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Comments on the review would be gratefully received and should be sent to:
Directorate A
Directorate-General for Employment, Social Affairs and Inclusion
Office J-27 05/80
B-1049 Brussels
E-mail: Empl-A1-unit@ec.europa.eu

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Foreword

After a prolonged crisis that has seriously affected the lives of many citizens, and strained our labour market and welfare institutions, we are finally seeing some, if clearly fragile, economic recovery. Unemployment decreased in 2014 but it is still far too high, and new job creation is still too slow. That is why the new Commission is focusing on restoring job creation and getting more people into work.

The ESDE 2014 Review looks back to the crisis years to extract valuable lessons to face the challenges ahead. It examines the impact of the crisis across Member States to determine which of them and why they have better weathered the storm. We find that the most resilient countries have labour market and welfare institutions that promote social fairness and contribute to recovery and growth. These countries have more open and labour markets, invest more in life-long learning and activation, and protect people throughout their lifetime while helping them realise their full employment potential. This confirms the need to continue with labour market reforms and the modernisation of our social protection systems.

The Review also demonstrates that even if the recovery has seen some reduction in divergence, the gap is still large. Pursuing structural reforms at national level will also help to restore convergence, in particular in the Eurozone.

The Review highlights that stronger investment in skills is vital for competitiveness and sustained growth and jobs. Public and private sector organisations have complementary roles in the provision of training and life-long learning. It shows, for instance, that the most competitive countries in the EU, and in the world, are those where businesses invest most in skills. Investment in human capital is crucial to success.

The Investment initiative launched by President Juncker will make a real difference to face the legacy of the crisis and prepare our future growth. Through the new European Fund for Strategic Investments (EFSI), funding will also be available for projects that can help create more and better jobs.

This publication makes an invaluable contribution to the analysis of our policies, and shows that structural reforms work.

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

Contents

Executive summary

This fourth edition of the annual Employment and Social Developments in Europe (ESDE) Review presents a detailed analysis of key employment and social issues and concerns for the European Union and its Member States as it pursues its EU 2020 employment and social goals.

The opening section provides an overall review of developments, challenges and responses, followed by thematic chapters on:

- *The legacy of the recession; resilience and challenges*
- *Investing in human capital and responding to long-term societal challenges*
- *The future of work in Europe; job quality and work organisation for smart, sustainable and inclusive growth*
- *Restoring socio-economic convergence between Member States in the EU and EMU*

The foundations of sustained growth remain fragile in many Member States…

The European economy and labour markets are experiencing signs of recovery from the prolonged downturn. However, there is no reason to celebrate prematurely. While economic output and employment have both started to recover in recent quarters, they remain below the pre-crisis levels and the foundations of further growth remain fragile. Moreover, the employment and social impacts of the crisis will take years to redress, even under the most optimistic scenarios. At the same time, some Member States weathered the crisis better than others and experience a stronger recovery, also in terms of employment.

… with unemployment still high and employment growth concentrated in temporary and part-time jobs.

Unemployment has declined from the crisis peaks, but still remains in double digits in the EU as a whole. Around 9 million more people are out of work compared with 2008, with youth and long-term unemployment being a source of particular concern. Moreover, much of the recent employment growth consists of temporary or part-time, which is suggestive of the uncertainty that prevails on the hiring side.

The recovery remains short of addressing the social challenges built up since the beginning of the crisis.

Also household incomes have shown some signs of improvement since late 2013, after several years of decline, but this is insufficient to address the social challenges that have exacerbated since the beginning of the crisis. Increased levels of poverty and inequality in the most affected Member States threaten the EU goal of inclusive and sustainable growth.

Europe 2020 mid-term review and new European Commission.

Against this backdrop, the European Commission launched earlier this year its mid-term review of the Europe 2020 Strategy, in the first phase through a broad public consultation. The results of the review will feed into discussions on the Strategy's future direction by the new Commission appointed in the wake of the June 2014 European Parliament elections. This Review aims to contribute to this process by providing a longer term analysis of employment and social trends and presenting the policy challenges, and possible ways to improve the delivery of the Europe 2020 headline targets.

The crisis had a deep impact on people and societies…

In many countries long-term unemployment has more than doubled, especially among the young. The review documents the potential 'scarring' effects on people facing unemployment early in their careers, while underlining the opportunity that the recession presents to step up investment in developing and maintaining skills in order to contribute to a more solid and socially sustainable future growth.

Unlike in past recessions, activity rates have continued to increase, with the rise in the participation of women and older workers, partly due to the fact that supportive policy measures were maintained. At the same time, the crisis has increased financial distress and debt levels among households, exacerbated poverty and social exclusion, weakened social ties and led many families and individuals to rely on informal support. The deterioration of the social situation for a prolonged period of time had a negative impact on the public belief and trust in the ability of governments and institutions to address such problems.

… while cross country differences in their resilience to the economic shock can be explained by several factors.

Looking back to the experience of the crisis, different Member States showed different levels of resilience to the economic shock of the recession, which can be linked to both their initial institutional and policy setting, and the policies implemented during the recession years. Here the review finds, inter alia, that the transmission of economic shocks to employment and income was smaller in countries in which there were more open and also less segmented labour markets; more efficient social protection systems, a greater availability and use of short-time working arrangements; a stronger investment in lifelong learning and activation; as well as unemployment and other social benefits that were widely available, linked to activation, and responsive to the economic cycle, in other words policy and institutional setups focused on providing stronger employment security over working life, rather than in a single job.

The review also finds that a number of Member States are progressively moving towards a social investment model that helps people achieve their full potential throughout their lifetime and supports wider labour market participation. It likewise notes that the effectiveness of automatic financial stabilisers depends on their ability to provide sustained support even in a case of a prolonged labour demand weakness, while not creating work disincentives in times of growth. Moreover, the structure of financing arrangements influences the sustainability of social expenditure in that a shift from financing from social security contributions toward financing through general taxation may lead to a more inclusive system, provided the benefit systems are appropriately adjusted.

Structural trends underline the need for investment in human capital to support productivity.

The combination effects of an ageing and declining population in the Union as against demographic growth in much of the rest of the world, and increasing global production, trade and competition, highlights the need to recognise investment in human capital as the main approach needed in order to support productivity gains and ensure that future growth is both job-rich and inclusive. Here the review underlines the fact that effective human capital investment requires not only the forming of the right skills through education and training, but also the creation of policy and institutional frameworks that help individuals to maintain, upgrade and use their skills throughout their working lives.

Policy support to formation, maintenance and use of human capital…

Among the key elements of a supportive policy and institutional mix for the formation of human capital are accessible, affordable and quality early childhood care and education, which can help reducing the generation-to-generation transmission of poverty and persistence of social inequalities, and support female participation in the labour market. At the same time there is a need to reduce early school leaving, which contributes to breaking the cycle of deprivation that leads to social exclusion, and ensure that higher education and vocational education and training systems respond to future needs of the labour markets.

In terms of maintaining and developing human capital throughout working lives, the review demonstrates the importance of stronger investment in skills of all workers and avoiding skills depreciation. It highlights the complementary roles of public and private sector organisations in the provision of life-long learning. At the same time, appropriate policies are needed in order to prevent human capital investments being wasted through labour market inactivity, weak labour market attachment, skills mismatch, or the underutilisation of the employment potential of all.

… is instrumental for strengthening competitiveness and sustaining EU social welfare model.

Integrated policy approaches reflecting all these aspects are instrumental for strengthening EU competitiveness and for sustaining its social welfare model. Social protection systems should represent an investment in human capital by effectively activating and enabling those who can participate in the labour market, protecting those (temporarily) excluded from the labour market and/or unable to participate in it, and preparing individuals for potential risks in their lifecycles, in particular for children and the elderly. Well-functioning welfare systems and well-designed social investments are instrumental in supporting Europe's main source of international competitive advantage in the form of its highly skilled and productive human capital.

Increasing supply of skilled human capital needs to be matched by supply of quality jobs.

An increase in the supply of skilled human capital needs to be matched by an increase in the supply of quality jobs in order to yield a more productive workforce. Here the Review takes a closer look at future EU labour market challenges and opportunities in terms of job quality and work organisation, and notes large differences between Member States, and across population groups. It discusses a range of workplace issues such as transition rates from temporary jobs to more permanent employment; access to training; work-life and gender balance; work intensity; and levels of autonomy at work.

Structural changes generate opportunities for creating of high quality jobs.

