	0.7 p	0.6 p		
	Housing and Social exclusion n.e.c.	1.6	1.6	2.0	2.2	2.6	2.6	2.5	2.5 p	2.4 p		
	Total (including Admin and Other expenditures)	25.8	25.6	26.4	27.5	30.5	30.1	30.2	30.8 p	30.3 p		
of which: Means tested benefits	3.9	3.9	3.8	4.0	4.5	4.5	4.4	4.5 p	4.3 p			

## 2. LABOUR MARKET INDICATORS

Labour market indicators: Real GDP (yearly growth)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
BE	2.1	2.5	3.4	0.7	-2.3	2.7	1.8	0.2	0.0	1.3
BG	7.2	6.8	7.7	5.6	-4.2	0.1	1.6	0.2	1.3	1.5
CZ	6.4	6.9	5.5	2.7	-4.8	2.3	2.0	-0.9	-0.5	2.0
DK	2.4	3.8	0.8	-0.7	-5.1	1.6	1.2	-0.1	-0.2	1.3
DE	0.7	3.7	3.3	1.1	-5.6	4.1	3.7	0.4	0.3	1.6
EE	9.4	10.3	7.7	-5.4	-14.7	2.5	7.6	5.2	1.6	2.9
IE	6.3	6.3	5.5	-2.2	-5.6	0.4	2.6	0.2	1.4	5.2
EL	0.6	5.7	3.3	-0.3	-4.3	-5.5	-9.1 p	-7.3 p	-3.2 p	0.7 p
ES	3.7	4.2	3.8	1.1	-3.6	0.0	-1.0	-2.6 p	-1.7 p	1.4 p
FR	1.6	2.4	2.4	0.2	-2.9	2.0	2.1	0.2	0.7	0.2
HR	4.2	4.8	5.2	2.1	-7.4	-1.7	-0.3	-2.2	-0.9	-0.4
IT	0.9	2.0	1.5	-1.0	-5.5	1.7	0.6	-2.8	-1.7	-0.4
CY	3.9	4.5	4.9	3.7	-2.0	1.4	0.4	-2.4	-5.9	-2.5 p
LV	10.7	11.9	10.0	-3.6	-14.3	-3.8	6.2	4.0	3.0	2.4
LT	7.7	7.4	11.1	2.6	-14.8	1.6	6.0	3.8	3.5	3.0
LU	3.2	5.1	8.4	-0.8	-5.4	5.7	2.6	-0.8	4.3	4.1
HU	4.4	3.8	0.4	0.8	-6.6	0.7	1.8	-1.7	1.9	3.7
MT	3.8	1.8	4.0	3.3	-2.5	3.5	2.1	2.5	2.6	3.5
NL	2.2	3.5	3.7	1.7	-3.8	1.4	1.7	-1.1	-0.5 p	1.0 p
AT	2.1	3.4	3.6	1.5	-3.8	1.9	2.8	0.8	0.3	0.4
PL	3.5	6.2	7.2	3.9	2.6	3.7	5.0	1.6	1.3	3.3
PT	0.8	1.6	2.5	0.2	-3.0	1.9	-1.8	-4.0	-1.1	0.9 e
RO	4.2	8.1	6.9	8.5	-7.1	-0.8	1.1	0.6	3.5	2.8 p
SI	4.0	5.7	6.9	3.3	-7.8	1.2	0.6	-2.7	-1.1	3.0
SK	6.4	8.5	10.8	5.7	-5.5	5.1	2.8	1.5	1.4	2.5
FI	2.8	4.1	5.2	0.7	-8.3	3.0	2.6	-1.4	-1.1	-0.4
SE	2.8	4.7	3.4	-0.6	-5.2	6.0	2.7	-0.3	1.2	2.3
UK	3.0	2.7	2.6	-0.5	-4.2	1.5	2.0	1.2	2.2	2.9
EU-28	2.0	3.4	3.1	0.5	-4.4	2.1	1.7	-0.5	0.2	1.4
EA-18	1.7	3.2	3.0	0.5	-4.5	2.0	1.6	-0.8	-0.3	0.9

Labour market indicators: Employment rate (% population aged 20-64)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
BE	66.5	66.5	67.7	68.0	67.1	67.6	67.3	67.2	67.2	67.3
BG	61.9	65.1	68.4	70.7	68.8	65.4	62.9 b	63.0	63.5	65.1
CZ	70.7	71.2	72.0	72.4	70.9	70.4	70.9 b	71.5	72.5	73.5
DK	78.0	79.4	79.0	79.7	77.5	75.8	75.7	75.4	75.6	75.9
DE	69.4 b	71.1	72.9	74.0	74.2	74.9	76.5 b	76.9	77.3	77.7
EE	72.0	75.9	76.9	77.1	70.0	66.8	70.6	72.2	73.3	74.3
IE	72.6	73.4	73.8 b	72.2	66.9	64.6	63.8	63.7	65.5	67.0
EL	64.4	65.6	65.8	66.3	65.6	63.8	59.6	55.0	52.9	53.3
ES	67.5 b	69.0	69.7	68.5	64.0	62.8	62.0	59.6	58.6	59.9
FR	69.4	69.4	69.9	70.5	69.5	69.3	69.2	69.4	69.5 b	69.9
HR	60.0	60.6	63.9	64.9	64.2	62.1	59.8	58.1	57.2	59.2
IT	61.5	62.4	62.7	62.9	61.6	61.0	61.0	60.9	59.7	59.9
CY	74.4	75.8	76.8	76.5	75.3 b	75.0	73.4	70.2	67.2	67.6
LV	69.1	73.2	75.2	75.4	66.6	64.3	66.3	68.1	69.7	70.7
LT	70.7	71.3	72.7	72.0	67.0	64.3	66.9	68.5	69.9	71.8
LU	69.0	69.1	69.6 b	68.8	70.4	70.7	70.1	71.4	71.1	72.1
HU	62.2	62.6	62.3	61.5	60.1	59.9	60.4	61.6	63.0	66.7
MT	57.4 b	57.9	58.6	59.2	59.0	60.1	61.6	63.1	64.8	66.3
NL	75.1	76.3	77.8	78.9	78.8	76.8 b	76.4 b	76.6	75.9	75.4
AT	70.4	71.6	72.8	73.8	73.4	73.9	74.2	74.4	74.6	74.2
PL	58.3	60.1	62.7	65.0	64.9	64.3 b	64.5	64.7	64.9	66.5
PT	72.2	72.6	72.5	73.1	71.1	70.3	68.8 b	66.3	65.4	67.6
RO	63.6	64.8	64.4	64.4	63.5	64.8 b	63.8	64.8	64.7	65.7
SI	71.1	71.5	72.4	73.0	71.9	70.3	68.4	68.3	67.2	67.8
SK	64.5	66.0	67.2	68.8	66.4	64.6	65.0 b	65.1	65.0	65.9
FI	73.0	73.9	74.8	75.8	73.5	73.0	73.8	74.0	73.3	73.1
SE	78.1 b	78.8	80.1	80.4	78.3	78.1	79.4	79.4	79.8	80.0
UK	75.2	75.2 b	75.2	75.2	73.9	73.5	73.5	74.1	74.8	76.2
EU-28	67.9	68.9	69.8	70.3	69.0	68.6	68.6	68.4	68.4	69.2
EA-18	67.9	68.9	69.9	70.2	68.8	68.4	68.4	68.0	67.7	68.2

## Labour market indicators: Activity rate (% population aged 15-64)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
BE	66.7	66.5	67.1	67.1	66.9	67.7	66.7	66.9	67.5	67.7
BG	62.1	64.5	66.3	67.8	67.2	66.5	65.9 b	67.1	68.4	69.0
CZ	70.4	70.3	69.9	69.7	70.1	70.2	70.5 b	71.6	72.9	73.5
DK	79.8	80.6	80.1	80.7	80.2	79.4	79.3	78.6	78.1	78.1
DE	73.8 b	74.9	75.6	75.9	76.3	76.6	77.3 b	77.2	77.6	77.7
EE	70.7	72.8	73.2	74.2	74.0	73.9	74.7	74.8	75.1	75.2
IE	70.8	71.9	72.6 b	72.1	70.6	69.4	69.2	69.2	69.8	69.8
EL	66.4	66.7	66.5	66.7	67.4	67.8	67.3	67.5	67.5	67.4
ES	70.0 b	71.1	71.8	72.7	73.1	73.5	73.9	74.3	74.3	74.2
FR	69.7	69.6	69.7	69.9	70.3	70.3	70.1	70.7	71.1 b	71.4
HR	63.3	62.8	65.7	65.8	65.6	65.1	64.1	63.9	63.7	66.1
IT	62.5	62.6	62.4	62.9	62.3	62.0	62.1	63.5	63.4	63.9
CY	72.4	73.0	73.9	73.6	73.0 b	73.6	73.5	73.5	73.6	74.3
LV	69.1	71.0	72.6	74.2	73.5	73.0	72.8	74.4	74.0	74.6
LT	68.7	67.6	67.9	68.4	69.6	70.2	71.4	71.8	72.4	73.7
LU	66.6	66.7	66.9 b	66.8	68.7	68.2	67.9	69.4	69.9	70.8
HU	61.3	62.0	61.6	61.2	61.2	61.9	62.4	63.7	64.7	67.0
MT	57.6 b	57.9	58.8	59.1	59.4	60.4	61.8	63.1	65.0	66.3
NL	76.9	77.4	78.5	79.3	79.7	78.2 b	78.1 b	79.0	79.4	79.0
AT	71.4	72.4	73.5	73.9	74.3	74.4	74.6	75.1	75.5	75.4
PL	64.4	63.4	63.2	63.8	64.7	65.3 b	65.7	66.5	67.0	67.9
PT	73.2	73.6	73.9	73.9	73.4	73.7	73.6 b	73.4	73.0	73.2
RO	62.3	63.6	63.0	62.9	63.1	64.9 b	64.1	64.8	64.9	65.7
SI	70.7	70.9	71.3	71.8	71.8	71.5	70.3	70.4	70.5	70.9
SK	68.9	68.6	68.3	68.8	68.4	68.7	68.7 b	69.4	69.9	70.3
FI	74.7	75.2	75.6	76.0	75.0	74.5	74.9	75.2	75.2	75.4
SE	78.7 b	78.8	79.1	79.3	78.9	79.1	79.9	80.3	81.1	81.5
UK	75.4	75.7 b	75.5	75.8	75.7	75.4	75.5	76.1	76.4	76.7
EU-28	69.7	70.1	70.3	70.7	70.8	71.0	71.1	71.7	72.0	72.3
EA-18	69.9	70.4	70.8	71.2	71.3	71.3	71.4	72.0	72.2	72.3

## Labour market indicators: Unemployment rate (% labour force)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
BE	8.5	8.3	7.5	7.0	7.9	8.3	7.2	7.6	8.4	8.5
BG	10.1	9.0	6.9	5.6	6.8	10.3 i	11.3	12.3	13.0	11.4
CZ	7.9	7.1	5.3	4.4	6.7	7.3	6.7	7.0	7.0	6.1
DK	4.8	3.9 i	3.8	3.4	6.0	7.5	7.6	7.5	7.0	6.6
DE	11.2 i	10.1	8.5	7.4	7.6	7.0	5.8	5.4	5.2	5.0
EE	8.0	5.9	4.6	5.5 i	13.5	16.7	12.3	10.0	8.6	7.4
IE	4.4	4.5	4.7	6.4	12.0	13.9	14.7	14.7	13.1	11.3
EL	10.0	9.0	8.4	7.8	9.6	12.7	17.9	24.5	27.5	26.5
ES	9.2	8.5	8.2	11.3	17.9	19.9	21.4	24.8	26.1	24.5
FR	8.9	8.8	8.0	7.4	9.1	9.3	9.2	9.8	10.3	10.3
HR	13.0	11.6 i	9.9	8.6	9.2	11.7	13.7	16.0	17.3	17.3
IT	7.7	6.8	6.1	6.7	7.7	8.4	8.4	10.7	12.1	12.7
CY	5.3	4.6	3.9	3.7	5.4	6.3	7.9	11.9	15.9	16.1
LV	10.0	7.0	6.1	7.7	17.5	19.5	16.2	15.0	11.9	10.8
LT	8.3	5.8	4.3	5.8	13.8	17.8	15.4	13.4	11.8	10.7
LU	4.6	4.6 i	4.2	4.9	5.1	4.6	4.8	5.1	5.9	6.0
HU	7.2	7.5	7.4	7.8 i	10.0	11.2	11.0	11.0	10.2	7.7
MT	6.9	6.8	6.5	6.0	6.9	6.9	6.4	6.3	6.4	5.9
NL	5.9	5.0	4.2	3.7	4.4	5.0	5.0	5.8	7.3	7.4
AT	5.6	5.3	4.9	4.1	5.3	4.8	4.6	4.9	5.4	5.6
PL	17.9	13.9	9.6	7.1	8.1 i	9.7	9.7	10.1	10.3	9.0
PT	8.8 e	8.9 e	9.1 e	8.8 e	10.7 e	12.0 e	12.9	15.8	16.4	14.1
RO	7.1	7.2	6.4	5.6	6.5	7.0	7.2	6.8	7.1	6.8
SI	6.5	6.0	4.9	4.4	5.9	7.3	8.2	8.9	10.1	9.7
SK	16.4	13.5	11.2	9.6	12.1	14.5	13.7 i	14.0	14.2	13.2
FI	8.4	7.7	6.9	6.4	8.2	8.4	7.8	7.7	8.2	8.7
SE	7.7	7.1	6.1	6.2	8.3	8.6	7.8	8.0	8.0	7.9
UK	4.8	5.4	5.3	5.6	7.6	7.8	8.1	7.9	7.6	6.1
EU-28	9.0	8.2	7.2	7.0	9.0	9.6	9.7	10.5	10.9	10.2
EA-18	9.1	8.4	7.5	7.6	9.6	10.1	10.1	11.4	12.0	11.6