In terms of these workplace issues, the crisis period has seen deterioration in a number of Member States with, notably, a decrease in participation in life-long learning in around a third of Member States. On the other hand, ongoing structural changes linked to technological advance and innovation, globalisation, demographic change and the greening of the economy, should offer opportunities for the creation of high quality jobs and shifts in work organisation that are supportive of productivity growth.

Equally, however, the same structural changes may also contribute to skills obsolescence or jobs and wage polarisation, calling for broader and more pro-active policy responses that can mitigate the risks associated to these changes. These include, for instance, support for participation in life-long training, improved job-search assistance and job profiling, and the promotion of social dialogue linked to work organisation innovations that are conducive to supporting the development of the knowledge-based economy.

Restoring socio-economic convergence is another important goal facing the EU.

Another important task facing the EU following the crisis years concerns the ways in which it can promote and support the return to an upward socio-economic convergence of its Member States. This particularly concerns Southern and peripheral EU 15 Member States, since most of the post-2004 Member States managed to continue to converge even during the crisis.

The factors behind the divergence included, not only the sheer size of the economic shock, but also the underlying structural imbalances in the affected countries in the period before the crisis (notably weak productivity growth, lack of human capital investment, divergent unit labour cost growth, banking sector weaknesses and property bubbles). In this respect the Review contributes to the ongoing debate on the most appropriate forms of reforms given the aims of restoring convergence, deepening the economic and monetary union, and strengthening its social dimension.

Adverse socio-economic outcomes such as labour market polarisation and poverty or 'scarring' effects intensify the depth and persistence of any economic downturn if adjustments are left solely to market forces. Here national level reforms to improve the viability of social protection systems in the case of temporary shocks can significantly contribute to the stabilisation of aggregate demand, long-term employment and productivity growth, thereby strengthening convergence and mitigating hysteresis effects.

National level actions can be supported, at the EU level, by measures facilitating mobility, promoting investment in human capital, notably through the European Social Fund (ESF), and by the use of appropriate benchmarks.

A wealth of lessons for the future.

This year's Review provides an overview of key employment and social developments and policy responses that can be drawn upon by the new European Commission in its deliberations on the future orientations of the Europe 2020 strategy.

The Review recognises that the legacy of the prolonged crisis is continuing to seriously affect the lives of many of the EU's citizens, and that it has also compounded many of the structural challenges already facing the Union. However, the evidence presented in the Review also shows how structural reforms combining employment and social policies can promote social fairness, enable countries to address both their social concerns and their competitiveness challenges with reasonable success, even in the most difficult of circumstances, where there is a commitment to do so.

Job creation, productivity and more equality for sustained growth [1]

While the EU has been seeing a recovery from the recession, with output, employment and household incomes growing and unemployment falling, the recovery remains extremely fragile and unequal, as witnessed by the recent downgrading of the GDP outlook in the Commission autumn forecast [2].

At the same time, the employment and social imbalances (and their cross-border impacts) that occurred during the crisis must as far as possible be prevented from happening in the future. The 'key employment and social indicators' scoreboard introduced in the 2014 European Semester should help with the close monitoring of key factors – unemployment; young people not in employment, education or training; household income; poverty; and inequality – and will help detect challenges early and enable timely policy responses to be made.

Nevertheless, the EU's prosperity ultimately depends on economic growth, which results from employment growth and productivity growth. In order to develop this further we have looked at those labour market factors that constrain job creation, apart from weak demand and legacy effects from the crisis.

In this respect we particularly identify demographic developments as being liable to constrain future employment growth [3], putting further pressure on ensuring that the best use is made of all available human resources.

In so far as the contribution of employment to overall GDP growth declines over the coming 20 years, then productivity growth will be the only source of increased output in the EU [4] – hence the need to fully understand the links between productivity and education, skill formation and innovation.

After several years of decline, household incomes started increasing again slightly in real terms at the end of 2013. In some countries, very significant declines have led to strong increases in poverty, and together with high household debt levels, this is likely to undermine aggregate demand for some time, especially in countries where inequalities have also increased.

We examine the potential role of well-functioning labour markets and tax and transfer systems to restore a sustainable recovery of household incomes and a reduction of poverty and inequalities.

Unemployment, poverty and inequalities undermine sustainable growth by weakening aggregate demand in the short term and by affecting potential GDP in the longer term through reduced access for many households to education and health services, and hence sub-optimal use of human capital.

They can also lead to political instability, weaken trust in institutions and undermine the capacity of governments to conduct the reforms that are necessary to ensure that policies and institutions are supportive of growth. Such effects may also have impacts beyond borders and are therefore of common EU concern. Moreover, these effects contribute to increased divergence within the EU, specifically since the start of the crisis and which recently has stabilised at a high level.

The EU economy is facing an uncertain outlook, the recovery is not assured and isolated demand or supply policies cannot bring a sustainable recovery with job growth.

1. GROWTH, JOBS AND HOUSEHOLD INCOMES: RECENT DEVELOPMENTS

Although employment growth in EU-28 turned positive at the end of 2013, as did growth in household disposable income [5] after nearly four years of continuous decline (Chart 1) [6], employment

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[1] By Guy Lejeune and Isabelle Maquet.

[2] European Commission (2014), 'European Economic Forecast Autumn 2014', Directorate-General for Economic and Financial Affairs, European Economy N° 7/2014.

[3] 'The quantitative evidence shows that in less than 20 years EU employment will almost inescapably start declining in volume due to the intensity of workforce shrinking', Peschner and Fotakis (2013).

[4] Peschner and Fotakis (2013).

[5] The real GDHI growth for the EU is a DG EMPL estimation, and it does not include Member States for which quarterly data are missing (eight Member States). 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.

[6] See Section 5 for a detailed analysis of recent trends of the EU GDHI in real terms and its components.

rates (for 20-64) remain well below pre-crisis levels (68.4% in 2013 vs. 70.3% in 2008) and a long way off the Europe 2020 target of 75%. While 6.7 million jobs were destroyed between 2008 and the first quarter of 2013, the number of jobs increased by 1.8 million up to the second quarter of 2014. Moreover, a large proportion of the new jobs created recently are temporary or part-time, raising concerns about the robustness of the recovery.

The impact of the crisis on employment and the social situation increased as the unemployment rate rose from less than 7% in 2008 to 10.8% in 2013, putting 9 million more people out of work. The effects were unevenly spread across the EU however, with unemployment rates in 2013 still only around 5% in Austria and Germany against over 25% in Greece and Spain.

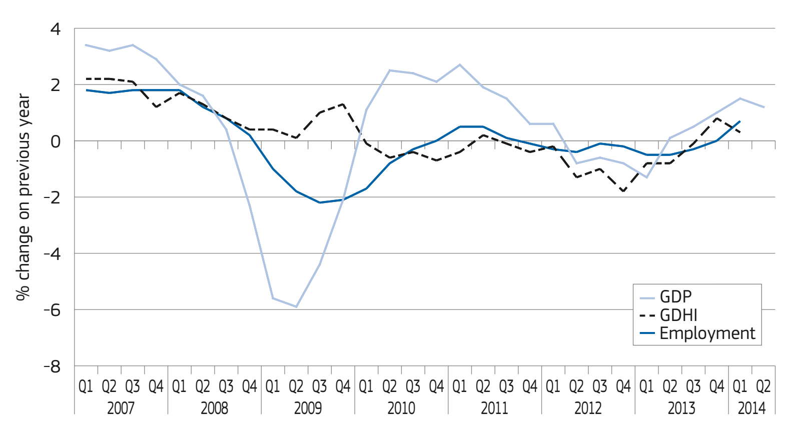
While the economic recovery is expected to strengthen only gradually, EU employment is foreseen to start growing from this year onwards, leading to a decline in the overall EU unemployment rate towards 9.5% by 2016, according to the Commission autumn forecast.

Cross-country differences in employment are large. Between 2008 and mid-2014 most of the jobs were destroyed in Spain (-3.4 million), Italy (-1.2 million), and Greece (-1.0 million), while the number of jobs increased by 1.8 million in Germany, and by 0.9 million in the United Kingdom during the same period.

Employment divergence was reflected in cross-country differences in unemployment, particularly in the euro area, with Southern/peripheral countries seeing a massive increase while rates remained stable and low in the Northern/core countries (see Chart 2). The dispersion in unemployment rates is expected to start to decline only gradually, still remaining well above the pre-crisis level.