## Labour market indicators: Youth unemployment rate (% labour force 15-24)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
BE	21.5	20.5	18.8	18.0	21.9	22.4	18.7	19.8	23.7	23.2
BG	21.0	18.3	14.1	11.9	15.1	21.9 i	25.0	28.1	28.4	23.8
CZ	19.3	17.5	10.7	9.9	16.6	18.3	18.1	19.5	18.9	15.9
DK	8.6	7.7 i	7.5	8.0	11.8	13.9	14.2	14.1	13.0	12.6
DE	15.4 i	13.6	11.8	10.4	11.1	9.8	8.5	8.0	7.8	7.7
EE	15.1	12.1	10.1	12.0 i	27.4	32.9	22.4	20.9	18.7	15.0
IE	8.7	8.7	9.1	13.3	24.0	27.6	29.1	30.4	26.8	23.9
EL	25.8	25.0	22.7	21.9	25.7	33.0	44.7	55.3	58.3	52.4
ES	19.6	17.9	18.1	24.5	37.7	41.5	46.2	52.9	55.5	53.2
FR	21.0	22.0	19.5	19.0	23.6	23.3	22.7	24.4	24.9	24.2
HR	31.9	28.8 i	25.2	23.7	25.2	32.4	36.7	42.1	50.0	45.5
IT	24.1	21.8	20.4	21.2	25.3	27.9	29.2	35.3	40.0	42.7
CY	13.9	10.0	10.2	9.0	13.8	16.6	22.4	27.7	38.9	36.0
LV	15.1	13.6	10.6	13.6	33.3	36.2	31.0	28.5	23.2	19.6
LT	15.8	10.0	8.4	13.3	29.6	35.7	32.6	26.7	21.9	19.3
LU	14.6	15.5 i	15.6	17.3	16.5	15.8	16.4	18.0	16.9	22.3
HU	19.4	19.1	18.1	19.5 i	26.4	26.4	26.0	28.2	26.6	20.4
MT	16.1	15.5	13.5	11.7	14.5	13.2	13.3	14.1	13.0	11.8
NL	11.8	10.0	9.4	8.6	10.2	11.1	10.0	11.7	13.2	12.7
AT	11.0	9.8	9.4	8.5	10.7	9.5	8.9	9.4	9.7	10.3
PL	36.9	29.8	21.6	17.2	20.6 i	23.7	25.8	26.5	27.3	23.9
PT	20.8 e	21.2 e	21.4 e	21.6 e	25.3 e	28.2 e	30.2	38.0	38.1	34.7
RO	19.1	20.2	19.3	17.6	20.0	22.1	23.9	22.6	23.7	24.0
SI	15.9	13.9	10.1	10.4	13.6	14.7	15.7	20.6	21.6	20.2
SK	30.4	27.0	20.6	19.3	27.6	33.9	33.7 i	34.0	33.7	29.7
FI	20.1	18.7	16.5	16.5	21.5	21.4	20.1	19.0	19.9	20.5
SE	22.6	21.5	19.2	20.2	25.0	24.8	22.8	23.7	23.6	22.9
UK	12.8	13.9	14.3	15.0	19.1	19.9	21.3	21.2	20.7	16.9
EU-28	19.0	17.7	15.9	15.9	20.3	21.4	21.7	23.3	23.7	22.2
EA-18	18.5	17.2	15.6	16.1	20.6	21.3	21.2	23.5	24.4	23.8

## Labour market indicators: Long-term unemployment rate (% labour force)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
BE	4.4	4.2	3.8	3.3	3.5	4.1	3.5	3.4	3.9	4.3
BG	6.1	5.0	4.1	2.9	3.0	4.8	6.3	6.8	7.4	6.9
CZ	4.2	3.9	2.8	2.2	2.0	3.0	2.7	3.0	3.0	2.7
DK	1.1	0.8	0.6	0.5	0.6	1.5	1.8	2.1	1.8	1.7
DE	5.9 b	5.7	4.8	3.9	3.5	3.3	2.8	2.4	2.3	2.2
EE	4.4	2.9	2.3	1.7	3.7	7.6	7.1	5.5	3.8	3.3
IE	1.5	1.4	1.4	1.7	3.5	6.8	8.7	9.1	7.9	6.7
EL	5.2	4.9	4.2	3.7	3.9	5.7	8.8	14.5	18.5	19.5
ES	2.2 b	1.8	1.7	2.0	4.3	7.3	8.9	11.0	13.0	12.9
FR	3.6	3.7	3.2	2.8	3.2	3.7	3.8	3.9	4.2	4.4
HR	7.6	7.0	6.0	5.3	5.1	6.6	8.4	10.2	11.0	10.1
IT	3.8	3.4	2.9	3.1	3.5	4.1	4.3	5.7	6.9	7.8
CY	1.3	0.9	0.7	0.5	0.6	1.3	1.6	3.6	6.1	7.7
LV	4.5	2.4	1.6	1.9	4.5	8.8	8.8	7.8	5.8	4.7
LT	4.4 e	2.6 e	1.4 e	1.3 e	3.3 e	7.4 e	8.0	6.6	5.1	4.8
LU	1.2	1.4	1.2	1.6	1.2	1.3	1.4	1.6	1.8	1.7
HU	3.2	3.4	3.4	3.6	4.2	5.5	5.2	5.0	4.9	3.7
MT	3.3	2.7	2.7	2.5	2.9	3.1	3.1	3.1	2.9	2.7
NL	2.4	2.2	1.6	1.3	1.1	1.4 b	1.7	2.0	2.6	3.0
AT	1.4	1.5	1.3	1.0	1.2	1.2	1.2	1.2	1.3	1.5
PL	10.3	7.8	4.9	2.4	2.5	3.0	3.6	4.1	4.4	3.8
PT	4.2 e	4.5 e	4.3 e	4.1 e	4.7 e	6.3 e	6.2 b	7.7	9.3	8.4
RO	4.0	4.1	3.2	2.3	2.1	2.4	2.9	3.0	3.2	2.8
SI	3.1	2.9	2.2	1.9	1.8	3.2	3.6	4.3	5.2	5.3
SK	11.8	10.3	8.3	6.7	6.5	9.3	9.3	9.4	10.0	9.3
FI	2.2	1.9	1.6	1.2	1.4	2.0	1.7	1.6	1.7	1.9
SE	1.0 b	1.0	0.9	0.8	1.1	1.6	1.5	1.5	1.5	1.5
UK	1.0	1.2	1.3	1.4	1.9	2.5	2.7	2.7	2.7	2.2
EU-28	4.1	3.7	3.1	2.6	3.0	3.8	4.1	4.7	5.1	5.1
EA-18	4.1	3.9	3.3	3.0	3.4	4.3	4.6	5.3	6.0	6.1



## Labour market indicators: At-risk-of-poverty or exclusion (% of total population)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
BE	22.6	21.5	21.6	20.8	20.2	20.8	21.0	21.6	20.8	21.2
BG		61.3	60.7	44.8 b	46.2	49.2	49.1	49.3	48.0	40.1 b
CZ	19.6	18.0	15.8	15.3	14.0	14.4	15.3	15.4	14.6	14.8
DK	17.2	16.7	16.8	16.3	17.6	18.3	18.9	19.0	18.3	17.8 b
DE	18.4	20.2	20.6	20.1	20.0	19.7	19.9	19.6	20.3	20.6
EE	25.9	22.0	22.0	21.8	23.4	21.7	23.1	23.4	23.5	
IE	25.0	23.3	23.1	23.7	25.7	27.3	29.4	30.0	29.5	
EL	29.4	29.3	28.3	28.1	27.6	27.7	31.0	34.6	35.7	36.0
ES	24.3	24.0	23.3	23.8	24.7 b	26.1	26.7	27.2	27.3	29.2
FR	18.9	18.8	19.0	18.5 b	18.5	19.2	19.3	19.1	18.1	18.6
HR						31.1	32.6	32.6	29.9	29.3
IT	25.6	25.9	26.0	25.5	24.9	25.0	28.1	29.9	28.5	28.1 p
CY	25.3	25.4	25.2	23.3 b	23.5	24.6	24.6	27.1	27.8	27.4
LV	46.3	42.2	35.1	34.2 b	37.9	38.2	40.1	36.2	35.1	32.7
LT	41.0	35.9	28.7	28.3	29.6	34.0	33.1	32.5	30.8	27.3
LU	17.3	16.5	15.9	15.5	17.8	17.1	16.8	18.4	19.0	19.0
HU	32.1	31.4	29.4	28.2	29.6	29.9	31.0	32.4	33.5	31.1
MT	20.5	19.5	19.7	20.1	20.3	21.2	22.1	23.1	24.0	23.8
NL	16.7	16.0	15.7	14.9	15.1	15.1	15.7	15.0	15.9	16.5
AT	17.4	17.8	16.7	20.6 b	19.1	18.9	19.2	18.5	18.8	19.2
PL	45.3	39.5	34.4	30.5 b	27.8	27.8	27.2	26.7	25.8	24.7
PT	26.1	25.0	25.0	26.0	24.9	25.3	24.4	25.3	27.5	27.5
RO			45.9	44.2	43.1	41.4	40.3	41.7	40.4	40.2
SI	18.5	17.1	17.1	18.5	17.1	18.3	19.3	19.6	20.4	20.4
SK	32.0	26.7	21.3	20.6	19.6	20.6	20.6	20.5	19.8	18.4
FI	17.2	17.1	17.4	17.4	16.9	16.9	17.9	17.2	16.0	17.3
SE	14.4	16.3	13.9	14.9	15.9	15.0	16.1	15.6	16.4	16.9
UK	24.8	23.7	22.6	23.2	22.0	23.2	22.7	24.1 b	24.8	24.1
EU-28						23.7	24.3	24.7	24.5	24.4 e
EA-18	21.7	22.0	21.8	21.7	21.5	21.8	22.9	23.2	23.1	23.4 e

## Labour market indicators: At-risk-of-poverty (% of total population)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
BE	14.8	14.7	15.2	14.7	14.6	14.6	15.3	15.3	15.1	15.5
BG		18.4	22.0	21.4	21.8	20.7	22.2	21.2	21.0	21.8
CZ	10.4	9.9	9.6	9.0	8.6	9.0	9.8	9.6	8.6	9.7
DK	11.8	11.7	11.7	11.8	13.1	13.3	13.0	13.1	11.9	11.9 b
DE	12.2	12.5	15.2	15.2	15.5	15.6	15.8	16.1	16.1	16.7
EE	18.3	18.3	19.4	19.5	19.7	15.8	17.5	17.5	18.6	
IE	19.7	18.5	17.2	15.5	15.0	15.2	15.2	15.7	14.1	
EL	19.6	20.5	20.3	20.1	19.7	20.1	21.4	23.1	23.1	22.1
ES	20.1	20.3	19.7	19.8	20.4 b	20.7	20.6	20.8	20.4	22.2
FR	13.0	13.2	13.1	12.5 b	12.9	13.3	14.0	14.1	13.7	13.3
HR						20.6 b	20.9	20.4	19.5	19.4
IT	19.2	19.3	19.5	18.9	18.4	18.7	19.8	19.5	19.3	19.6 p
CY	16.1	15.6	15.5	15.9 b	15.8	15.6	14.8	14.7	15.3	14.4
LV	19.4	23.5	21.2	25.9	26.4	20.9	19.0	19.2	19.4	21.2
LT	20.5	20.0	19.1	20.9	20.3	20.5	19.2	18.6	20.6	19.1
LU	13.7	14.1	13.5	13.4	14.9	14.5	13.6	15.1	15.9	16.4
HU	13.5	15.9	12.3	12.4	12.4	12.3	13.8	14.0	14.3	14.6
MT	14.3	14.2	15.1	15.3	14.9	15.5	15.6	15.1	15.7	15.9
NL	10.7	9.7	10.2	10.5	11.1	10.3	11.0	10.1	10.4	11.6
AT	12.6	12.6	12.0	15.2 b	14.5	14.7	14.5	14.4	14.4	14.1
PL	20.5	19.1	17.3	16.9	17.1	17.6	17.7	17.1	17.3	17.0
PT	19.4	18.5	18.1	18.5	17.9	17.9	18.0	17.9	18.7	19.5
RO			24.8	23.4	22.4	21.1	22.2	22.6	22.4	25.4
SI	12.2	11.6		12.3	11.3	12.7	13.6	13.5	14.5	14.5
SK	13.3	11.6		10.9	11.0	12.0	13.0	13.2	12.8	12.6
FI	11.7	12.6	13.0	13.6	13.8	13.1	13.7	13.2	11.8	12.8
SE	9.5	12.3	10.5	12.2	13.3	12.9	14.0	14.1	14.8	15.1
UK	19.0	19.0		18.7	17.3	17.1	16.2	16.0 b	15.9	16.8
EU-28						16.4	16.8	16.8	16.6	17.2 e
EA-18	15.3	15.6	16.3 e	16.1	16.1	16.2	16.7	16.8	16.6	17.1 e