The convergence in the cyclical positions and the ongoing labour cost adjustment in high-unemployment countries would contribute to further reduce the divergence of labour market conditions in the EU. Nevertheless, the present divergence shows the need to look beyond the traditional macro-economic adjustment channels and consider changes in socio-economic factors and cross-border effects that may influence the depth and

Chart 1: **Growth in real GDP, real household disposable income and employment, year-on-year change**



Source: Eurostat, National Accounts, data non-seasonally adjusted [namq_gdp_k]

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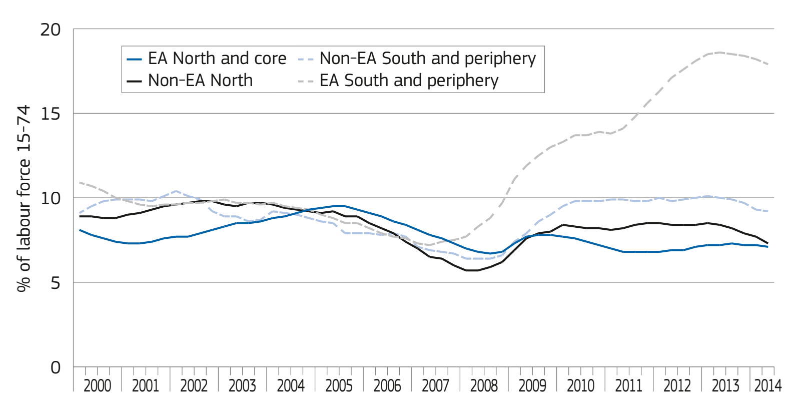
Chart 2: **Unemployment rates in the EU by group of Member States**



Source: Eurostat, EU-LFS; DG EMPL calculations.

Note: EA North and core: AT BE DE FI FR LU NL, EA South and periphery: EE EL ES IE IT CY MT PT SI SK LV Non-EA north: CZ DK PL SE UK, Non-EA South and periphery: BG HR LT HU RO.

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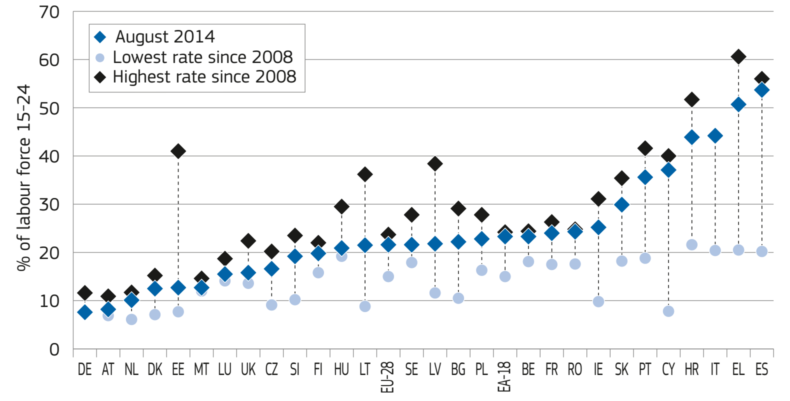
Chart 3: **Youth unemployment rates in the EU Member States in August 2014 and the highest and lowest rates since 2008**



Source: Eurostat, EU-LFS data, seasonally adjusted [une_rt_m].

Notes: EE EL HU UK Jul 2014 CY HR LV RO SI 2014Q2.

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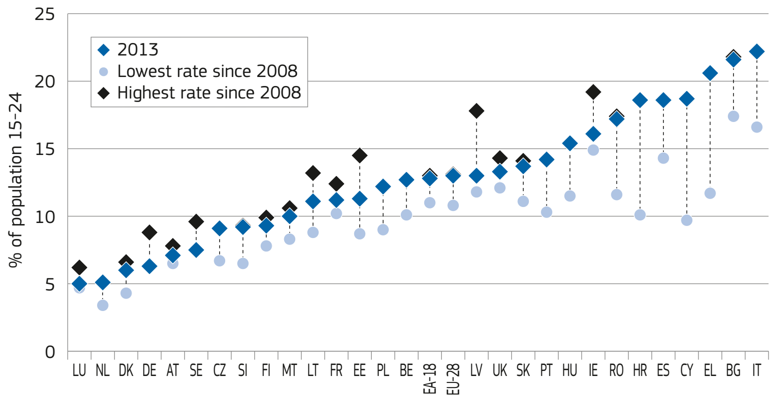
Chart 4: **NEET rate for the EU, EA and Member States in 2013 and the highest and lowest rates since 2008**



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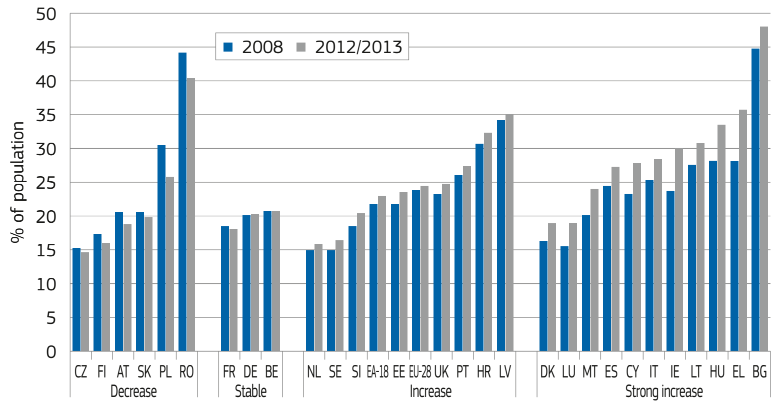
Source: Eurostat, EU-LFS data [edat_lfse_20].

Chart 5: **Evolution of the risk-of-poverty or social exclusion, 2008 and 2013**



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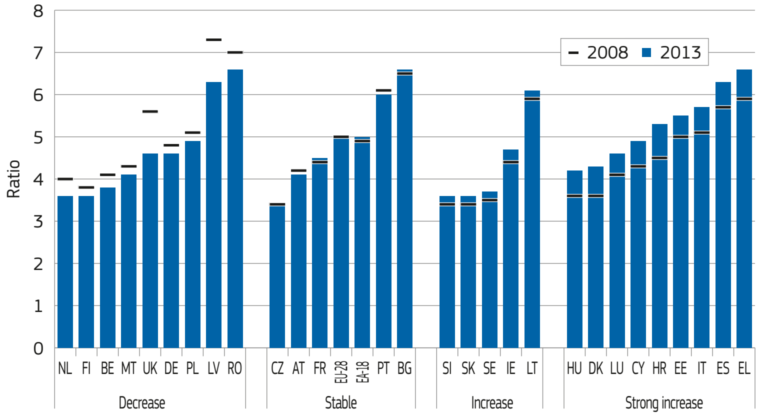
Source: Eurostat, EU SILC [ilc_peps01], income year 2007, 2012.

Notes: ES 2013 break in series (classified as strong increase based on 2008-2012 change), AT and UK 2012 break in series, HR 2010 instead of 2008 and 2012 instead of 2013, IE 2012 instead of 2013, EU-27 instead of EU-28 in 2008.

Chart 6: **Inequality of income distribution (income quintile share ratio S80/S20), 2008 and 2013**



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Source: Eurostat, EU SILC [ilc_di11], income year 2007, 2012.

Notes: ES 2013 break in series, AT and UK 2012 break in series, HR 2010 instead of 2008, IE 2012 instead of 2013, EU-27 instead of EU-28 in 2008.

persistence of an economic downturn as well as the adjustment capacity of any given economy (7).

The situation of young people and the long-term unemployed is of particular concern. In almost two thirds of Member States, youth unemployment rates in July 2014 were still close to their historic highs – EU average of 21.7 % compared to about 15 % in the first half of 2008 – (Chart 3) while the proportion of young people not in education or employment (NEET) reached 13 % in 2011 against 11 % in 2008 (Chart 4). Again, however, it varies considerably between Member States while remaining higher than before the downturn.

Such severe labour market deterioration has had inevitable social consequences with the number of people at risk of poverty and social exclusion rising by more than 6 million since 2008, reaching some 123 million in 2013, and taking us further from the Europe 2020 target of having at least 20 million fewer people in or at risk of poverty and social exclusion.

Poverty and social exclusion among those of working age (18-64 years) has increased significantly in two thirds of the Member States as a combined result of rising levels of jobless and low work intensity households, and in-work poverty. In Greece, Ireland, Spain, Italy and Hungary, poverty, social exclusion and inequalities have increased significantly from already high levels prior to the crisis.