## Labour market indicators: Severe Material Deprivation (% of total population)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
BE	6.5	6.4	5.7	5.6	5.2	5.9	5.7	6.3	5.1	5.9
BG		57.7	57.6	41.2	41.9	45.7	43.6	44.1	43.0	33.1 b
CZ	11.8	9.6	7.4	6.8	6.1	6.2	6.1	6.6	6.6	6.7
DK	3.2	3.1	3.3	2.0	2.3	2.7	2.6	2.8	3.6	3.2
DE	4.6	5.1	4.8	5.5	5.4	4.5	5.3	4.9	5.4	5.0
EE	12.4	7.0	5.6	4.9	6.2	9.0	8.7	9.4	7.6	
IE	5.1	4.8	4.5	5.5	6.1	5.7	7.8	9.8	9.9	
EL	12.8	11.5	11.5	11.2	11.0	11.6	15.2	19.5	20.3	21.5
ES	4.1	4.1	3.5	3.6	4.5 b	4.9	4.5	5.8	6.2	7.1
FR	5.3	5.0	4.7	5.4	5.6	5.8	5.2	5.3	4.9	4.8
HR						14.3	15.2	15.9	14.7	13.9
IT	6.8	6.4	7.0	7.5	7.3	7.4	11.1	14.5	12.3	11.5 p
CY	12.2	12.6	13.3	9.1 b	9.5	11.2	11.7	15.0	16.1	15.3
LV	39.3	31.3	24.0	19.3	22.1	27.6	31.0	25.6	24.0	19.2
LT	32.6	25.3	16.6	12.5	15.6	19.9	19.0	19.8	16.0	13.6
LU	1.8	1.1	0.8	0.7	1.1	0.5	1.2	1.3	1.8	1.4
HU	22.9	20.9	19.9	17.9	20.3	21.6	23.1	25.7	26.8	23.9
MT	5.4	3.9	4.4	4.3	5.0	6.5	6.6	9.2	9.5	10.2
NL	2.5	2.3	1.7	1.5	1.4	2.2	2.5	2.3	2.5	3.2
AT	3.5	3.6	3.3	5.9 b	4.6	4.3	4.0	4.0	4.2	4.0
PL	33.8	27.6	22.3	17.7	15.0	14.2	13.0	13.5	11.9	10.4
PT	9.3	9.1	9.6	9.7	9.1	9.0	8.3	8.6	10.9	10.6
RO			36.5	32.9	32.2	31.0	29.4	29.9	28.5	26.3
SI	5.1	5.1	5.1	6.7	6.1	5.9	6.1	6.6	6.7	6.6
SK	22.1	18.2	13.7	11.8	11.1	11.4	10.6	10.5	10.2	9.9
FI	3.8	3.3	3.6	3.5	2.8	2.8	3.2	2.9	2.5	2.8
SE	2.3	2.1	2.2	1.4	1.6	1.3	1.2	1.3	1.4	0.7
UK	5.3	4.5	4.2	4.5	3.3 u	4.8	5.1	7.8 b	8.3	7.3
EU-28						8.4	8.9	9.9	9.6	9.0 e
EA-18	5.9	5.7	5.5	5.9	5.9	5.9	6.8	7.7	7.5	7.3 e

## Labour market indicators: Share of people living in low work intensity households (% of people aged 0-59)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
BE	15.1	14.3	13.8	11.7	12.3	12.7	13.8	13.9	14.0	14.6
BG		14.7	16.0	8.1 b	6.9	8.0	11.0	12.5	13.0	12.1
CZ	8.9	8.9	8.6	7.2	6.0	6.4	6.6	6.8	6.9	7.6
DK	10.1	9.6	10.1	8.5	8.8	10.6	11.7	11.3	11.9	12.1
DE	12.0	13.6	11.5	11.7	10.9	11.2	11.2	9.9	9.9	10.0
EE	9.5	7.1	6.2	5.3	5.6	9.0	10.0	9.1	8.4	
IE	14.7	12.9	14.3	13.7	20.0	22.9	24.2	23.4	23.9	
EL	7.6	8.1	8.1	7.5	6.6	7.6	12.0	14.2	18.2	17.2
ES	6.9	6.4	6.8	6.6	7.6 b	10.8	13.4	14.3	15.7	17.1
FR	8.7	9.1	9.6	8.8	8.4	9.9	9.4	8.4	8.1	9.7
HR						13.9	15.9	16.8	14.8	14.7
IT	11.0	11.3	10.2	10.4	9.2	10.6	10.5	10.6	11.3	12.0 p
CY	4.4	3.8	3.7	4.5 b	4.0	4.9	4.9	6.5	7.9	9.7
LV	8.3	7.1	6.2	5.4	7.4	12.6	12.6	11.7	10.0	9.6
LT	9.6	8.3	6.4	6.1	7.2	9.5	12.7	11.4	11.0	8.8
LU	5.7	5.2	5.0	4.7	6.3	5.5	5.8	6.1	6.6	6.1
HU	9.5	13.1	11.3	12.0	11.3	11.9	12.2	12.8	12.6	12.2
MT	9.6	9.7	9.6	8.6	9.2	9.2	8.9	9.0	9.0	9.8
NL	9.8	10.9	9.7	8.2	8.5	8.4	8.9	8.9	9.3	10.2
AT	7.3	8.1	8.2	7.4 b	7.1	7.8	8.6	7.7	7.8	9.1
PL	14.3	12.4	10.1	8.0	6.9	7.3	6.9	6.9	7.2	7.3
PT	6.0	6.6	7.2	6.3	7.0	8.6	8.3	10.1	12.2	12.2
RO			8.4	8.3	7.7	6.9	6.7	7.4	6.4	6.4
SI	8.6	6.9	7.3	6.7	5.6	7.0	7.6	7.5	8.0	8.7
SK	6.6	6.2	6.4	5.2	5.6	7.9	7.7	7.2	7.6	7.1
FI	10.0	9.1	8.8	7.5	8.4	9.3	10.0	9.3	9.0	10.0
SE	7.6	6.8	6.0	5.5	6.4	6.0	6.9	5.7	7.1	6.4
UK	12.9	12.0	10.4	10.4	12.7	13.2	11.5	13.0 b	13.2	12.2
EU-28						10.2	10.4	10.5	10.8	11.0 e
EA-18	9.7	10.2	9.7	9.2	9.0	10.4	10.9	10.6	11.1	11.7 e