2. OBSTACLES TO JOB CREATION

The legacy of the crisis poses significant obstacles to job creation now, which add to many of the obstacles that were present before the crisis and are still in place.

2.1. Weak demand hampers job creation

Weak demand is a major obstacle to job creation. While EU GDP growth was 1.2 % year-on-year in the second quarter of 2014, potential growth estimates suggest little room for further acceleration from there under ‘no policy change’ assumptions. Commission estimates put potential growth in the EU at 1.0 % in 2015, accelerating slightly to 1.4 % in

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(7) See also Chapter 4 of this review.

2020-23 (8). The sober outlook for potential growth (in combination with high levels of private and public debt for many EU Member States) creates a difficult environment for job creation.

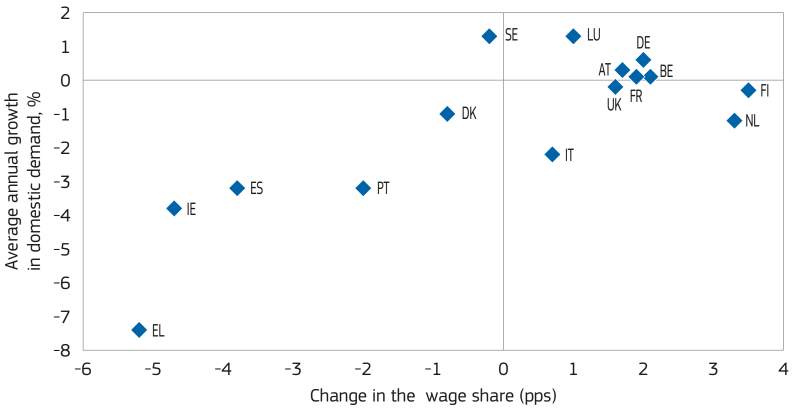
The policy environment remains difficult. Changes that could boost growth are, in the short term, faster wage growth in those sectors and Member States where it has lagged productivity growth and, in the medium term, policies to boost productive investment, specifically in human capital. A more expansionary fiscal stance in the euro area as a whole, within the limits of rules on national budgets would also be helpful (9).

Stronger demand and structural reforms should ideally occur simultaneously, with little impact likely to be expected from structural reforms (such as institutional, product market and labour market reforms) in a weak demand environment. As ECB President Draghi has put it: 'Without higher aggregate demand, we risk higher structural unemployment, and governments that introduce structural reforms could end up running just to stand still. … But without determined structural reforms, aggregate demand measures will quickly run out of steam and may ultimately become less effective.' (10)

Weakness in wage developments

Wages play a dual role in that they not only affect price competitiveness, but also influence domestic demand. In a weak economic environment, the propensity to spend out of labour income (and particularly for those at lower and average earnings and in the context of high private/household indebtedness as is the case in many Member States) is higher than the propensity to spend out of capital income (11).

Chart 7: Changes in the wage share and growth in domestic demand, 2008-13, %



Source: AMECO, ALCDO and OUNT.

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Chart 7 shows the positive correlation between the change in the wage share and growth in domestic demand over the period 2008-13.

The weakness in the wage share can be linked to the decline in employment, as in the Southern Member States, as well as to weakness in wages. Wages were compressed and price competitiveness restored as a result in (euro-area) Member States with significant external imbalances. At the same time, in some other Member States, wage growth has significantly lagged productivity growth in recent years, pointing to further imbalances, as evidenced in Chapter 4.

Weak (capital and social) investment

Stronger investment not only supports growth in the short-term but also brings longer-term benefits. The evidence is now that the EU economy is investing far too little, with the overall share of investment standing at 17.3 % of EU GDP in 2013, 2.7 pps below the average from 1995-2002 (12).

Evidently, the weakness in private investment is linked to the weak economic outlook, while public investment has been under pressure from fiscal consolidation, leading some observers to reassess the appropriateness of the overall fiscal stance for the euro area (13). It also explains the incoming Commission President's intention to present an ambitious Jobs, Growth and Investment Package (14).

The social consequences of low growth are such that there are clear benefits from an expansion in social investment across a range of areas: active labour market policies; early childhood education and care; preventive healthcare; health and safety at work; retraining and lifelong education; and human capital more generally (see also European Commission, 2013b).

In the area of education and training, including continuing and work-based learning, many Member States could improve the quality of their delivery systems. This is crucial to raise skill levels (15) and, as a result, the productivity of the workforce. It is, moreover, particularly pressing, given that expenditure on education fell between 2007 and 2011 (16) in almost half of the Member States and even where it increased, did so by less than total government expenditure.

Education and skills are highly relevant to employers, with employer survey data showing that Member States whose employers look at human capital in a holistic manner (motivation, training, education at all skills levels) and value it highly achieve higher levels of competitiveness (see Chart 32).

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(8) '… the pre-crisis boost to capital accumulation did not lead to increased TFP growth. Post crisis, capital and labour resources are only gradually re-allocated to more productive uses, which further strains potential growth.' From 'The euro area's growth prospects over the coming decade' in European Commission (2013e).

(9) See also Draghi (2014).

(10) Draghi (2014).

(11) The wage share, which is compensation of employees divided by GDP, is also equivalent to the real unit labour cost which measures real (price-adjusted) compensation per employee adjusted for productivity and is a measure of price competitiveness. See Annex 1 of Chapter 5, 'Wage developments in the European Union during a severe economic downturn' of European Commission (2013c).

(12) Similarly, the 2013 investment share is below its 1995-2002 average in seven out of the nine largest EU Member States (France and Sweden being the exceptions).

(13) See Draghi (2014).

(14) See Juncker (2014).

(15) This need is suggested by the results from the recent OECD Survey on Adult Skills (PIAAC), see OECD (2013).

(16) 2011 is the latest year for which data are available.

2.2. Crisis legacy reinforces some obstacles to job creation

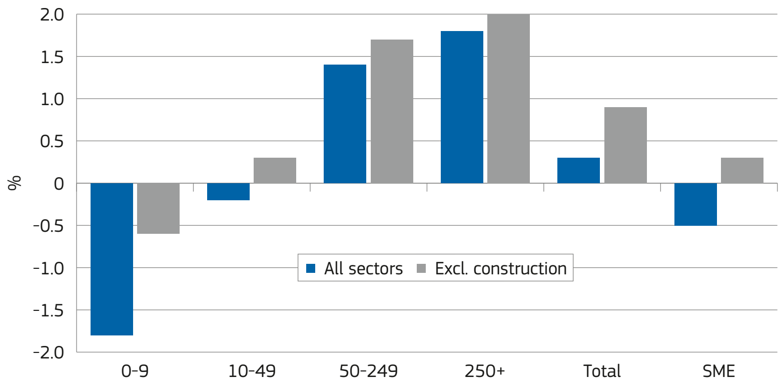
Job creation has been hampered by many obstacles, some of which have been reinforced by the lingering effects of the crisis.

Access to finance and the role of small and young firms

Small- and medium-sized enterprises (17) are traditionally seen as the motor of employment growth with, for example, EIM Business & Policy Research (2012) finding that, between 2002 and 2010, 85 % of net new jobs in the EU were created by SMEs.

In the US, between 2002 and 2007, 58 % of the net job gains in the private sector came from SMEs (18) and, after the job losses in 2008 and 2009, the share of SMEs was 51 % of the gains from 2010 to 2013 (19). By contrast, between 2010 and 2013, employment in SMEs in the EU fell by 0.5 % (20). When excluding the construction sector, which employed one in seven SME workers in 2008, this turns into a slight increase of 0.3 %, dwarfed by a 2 % rise among large firms (see Chart 8).

Chart 8: **Evolution of EU employment by firm size, 2010-13**



Source: European Commission (2013a).

Note: Sectors covered are Nace R.2 B-J, L,M,N.

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Some of the under-performance of SMEs since 2010 may be due to SMEs' reduced access to finance, with SMEs being more dependent on external financing.

To date, and in many Member States, credit availability to the non-financial sector remains weak, due to both supply and demand factors including sector restructuring and the deleveraging that followed the financial crisis (21). Moreover, bank lending rates in the vulnerable Member States remain high despite recent ECB actions (22), and this has mainly affected SMEs.

Limited access to finance is also likely to have curbed the number of start-ups which is of concern given the evidence that, among SMEs, young firms account for a major share of net job growth (23). The lack of dynamism in the employment record of SMEs since 2010 shows the potential positive employment impact of appropriate solutions to financial sector problems and support for business start-ups.

Policy uncertainty

A further hangover from the crisis that has blocked job creation in the recent past, and which risks continuing to do so, is policy uncertainty. Arpaia and Turrini (2013) used an indicator of policy uncertainty (24) that 'significantly (influences) the euro area unemployment rate indirectly, via economic activity, and directly'. Moreover, they find that 'policy uncertainty impacts mostly the process of job creation'. In this respect the strong relationship between the indicator of policy uncertainty and the Economic Sentiment Indicator (ESI (25)), together with the rise in the latter since autumn 2012, suggests that policy uncertainty has come down in the last two years (26).

Looking forward, changes to EU governance, specifically in the financial sector and the fiscal area, have the potential to further reduce policy uncertainty. Nevertheless, high private and public debt burdens in many Member States, with associated sustainability concerns, as well as the uncertain effects of structural reforms in some Member States, may hamper this reduction.

Policy uncertainty can be addressed to some extent through raising awareness by European and national policy makers of the potential positive effects of structural reforms and improvements in EU governance. On structural reforms, more clarity on the timing of its effects, usually with short-term costs but only medium-term benefits, would be generally helpful.

The addition of the scoreboard of key employment and social indicators to the Europe 2020 monitoring framework has the potential to bring a better assessment of the situation in individual Member States, which could pave the way for more policy fine-tuning at national level. It should also help in taking better account of the social impact of economic policies. Finally, stronger involvement of the social partners in the policy process at EU level, and in the Member States, would serve to promote a wider 'ownership' of policies and their delivery in a lasting way.

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(17) SMEs, defined as those with less than 250 employed persons. The official EU definition combines this with a condition on either the turnover or balance sheet total, see http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/index_en.htm

(18) Here also defined as firms with less than 250 employed persons.

(19) Own calculations based on Bureau of Labor Statistics, Gross Job Gains and Losses, from Business Employment Dynamics (BDM). Note that there is an ongoing debate in the US about the role of SMEs in creating new jobs with papers using varying definitions of SMEs.

(20) European Commission (2013a).

(21) See ECB (2014) and Turner (2014).

(22) They remain above the rates seen in the core countries.

(23) See, for example, Haltiwanger et al. (2010) and Lawless (2013).

(24) Arpaia and Turrini (2013) measure policy uncertainty as an index constructed from two sub-indices, one made up from counting some uncertainty-related words in newspaper articles, and another one measuring the extent of disagreement among forecasters on some variables.

(25) The ESI, whose purpose is to track GDP growth, is calculated by the Commission on the basis of confidence indicators resulting from the Joint Harmonised EU Programme of Business and Consumers Surveys. The correlation between the indicator of policy uncertainty and the ESI evidently has a negative sign and the policy uncertainty index anticipates swings in the ESI.

(26) The ECB also found that economic policy uncertainty came down but still remains somewhat higher than its pre-crisis average level, see ECB (2013), Box 4.

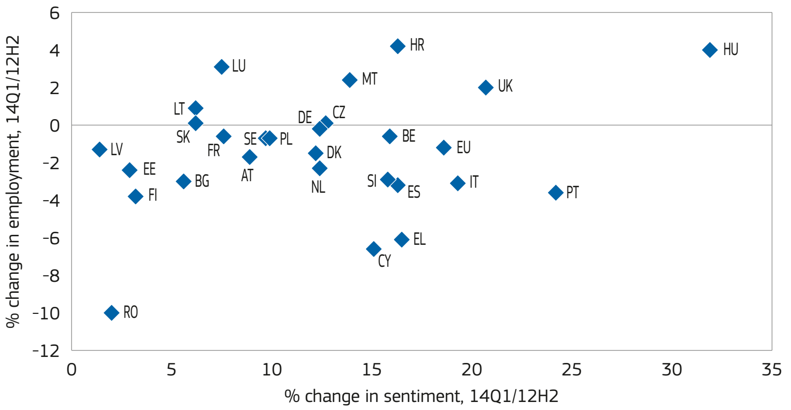
Skills mismatches

Skill mismatch – the discrepancy between the qualifications and skills that individuals possess and those that are needed by the labour market – is a structural problem. Due to the intense job destruction and its concentration in certain branches of economic activity a strong increase in structural mismatch has taken place since the start of the crisis. The evidence set out below points to increasing levels of skills mismatch in the EU, further aggravating current labour market difficulties ([27]).

In this context, the upward shift in the EU Beveridge curve (with a higher indicator for labour shortage for a given unemployment rate) suggests more labour market mismatches (see Chart 10). These mismatches are mostly linked to skills, as it seems that the sectoral mismatch follows a cyclical pattern (Arpaia et al., 2014).

Table 1 shows that, when comparing the period since 2010 with 2008-09, the Beveridge curves for about half of the Member States seem to have remained stable. This includes a group of Member States which had seen a continuous increase in unemployment until recently and for which it might be still too early to assess the possibility of a shift in their curve (Greece, Spain, Cyprus and Portugal). However, the other half (including most of the large Member States) saw an outward shift, while an inward shift was only seen in Germany ([28]).

Chart 9: **Economic sentiment and employment, changes between the second half of 2012 and the first quarter of 2014**



Source: Eurostat, ei_bssi_m_r2 and lfsi_emp_q.

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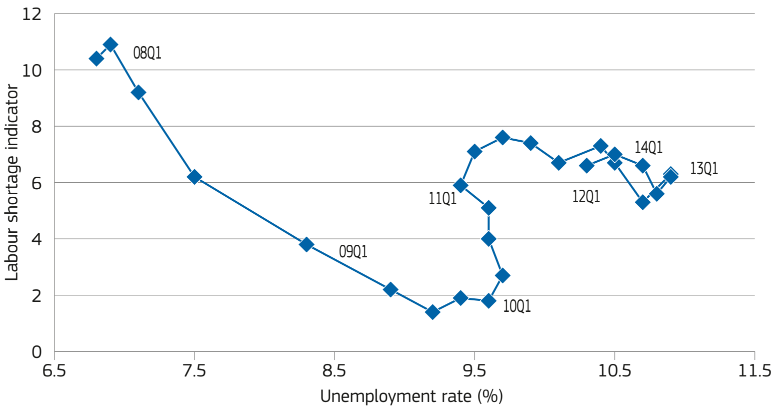
Chart 10: **Beveridge curve for the EU**



Source: Eurostat, ei_bsin_q_r2 and une_rt_q.

Note: The labour shortage indicator is the % of manufacturing firms pointing to labour shortage as a factor limiting production.

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Table 1: **Shifts in Beveridge curves between 2008-09 and 2010-14Q1**

Shift? A given unemployment rate goes together now with a ...	Valid for the following Member States:
higher indicator of labour shortage	(EU) BG, DK, EE, FR, HR, IT, LV, LT, NL, PL, SI, SK, UK
similar level of the indicator of labour shortage	BE, CZ, EL, ES, CY, LU, HU, MT, AT, PT, RO, FI, SE
lower indicator of labour shortage	DE

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A serious mismatch in skills inevitably affects economic competitiveness and growth, increases unemployment, undermines social inclusion, and generates significant economic and social costs. This is a serious matter of concern given that one in three European employees is considered to be either over-qualified ([29]) or under-qualified for the jobs that they do, with the mismatch being especially high in Mediterranean countries (Chapter 6 in European Commission, 2013c).

Countries with high rates of over-qualification ([30]) share some common characteristics. They tend to have lower levels of public investment in education and training, lower levels of expenditure on labour market programmes, and more rigid and segmented labour markets, with the impact mainly affecting younger male workers on non-standard contracts.

The skills mismatch is not only a current problem, however, since it risks becoming bigger over time when the recovery accelerates and broadens, and new jobs will require new skills which are not necessarily available in sufficient numbers.

An effective reduction in the level of skills mismatch requires action on both the supply and demand side. In this respect

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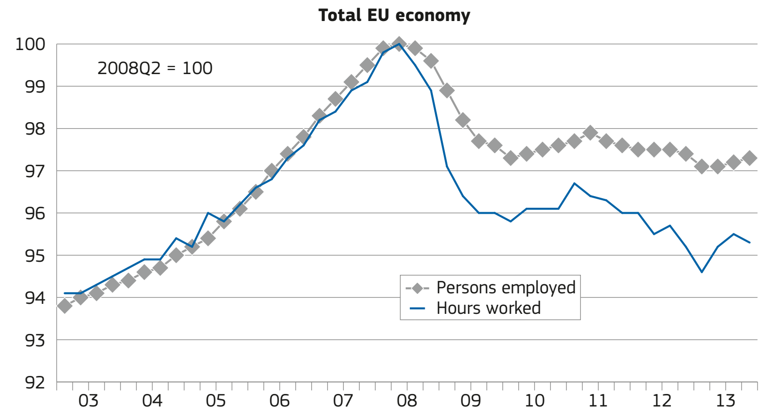
[27] See Chapter 6, 'The skill mismatch challenge in Europe' in European Commission (2013c).