## Labour market indicators: Income quintile share ratio S80/S20

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
BE	4.0	4.2	3.9	4.1	3.9	3.9	3.9	4.0	3.8	3.8
BG		5.1	7.0	6.5	5.9	5.9	6.5	6.1	6.6	6.8
CZ	3.7	3.5	3.5	3.4	3.5	3.5	3.5	3.5	3.4	3.5
DK	3.5	3.4	3.7	3.6	4.6	4.4 b	4.4	4.5	4.0	4.1 b
DE	3.8	4.1	4.9	4.8	4.5	4.5	4.5	4.3	4.6	5.1
EE	5.9	5.5	5.5	5.0	5.0	5.0	5.3	5.4	5.5	
IE	5.0	4.9	4.8	4.4	4.2	4.7	4.6	4.7	4.5	
EL	5.8	6.1	6.0	5.9	5.8	5.6	6.0	6.6	6.6	6.5
ES	5.5	5.5	5.5	5.6	5.9 b	6.2	6.3	6.5	6.3	6.8
FR	4.0	4.0	3.9	4.4 b	4.4	4.4	4.6	4.5	4.5	4.3
HR						5.5 b	5.6	5.4	5.3	5.1
IT	5.6	5.4	5.4	5.2	5.3	5.4	5.7	5.6	5.8	5.9 p
CY	4.3	4.3	4.4	4.3 b	4.4	4.5	4.3	4.7	4.9	5.4
LV	6.7	7.8	6.4	7.3	7.4	6.8	6.5	6.5	6.3	6.5
LT	6.9	6.3	5.9	6.1	6.4	7.3	5.8	5.3	6.1	6.1
LU	3.9	4.2	4.0	4.1	4.3	4.1	4.0	4.1	4.6	4.4
HU	4.0	5.5	3.7	3.6	3.5	3.4	3.9	4.0	4.2	4.2
MT	3.9	4.0	3.9	4.3	4.0	4.3	4.0	3.9	4.1	4.0
NL	4.0	3.8	4.0	4.0	4.0	3.7	3.8	3.6	3.6	3.8
AT	3.8	3.7	3.8	4.2 b	4.2	4.3	4.1	4.2	4.1	4.1
PL	6.6	5.6	5.3	5.1	5.0	5.0	5.0	4.9	4.9	4.9
PT	7.0	6.7	6.5	6.1	6.0	5.6	5.7	5.8	6.0	6.2
RO			7.8	7.0	6.7	6.0	6.2	6.3	6.6	7.2
SI	3.4	3.4	3.3	3.4	3.2	3.4	3.5	3.4	3.6	3.7
SK	3.9	4.1	3.5	3.4	3.6	3.8	3.8	3.7	3.6	3.9
FI	3.6	3.6	3.7	3.8	3.7	3.6	3.7	3.7	3.6	3.6
SE	3.3	3.6	3.3	3.5	3.7	3.5	3.6	3.7	3.7	3.9
UK	5.9	5.4	5.3	5.6	5.3	5.4	5.3	5.0 b	4.6	5.1
EU-28						4.9	5.0	5.0	5.0	5.2
EA-18	4.6	4.7	4.8	4.9	4.8	4.8	5.0	4.9	5.0	5.2

## Labour market indicators: NEET: Young people not in employment, education or training (% of total population aged 15-24)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
BE	13.0	11.2 b	11.2	10.1	11.1	10.9	11.8 b	12.3	12.7	12.0
BG	25.1	22.2 b	19.1	17.4 b	19.5	21.8	21.8 b	21.5	21.6	20.2
CZ	13.3	9.2 b	6.9	6.7	8.5	8.8	8.3 b	8.9	9.1 b	8.1
DK	4.3	3.6	4.3 b	4.3	5.4	6.0	6.3	6.6	6.0	5.8
DE	10.9 b	9.6	8.9	8.4 b	8.8	8.3	7.5 b	7.1	6.3	6.4
EE	10.6	8.8	8.9	8.7	14.5 b	14.0	11.6	12.2	11.3	11.7
IE	10.9	10.1 b	10.8 b	15.0	18.6 b	19.2	18.8	18.7	16.1	15.2
EL	15.9	12.0 b	11.3	11.4 b	12.4 b	14.8	17.4	20.2	20.4	19.1
ES	13.0 b	11.8 b	12.0	14.3	18.1	17.8	18.2	18.6	18.6	17.1 b
FR	11.2	11.3	10.7	10.5	12.7	12.7	12.3	12.5	11.2 b	11.4 b
HR	16.7 b	14.2 b	12.9	11.6	13.4	15.7	16.2	16.6	19.6	19.3
IT	17.1	16.8 b	16.1	16.6	17.6	19.0	19.7	21.0	22.2	22.1
CY	19.5	10.7 b	9.0	9.7	9.9 b	11.7	14.6	16.0	18.7	17.0
LV	10.6	11.5 b	11.9	11.8	17.5	17.8	16.0	14.9	13.0	12.0
LT	8.8	8.3 b	7.1	8.8	12.1	13.2	11.8	11.2	11.1	9.9
LU	5.5	6.7 b	5.7 b	6.2	5.8 b	5.1	4.7	5.9	5.0	6.3
HU	12.9	12.4 b	11.5	11.5	13.6	12.6	13.2	14.8	15.5	13.6
MT	11.9 b	10.3 b	11.5	8.3	9.9	9.5	10.2	10.6	9.9	10.5
NL	5.3	4.0 b	3.5	3.4	4.1	4.3 b	4.3	4.9	5.6 b	5.5
AT	8.6	7.8 b	7.4 b	7.4	8.2	7.4	7.3	6.8	7.3	7.7
PL	13.9	12.6	10.6	9.0 b	10.1	10.8 b	11.5	11.8	12.2 b	12.0
PT	11.1	10.6 b	11.2	10.2	11.2	11.4	12.6 b	13.9	14.1	12.3
RO	16.8	14.8 b	13.3	11.6	13.9	16.6 b	17.5	16.8	17.0	17.0
SI	8.9	8.5 b	6.7	6.5	7.5	7.1	7.1	9.3	9.2	9.4
SK	15.8	14.4 b	12.5	11.1	12.5	14.1	13.8 b	13.8	13.7	12.8
FI	7.8	7.7	7.0	7.8	9.9	9.0	8.4	8.6	9.3	10.2
SE	10.5 b	9.3 b	7.5 b	7.8 b	9.6	7.7	7.5	7.8	7.5	7.2
UK	8.4	8.5	11.9 b	12.1 b	13.2	13.6	14.2	13.9	13.2	11.9
EU-28	12.7	11.7 b	10.9	10.9	12.4	12.8	12.9	13.2	13.0	12.5
EA-18	12.1	11.2 b	10.7	11.0	12.6	12.7	12.8	13.1	12.9	12.6

## DATA SOURCES AND DEFINITIONS

### Main data sources

Most of the data used in this review originates from Eurostat, the Statistical Office of the European Union. The main data sources used are:

- European Union Labour Force Survey (EU-LFS)
- ESA2010 National Accounts
- EU-Statistics on Income and Living Conditions (EU-SILC)
- Social Protection Statistics (ESSPROS)

The **European Union Labour Force Survey** (EU-LFS) is the EU's harmonised household survey on labour market participation. While in the early years, it was carried out as an annual survey conducted in the spring quarter in many Member States it is now a continuous quarterly survey in all EU Member States. If not mentioned otherwise, the results based on the LFS for years before the introduction of the quarterly survey refer to the spring quarter of each year. LFS data covers the population living in private households only (collective households are excluded) and refers to the place of residence (household residence concept). They are broken down by various socio-demographic categories, in particular gender and age. The EU-LFS covers all EU Member States as well as Macedonia and Turkey plus Iceland, Norway and Switzerland.