[28] In the absence of structural changes, the unemployment rate and the vacancy rate (approximated here through the labour shortage indicator), would move along the curve during economic cycles. A booming economy then sees a lower unemployment rate associated with a higher vacancy rate and vice versa in case of a downturn.

[29] 'Over-qualified' does not mean that too much has been invested in the worker's human capital, just that their current employment does not make sufficient use of the skills and competences they have acquired.

[30] Countries with high over-qualification rates are Greece, Italy, Portugal, Cyprus, Lithuania, Spain and Ireland.

Chart 11: **Evolution of hours worked and persons employed in the EU, 2008Q2=100**



Source: Eurostat, namq_nace10_e.

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reforms designed to increase the flexibility and responsiveness of educational and training systems – including those to ensure the recognition of skills acquired outside of formal education or in another country – will need to be balanced by the creation of sufficient innovative and high-skilled jobs.

Tackling skills mismatches should also involve a significant degree of anticipation as, going forward, job creation will require different or higher skills and competencies (see Section 4.1), pointing to the need to invest in skills and adaptation of business strategies and human capital.

Low working hours and changes to work organisation

Since mid-2008 the total number of hours worked has fallen much more than the total number of people in employment (see Chart 11), and has continued to drop even as employment levels have stabilised (since mid-2010). This suggests that employment growth in headcounts may disappoint when economic growth accelerates, in so far as employers can be expected to increase hours of existing employees first before hiring additional workers.

This overall decline in hours worked is, of course, linked to an increased reliance on part-time employment, but also to a reduction in the average number of hours worked by full-time workers, falling from a weekly average of 41.0 in 2008 to 40.6 in 2013.

The number of those employed part-time exceeds the 2008 level by 8 %, with a particularly significant increase for men and young people. Moreover, among those part-time employed the share of involuntary part-timers – i.e. those who would prefer to be working full-time – increased from just over 20 % of the total in 2004 to almost 30 % in 2013, with the proportion of male workers at 40 %.

The increased reliance on part-time employment is linked to the uncertainty in demand prospects both during and since the crisis as well as to more flexible work organisation models that accommodate both companies' and workers' needs. While it may lead to higher employment numbers in the short term, it gives a misleading impression of the volume of employment and may equally give a misleading impression of the quality and sustainability of many of the jobs.

As a result of all these developments, the share of full-time employed persons in total employment fell by some 2 pps between 2002 and 2008, and again between 2008 and 2013, leaving the total number of full-time employed in 2013 5 % below the level of 2008, with the risk that ongoing structural changes associated with technological changes and globalisation may reinforce such developments (31).

Apart from its effect on job creation, fewer working hours also weigh on household incomes and consumption, in particular if part-time jobs are concentrated at the bottom of the wage distribution.

2.3. Recurrent obstacles

This section focuses on the roles of labour taxation, undeclared work and labour mobility for job creation.

However, it does not focus on employment protection (which is analysed in Section 3), as the impact of employment protection legislation on the aggregate labour market seems less significant than the impact on specific groups (32). EPL needs to be looked at as part of an overall labour market picture (33). For example, some of the Member States that were most resilient in the crisis had and have quite high EPL; see for example the EPL values for Germany, Sweden, the Netherlands and the Czech Republic (Chart 27).

Labour taxation

For employers, the level of their labour costs is a key determinant of their capacity to create jobs. An important part of labour costs is labour taxation, which affects both labour demand and labour supply. Cutting labour taxation can reduce labour costs and hence encourage employers to employ more workers (34). At the same time, empirical evidence shows that a high level of labour taxation (as well as its design) can hamper the labour supply of workers (35). In particular, the interaction of labour taxation and social benefits can create disincentives to work for specific groups such as young people, low-income workers, single parents, second-income earners and older workers.

In view of the negative labour market effects of high labour taxation, the EU has consistently asked many Member States to shift taxation away from labour onto other tax bases in order to

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(31) See Chapter 3 in European Commission (2014a).

(32) See Scarpetta (2014).

(33) See also Section 4.1., 'The institutional balance of a healthy labour market: EPL, activation and support', in Chapter 1.

(34) The tax wedge on labour includes personal income tax, social security contributions of employers and employees and payroll taxes. In a perfectly competitive labour market with flexible wages, only the size of the total tax wedge matters since different components of the tax wedge exert identical effects on employment (see Chapter 4 of European Commission, 2013c).

(35) Theoretically, the overall effect of labour taxation on labour supply is uncertain or ambiguous. See also the summary of the theoretical and empirical literature on the impact of direct taxation on employment in OECD (2011).

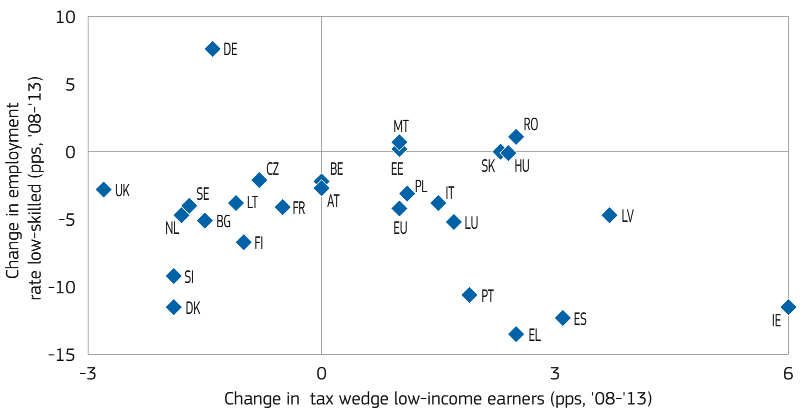
stimulate employment creation (36). The benefits could be particularly high if tax reductions were targeted at the most vulnerable groups in the labour market, while recognising that the outcome might differ significantly between Member States depending on their characteristics and the composition of their workforce.

The optimal design of tax shifts from both an employment policy and social policy perspective is a complex task, requiring distributional impacts to be addressed. For example, the regressive effects of substituting VAT for labour taxes can be mitigated by compensating targeted groups (unemployed, retirees) and by focusing on standard rather than reduced rates and exemptions (37). Similarly, green taxes linked to car ownership represent a lower tax burden for the lower income groups than taxes on heating and energy, and a proper taxation of imputed rent has socially favourable effects.

The desirability of some tax shifts could also be linked to other policy goals. A shift from labour towards green taxation also provides incentives for moving to a more green and resource-efficient economy, which could bring more sustainable and high-quality employment (38).

Targeting a reduction in the labour tax wedge to the groups facing the greatest challenges can maximise the employment effects of the reform limiting at the same time its fiscal costs. Simulations with DG EMPL's Labour Market Model for nine selected Member States show a pronounced employment impact when employers' social security costs for young workers are lowered by an amount equivalent to 0.1 % of GDP, financed by higher VAT (39). Tax shifts away from labour can reduce labour costs, in particular for the low-skilled and the young where such reductions can have a strong impact and are most needed. This makes handling the distributional implications of such shifts even more important.

Chart 12: **Tax wedge on low-income earners and the employment rate of low-skilled**



Source: OECD Taxing Wages, Eurostat, lfsa_ergaed.

Note: Tax wedge: single earner, earning 67 % of the average wage. Low-skilled: ISCED levels 0-2.

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Undeclared work

Undeclared work is categorised as paid activity that is lawful in itself, but not declared to public authorities (40). The existence of undeclared work distorts the evidence on job creation in so far as only declared work is actually measured and counted and, more generally, it is seen to undermine conventional growth-oriented economic, budgetary and social policies. From a macro-economic perspective, it decreases tax revenues and may undermine the financing of social security systems. From a micro-economic perspective, it tends to distort competition between firms and to reduce efficiency since informal businesses typically avoid accessing formal services and inputs (e.g. credit) and hence tend to remain small.

Moreover, undeclared work is frequently associated with poor working conditions, limited prospects of career progress and a lack of social protection.