A particular data collection connected to the EU-LFS is Eurostat's 'LFS main indicators' which present a selection of the main statistics on the labour market. They encompass annual and quarterly indicators of population, activity and inactivity; employment; unemployment; education and training. Those indicators are mainly but not only based on the results of the EU-LFS, in few cases integrated with data sources like national accounts employment or registered unemployment. National accounts employment data covers all people employed in resident producer units (domestic concept), including people living in collective households. In the main indicators, these national accounts figures are broken down by

sex, working-time status (full-time/part-time) and contract status (permanent/temporary) using LFS distributions. Where available, all key employment indicators in this review are based on the 'LFS main indicators'.

For the unemployment-related indicators, Eurostat's series on unemployment comprises yearly averages, quarterly and monthly data. It is based on the (annual and quarterly) EU-LFS data and monthly data on unemployment, either from the national LFS or other national sources, mainly unemployment register data. For the compilation of monthly unemployment estimates, these monthly figures from national sources are benchmarked against the quarterly EU-LFS data, and they are used to produce provisional unemployment figures for recent months which are not yet covered by quarterly EU-LFS results. Monthly unemployment by skills or duration is not available from this data collection.

Most macro economic indicators are based on Eurostat's collection of national accounts data according to the European System of National Accounts (**ESA2010 National Accounts**). The recent change-over to ESA2010 could produce some changes in relation with previous years. Data is compiled by the Member States and collected by Eurostat. The collection comprises aggregates such as GDP, from which derived measures such as productivity and real unit labour costs are calculated. In addition, national accounts also cover population and employment data, the latter expressed in persons and in hours worked and also broken down by economic activity, but not by socio-demographic categories.

The main data source for the social indicators is the EU-SILC (EU-Statistics on Income and Living Conditions). The EU-SILC instrument is the EU reference source for comparative statistics on income distribution and social inclusion at the European level. It provides two types of annual data for 28 European Union countries, Iceland, Norway, Switzerland and Turkey: Cross-sectional data pertaining to a given time or a certain time period with variables on income, poverty, social exclusion and other living conditions, and Longitudinal data pertaining to individual-level changes over time, observed periodically over a four year period. EU-SILC

does not rely on a common questionnaire or a survey but on the idea of a "framework". The latter defines the harmonised lists of target primary (annual) and secondary (every four years or less frequently) variables to be transmitted to Eurostat; common guidelines and procedures; common concepts (household and income) and classifications aimed at maximising comparability of the information produced.

Data regarding social protection expenditures are from the European System of integrated Social PROtection Statistics (ESSPROS). ESSPROS is an instrument of statistical observation which enables international comparison of the administrative national data on social protection in the EU Member States. The conventional definition used for the scope of social protection definition is the following:

"Social Protection encompasses all interventions from public or private bodies intended to relieve households and individuals of the burden of a defined set of risks or needs, provided that there is neither a simultaneous reciprocal nor an individual arrangement involved. The list of risks or needs that may give rise to social protection is, by convention, as follows: Sickness/Health care, Disability, Old age, Survivors, Family/children, Unemployment, Housing and Social exclusion not elsewhere classified".

Physically, data is generally obtained from Eurobase, Eurostat's online dissemination database and open to public access. Data shown here represents availability and revision status of mid-July 2015.

### Definitions and data sources of macro economic indicators

1. Real GDP: Gross Domestic Product (GDP), volume, annual change (*Source: Eurostat, ESA2010 National Accounts*).
2. Total employment: Employment, total economy, annual change (*Source: Eurostat, ESA2010 National Accounts*).
3. Labour productivity: GDP volume per person employed, annual change (*Source: Eurostat, ESA2010 National Accounts*).

4. Annual average hours worked per person employed, annual change (*Source*: Eurostat, ESA2010 National Accounts).
5. Productivity per hour worked: GDP volume per hour worked, annual change (*Source*: Eurostat, ESA2010 National Accounts).
6. Harmonised CPI: harmonised consumer price index, annual change (*Source*: Eurostat, HCIP).
7. Price deflator GDP: Implicit price deflator of GDP, annual change (*Source*: Eurostat, ESA2010 National Accounts).
8. Nominal compensation per employee, total economy, annual change (*Source*: Eurostat, ESA2010 National Accounts and DG EMPL calculations).
9. Real compensation per employee (GDP deflator): nominal compensation deflated with the implicit deflator of GDP, per employee, annual change (*Source*: Eurostat, ESA2010 National Accounts and DG EMPL calculations).
10. Real compensation per employee (private consumption deflator): nominal compensation deflated with the implicit deflator of private consumption expenditure, per employee, annual change (*Source*: Eurostat, ESA2010 National Accounts and DG EMPL calculations).
11. Nominal unit labour costs: Nominal compensation per employee divided by labour productivity, annual change (*Source*: Eurostat, ESA2010 National Accounts).
12. Real unit labour costs: Real compensation per employee divided by labour productivity, annual change (*Source*: Eurostat, ESA2010 National Accounts and DG EMPL calculations).
13. Total population aged 15-64 (the 'working age population') in 1 000s (*Source*: Eurostat, EU-LFS).
14. Total employment in 1 000s (*Source*: Eurostat, LFS).
15. Population in employment aged 15-64 in 1 000s (*Source*: Eurostat, EU-LFS).
- 16-19. Employment rates: calculated by the number of employed divided by the population in the corresponding age bracket (*Source*: Eurostat, EU-LFS).
20. Full-time equivalent employment rate: calculated by dividing the full-time equivalent employment by the total population in the 20-64 age group. Full-time equivalent employment is defined as total hours worked on both main and second job divided by the average annual number of hours worked in full-time jobs (*Source*: Eurostat, EU-LFS).
21. Self-employed in total employment: number of self-employed as a share of total employment (*Source*: Eurostat, EU-LFS).
22. Part-time employment in total employment: number of part-time employed as a share of total employment (*Source*: Eurostat, EU-LFS).
23. Fixed-term contracts in total employees: number of employees with contracts of limited duration as a share of total employees (*Source*: Eurostat, EU-LFS).
24. Employment in services: employed in services (NACE Rev. 2 sections G-U) as a share of total employment (*Source*: Eurostat, EU-LFS).
25. Employment in industry: employed in industry, including construction (NACE Rev. 2 sections B-F) as a share of total employment (*Source*: Eurostat, EU-LFS).
26. Employment in agriculture: employed in agriculture, forestry and fishing (NACE Rev. 2 section A) as a share of total employment (*Source*: Eurostat, EU-LFS).
- 27-30. Activity rates: labour force (employed and unemployed) as a share of total population in the corresponding age group (*Source*: Eurostat, EU-LFS).
31. Total unemployment in 1 000s (*Source*: Eurostat, EU-LFS).
- 32-33. Unemployment rates: unemployed as a share of the labour force (employed and unemployed persons) in the corresponding age group (*Source*: Eurostat, EU-LFS).
34. Long-term unemployment rate: persons unemployed for duration of 12 months or more as a share of the labour force (*Source*: Eurostat, EU-LFS).
35. Share of long-term unemployment: persons unemployed for duration of 12 months or more as a share of the total unemployed force (*Source*: Eurostat, EU-LFS).
36. Youth unemployment ratio: young unemployed (aged 15-24) as a share of the total population in the same age group (*Source*: Eurostat, EU-LFS).
- 37-39. Employment rates: calculated by the number of employed divided by the population in the corresponding age bracket, by education attainment (based in the ISCED classification), nationality and country of birth (*Source*: Eurostat, EU-LFS).
40. Underemployment, persons in part-time jobs that would like to work more hours (*Source*: Eurostat, EU-LFS).
41. Seeking but not available, persons seeking a job but not available to work immediately (*Source*: Eurostat, EU-LFS).
42. Discouraged, available but not seeking persons available to work but not seeking job at the moment (*Source*: Eurostat, EU-LFS).