The scale and nature of undeclared work is influenced by many factors. Economic factors include the direct and indirect incidence of taxation and the 'cost' of complying with complex tax and labour regulations, as well as the penalties (or lack of them) related to enforcement (41).

Various features of the current labour market and social situation are likely to have been conducive to the growth of informal work, such as the increasing length of unemployment spells, the situation of relatively disadvantaged groups, and the pressure on wages and household incomes more generally. From the demand side, a difficult business environment may also have encouraged employers to seek to evade or limit tax liabilities by resorting to undeclared work.

Tax evasion and inequality are closely connected. Higher levels of inequality are associated with a higher probability of tax evasion while tax evasion may increase income inequality, especially with respect to a situation of full tax compliance (42).

Lack of mobility

Intra-EU labour mobility can play an important role in alleviating some of the conjunctural challenges faced by EU labour markets, notably by mitigating unemployment in hard-hit regions and countries and in addressing labour force shortages in more resilient ones, by contributing to a more efficient allocation of human resources across the single market, thus mitigating skills mismatches (43).

However, intra-EU labour mobility remains limited in comparison to other OECD countries (such as the US, Canada or Australia) and as a proportion of the overall size of the EU labour market. While one in four EU citizens say they

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(36) The Eurogroup recalled that the 'overall tax burden in the euro area is above the OECD average and is skewed towards labour' (Eurogroup, 2014).

(37) See the conclusions of Chapter 4 in European Commission (2013c): "increasing standard VAT rates has less socially detrimental effects than curtailing VAT reduced rates and exemptions".

(38) European Commission (2014c) provided estimates of possible employment gains.

(39) More simulation results, with reductions targeted at other groups, can be found in Chapter 4 of European Commission (2013c). See also Chapter 3 of this review.

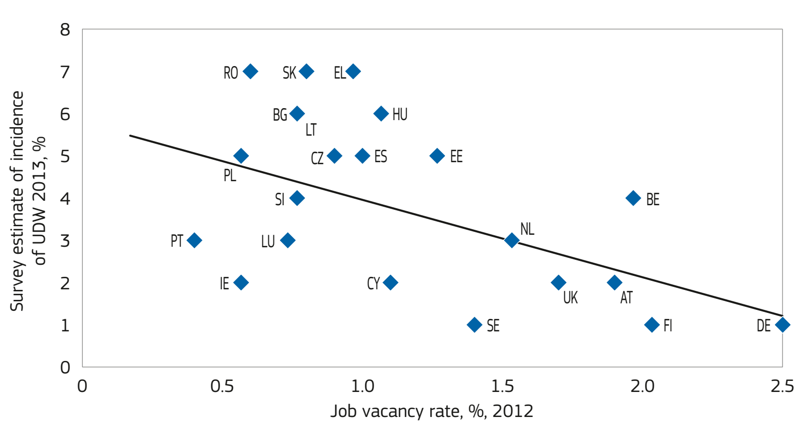
(40) Formally, the definition adopted by the European Commission is: '…any paid activities that are lawful as regards their nature but not declared to public authorities, taking into account differences in the regulatory system of Member States', European Commission (2007), p. 2.

(41) See also Chapter 4, 'Undeclared work: recent developments' in European Commission (2014a).

(42) See the conclusions of Chapter 4 in European Commission (2013c).

(43) Jauer et al. (2014).

Chart 13: Job vacancy rate and undeclared work



Source: Eurostat, jvs_q_nace2 and Special Eurobarometer survey 402, 2013, question 10: 'Sometimes employers prefer to pay all or part of the salary or the remuneration (for extra work, overtime hours or the part above a legal minimum) in cash and without declaring it to tax or social security authorities. Has your employer paid you any of your income in the last 12 months in this way?'

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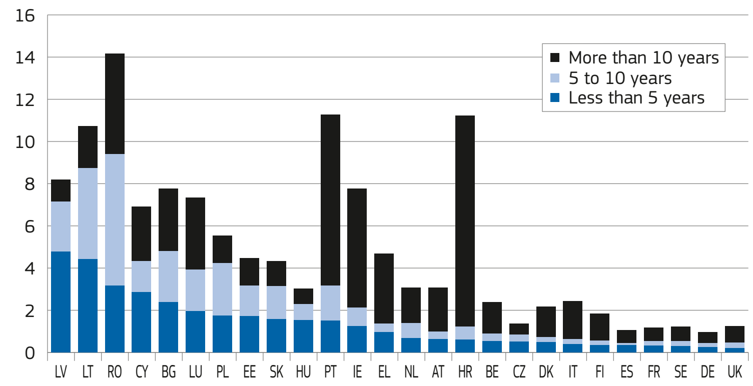
Chart 14: Mobility rate by Member State of origin by years of residence (2013)



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 2013, as a percentage of the working-age population of the country of citizenship. Figures for MT and SI are too small to be reliable. Figures for CY, DK, EE, FI, LU and SE are not reliable due to the small size of the sample.

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would consider working in another EU country in the next ten years (44), until 2013 only around 3.3 % of the EU economically active population resided in another Member State. In half of the Member States, only around 1 % or less of the working-age population has moved to another EU country in the last ten years (see Chart 14) – and this is around 0.5 % or less in large Member States, including Italy and Spain, despite being affected by high unemployment.

There is evidence that the current levels of mobility are below what could be expected from the EU as well as below the measured mobility intentions, especially as far as movements between euro-area Member States are concerned (45). Indeed, due to substantial differences in unemployment rates between southern and northern Member States, the rising number of persons wanting to move has partly materialised in increased mobility from South to North since 2011 but only to a limited extent.

Mobility flows in the EU have reacted to the economic conditions, though not to the extent needed to have a real equilibrating role against the huge imbalances across EU labour markets. The limited intra-EU mobility is due to the many barriers such as differences in language and culture, administration, taxation, social security systems (including lack of portability of benefits) and mutual recognition of professional qualifications.

The main driving factor behind mobility between Member States is work, although family reasons and the wish to study abroad also play a role. In terms of labour mobility flows over the last decade, the main drivers seem to have been income and wage differentials, particularly between Eastern and Western Member States (Chart 14) where income differentials have been greatest (46).

This also suggests that the progressive narrowing of the income gap between EU Member States plus the movement of many activities in both manufacturing and service sectors from West to East in order to benefit, at least in the short term, from lower wages, should, in the long run, lead to a decrease in the size of the flows from East to West, already visible for some countries (such as Czech Republic or Slovenia). For the euro-area Member States, by contrast, current changes in relative levels of unemployment may increasingly act as a 'push factor' (47).

In terms of 'pull factors', the employment opportunities in the destination country seem to have been the most crucial driver, while generosity of the welfare systems or the legal regime (48) has had limited influence. As a result, there is no evidence in the data that welfare tourism is significant in scale or impact in the EU (49).

Labour mobility could be fostered through developing more targeted interventions to better support cross-border jobseekers and employers and improving job matching across borders. The new Directive on free movement of workers (50) will certainly contribute to making it easier for people working or looking for a job in another country to exercise their rights in practice.

Moreover, various observers (51) have pointed out the need for a series of

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(44) European Commission (2013f).

(45) European Commission (2013d).

(46) Among euro-area Member States, a certain level of convergence in income had been achieved, at least before the crisis.

(47) See also the article 'Recent trends in the geographical mobility of workers in the EU' in European Commission (2014b).

(48) i.e.: applying restrictions during the transitional arrangements phase.

(49) See Guild et al. (2013) and Juravle et al. (2013).

(50) Directive 2014/54/EU of the European Parliament and of the Council of 16 April 2014 on measures facilitating the exercise of rights conferred on workers in the context of freedom of movement for workers.

(51) See OECD (2014), Dhéret et al. (2013) and Bertelsmann Stiftung (2014).

various other measures such as improving the transferability and tracking of supplementary pension rights, addressing concerns for taxation of cross-border pensions, improving the cross-border recognition of professional qualifications, tackling administrative obstacles for cross-border workers and their families and, finally, giving more support for language learning.