#### Definitions and data sources of key employment indicators

#### Definitions and data sources of key social indicators

At-risk-of-poverty-or-exclusion. Percentage of a population representing the sum of persons who are: at risk of poverty or severely materially deprived or living in households with very low work intensity (Eurostat, EU-SILC).



- **At-risk-of-poverty.** Share of people with an equivalised disposable income (after social transfer) below the at-risk-of-poverty threshold, which is set at 60% of the national median equivalised disposable income after social transfers (Eurostat, EU-SILC).
- **At-risk-of-poverty threshold.** 60% of the national median equivalised disposable income after social transfers (Eurostat, EU-SILC).
- **Poverty gap.** Difference between the median equivalised disposable income of people below the at-risk-of-poverty threshold and the at-risk-of-poverty threshold, expressed as a percentage of the at-risk-of-poverty threshold (cut-off point: 60% of national median equivalised disposable income) (Eurostat, EU-SILC).
- **Persistent at-risk-of-poverty.** Percentage of the population living in households where the equivalised disposable income was below the at-risk-of-poverty threshold for the current year and at least two out of the preceding three years (Eurostat, EU-SILC).
- **At-risk-of-poverty before social transfers excl. pensions.** Share of people having an equivalised disposable income before social transfers that is below the at-risk-of-poverty threshold calculated after social transfers (Eurostat, EU-SILC).
- **Impact of social transfers.** Computed indicator (Eurostat, EU-SILC), formula:  $100 \cdot (B-A)/B$ , where:
  - B: At-risk-of-poverty before social transfers excl. pensions;
  - A: At-risk-of-poverty.
- **Severe Material Deprivation.** Inability to afford some items (at least 4 on a list of 9) considered by most people to be desirable or even necessary to lead an adequate life (Eurostat, EU-SILC).
- **Share of people living in low work intensity households.** Share of persons living in a household having a work intensity below a threshold set at 0.20 (Eurostat, EU-SILC). The work intensity of a household is the ratio of the total number of months that all working-age household members have worked during the income reference year and the total number of months the same household members theoretically could have worked in the same period.
- **Gross Household Disposable Income adjusted for consumer prices.** The amount of money available for spending or saving. This is money left after expenditure associated with income, e.g. taxes and social contributions, property ownership and provision for future pension income (Eurostat, National Accounts and DG EMPL calculations).
- **Income quintile share ratio S80/S20.** Ratio of total income received by the 20% of the population with the highest income (the top quintile) to that received by the 20% of the population with the lowest income (the bottom quintile) (Eurostat, EU-SILC).
- **GINI coefficient.** The relationship of cumulative shares of the population arranged according to the level of equivalised disposable income, to the cumulative share of the equivalised total disposable income received by them (Eurostat, EU-SILC).
- **Life expectancy at birth.** The mean number of years a newborn child can expect to live if subjected throughout his or her life to the current mortality conditions, the probabilities of dying at each age (Eurostat).
- **Healthy life years at birth.** Number of years that a person is expected to continue to live in a healthy condition (Eurostat).
- **Early leavers from education and training.** Early leaver from education and training, previously named early school leaver, generally refers to a person aged 18 to 24 who has finished no more than a lower secondary education and is not involved in further education or training; their number can be expressed as a percentage of the total population aged 18 to 24 (Eurostat).
- **NEET: Young people not in employment, education or training.** Share of people aged 15 to 24 who are unemployed, not engaged in housework, not enrolled in school or work-related training, and not seeking work (Eurostat, EU-LFS).
- **Risk of poverty of children in households at work (Working Intensity > 0.2).** Share of children at-risk-of-poverty living in households with work intensity bigger than very low (Eurostat, EU-SILC).
- **In-work at Risk-of-poverty rate.** The share of persons who are at work and have an equivalised disposable income below the risk-of-poverty threshold, which is set at 60% of the national median equivalised disposable income (after social transfers) (Eurostat, EU-SILC).
- **Relative median income of elderly.** Ratio of the median equivalised disposable income of people aged above 65 to the median equivalised disposable income of those aged below 65 (Eurostat, EU-SILC).
- **Aggregate replacement ratio.** Ratio of the median individual gross pensions of 65-74 age category relative to median individual gross earnings of 50-59 age category, excluding other social benefits (Eurostat, EU-SILC).
- **Social indicators expenditure.** Percentage of expenditure in different social protection areas in relation with the GDP (Eurostat, ESSPROS).







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Success in raising employment levels and living standards in Europe depends on effective support policies as well as positive macro-economic strategies. In this respect, this year's Employment and Social Developments review addresses a range of issues.

It starts by looking at the contribution of entrepreneurship and self-employment to job creation and growth and the need to tackle the difficulties faced by the self-employed and notably micro and small companies. It then looks at the role of labour legislation in supporting more and better jobs and the need to strike the right balance between flexibility and protection. It then moves on to look at the best actions to avoid unemployment turning into long-term unemployment and inactivity. More broadly, given technology change, globalisation and population ageing, which translates into a reduction in the working-age population, the EU needs to increase employment and increase productivity. Mobility and migration can play an important role here. In relation to this, Europe needs to improve skills and better match skills with evolving demands. It also needs to promote labour market participation of older workers and women. Social policies, including pension policies and family policies (for example, child care and long-term care), can support longer working lives and increase employment of women. Promoting social dialogue and the involvement of social partners in the development of employment and social policies may help the implementation and effectiveness of such policies.

The review is available in printed and electronic format in English. All the graphs and tables can be downloaded both in gif and excel format by accessing the individual chapters <http://ec.europa.eu/social/esde2015>

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