Table 2: **Employment rates of young people (aged 18-34 years) not in education and training, by educational attainment level, EU-28**

Educational attainment level	years after	2007	2008	2009	2010	2011	2012	2013
Total	3 years or less	75.2	76.2	72.0	71.1	71.2	69.9	69.5
Total	Over 3 years	78.2	78.5	75.6	74.9	74.5	73.6	72.8
Pre-primary, primary and lower secondary education	3 years or less	53.2	52.1	43.9	42.8	42.9	37.1	38.4
Pre-primary, primary and lower secondary education	Over 3 years	65.4	64.7	59.2	57.4	56.1	54.2	52.5
Upper secondary and post-secondary non-tertiary education	3 years or less	72.1	73.4	68.9	67.9	67.3	65.6	65.1
Upper secondary and post-secondary non-tertiary education	Over 3 years	80.3	80.9	78.3	77.9	77.5	76.5	75.5
First and second stage of tertiary education	3 years or less	84.0	84.4	80.9	80.0	80.3	79.5	78.6
First and second stage of tertiary education	Over 3 years	89.9	89.9	88.5	87.8	87.7	86.9	86.5

Source: Eurostat, edat_lfse_24.

Note: 'years after' refers to years since completion of highest level of education.

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3. WHO WILL BENEFIT FROM JOB CREATION?

The Commission autumn 2014 forecast envisages employment growth of around 0.7 % annually in 2014-16, but with the benefits liable to be unevenly spread across Member States and sections of the population. The logical question then is who is likely to benefit most from the creation of jobs?

This section starts by looking at those two groups on whom the legacy of the crisis weighs most, namely youth and the long-term unemployed. Next, it takes a broader look at the employment rates of various groups, the possible reasons for the differences in employment rates and possible ways to help curb these differences, with some attention to the issues of employment protection legislation and segmentation.

In this long period of labour market weakness, with 2016 employment still expected to be 0.5 % below the 2008 level according to the latest Commission forecast, job search has been (and still is) a difficult process for many workers, with lasting effects, specifically those who searched for an entry (youth) or a re-entry (unemployed) into the labour market – the two groups we analyse here in detail.

3.1. Youth: more education and better skills can lessen the impact of lack of experience

The current labour market challenges facing young people are the result of underlying structural problems which have been aggravated by the crisis.

Young people have to overcome two difficulties as a result of their lack of work experience: firstly, they are likely to be less productive initially compared to existing workers, and, secondly, employers will be uncertain about their likely reliability as individuals. On the other hand, their recent education and better skills (e.g. ICT, language) may compensate for a lack of work experience, especially if it is seen to be relevant.

Young people often remain outsiders in countries with particularly segmented labour markets, experiencing lower employment rates, more precarious employment conditions and higher unemployment rates than the overall average.

While the employment rate of those aged 25 or over fell by a little more than 1 pps between 2007 and 2013, much larger falls were recorded for those aged under 25. All these developments come with an education gradient in the sense that people younger than 35 who left education at least three years ago have lower chances of being in employment than people with more education who left education less than three years ago (Table 2).

When they are employed, young people are more likely to be subject to more precarious employment terms and conditions (52) with some 43 % being on temporary contracts – a share that has increased since 2007, while it has declined for those aged 25 or more. However, the share working on temporary contracts varies significantly across Member States, reflecting their different labour market regimes, being less than 10 % in Romania and Lithuania and more than 60 % in Portugal, Spain, Poland and Slovenia.

Similarly, young people have a higher than average share of part-time employment (almost one out of three), with a larger than average increase in the share since 2007. In 2013, one out of four male workers under 25 had a part-time job, against one out of fifteen male workers aged 25 or older.

As a result of the lower earnings associated with temporary and part-time jobs (53) young people with a job run a higher than average risk of experiencing in-work poverty. However such terms and conditions are not always one-sided. In Member States such as Germany, the Netherlands, Luxembourg, Austria, and Denmark, temporary contracts include a significant portion of apprenticeships or other employment

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(52) These jobs often come with less pay, less security, less training and fewer pension rights.

(53) 'The in-work poverty rate is on average almost two times higher for people working on temporary contracts or part-time' – Chapter 4, 'Is working enough to avoid poverty? In-work poverty mechanisms and policies in the EU' in European Commission (2011a).

forms linked to education and training, which are generally seen as providing effective stepping stones into regular and secure employment (54).

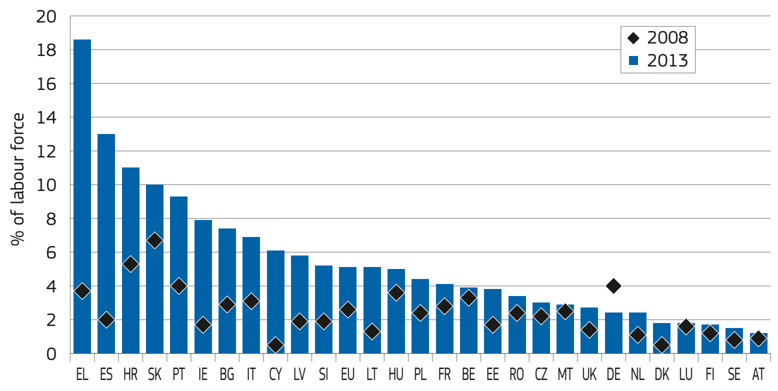
High unemployment of young people also affects the 25-29 age group – with a rate of 14.5 % in 2013, rising to 28 % for the least educated group. Overall, one out of three unemployed people aged 15-24 has currently been unemployed for 12 months or more, compared with one out of four in 2009, increasing their risk of becoming detached from the labour market.

The social problem is particularly acute for young people who are neither in employment nor in education and training (NEET) with the NEET rates having increased most for those aged 20-24 and 25-29 since 2007. For the 20-24 years old, the NEET rate for the EU currently stands at over 18.5 % in 2013, an increase of more than 3 pps since 2007.

NEET rates for 20-24 year olds show a clear North-South divide within the EU, ranging from less than 10 % in Luxembourg, the Netherlands, Denmark, Austria and Germany (but also Malta) to above 25 % in Croatia, Bulgaria, Spain, Cyprus, Greece and Italy.

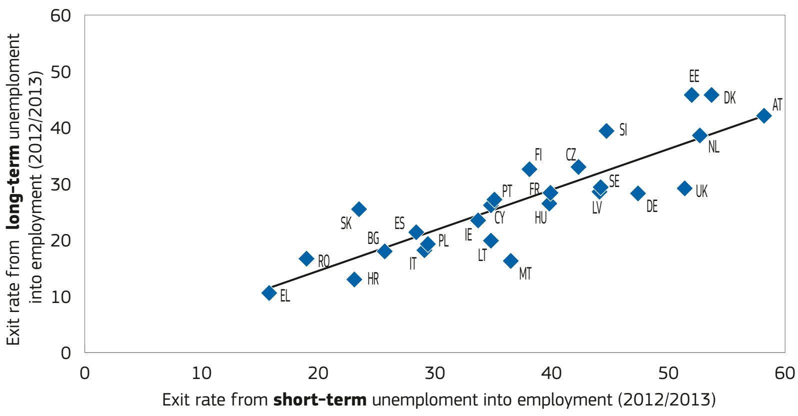
Best practices point to the value added of measures which improve school-to work transitions and, more generally, labour market insertion. Moreover, a comprehensive framework of EU measures exists to help tackle youth unemployment (55), the main ones being the Youth Guarantee (56), reforms of vocational education and training systems, support for public employment services and EURES (the pan-European job search network). The focus on the under-25s may not come at the expense of the 25-29 age group, which also requires policy attention due to a similar lack of job opportunities.

Chart 15: **Long-term unemployment rates, 2008 and 2013**



Source: Eurostat, une_ltu_a.

Chart 16: **Exit rate from short-term unemployment (less than one year) and long-term unemployment (more than one year) into employment between 2012/13**



Source: Eurostat, EU-LFS, ad-hoc transition calculations based on longitudinal data. No data for BE and LU. Exceptions to the reference year: NL: 2011/12 instead of 2012/13.

3.2. Long-term unemployment has doubled, different policies can help prevent and tackle it

While long-term unemployment (unemployed for 12 months or more) has increased in most Member States in recent years, doubling between 2008 and 2013 at EU level, the problem is particularly acute in some Member States, notably Spain and Greece (Chart 15). In recent months, very long-term unemployment (for 24 months or more) has continued to increase, while overall unemployment has declined modestly.

Long-term unemployment affects some specific groups more severely than others: men, young people or low-skilled workers and, particularly, those employed in declining occupations and sectors, whose skills often need upgrading. In this respect, the most recent data on labour market transitions shows that inflows into unemployment have returned close to pre-crisis levels, but that outflows to employment have fallen for both short- and long-term unemployed.

The overall state of the economy remains a powerful factor in determining changes in levels and flows to and from long-term unemployment, but there are also strong country-specific effects with some Member States (such as the Netherlands, Sweden or Finland) ensuring high transition rates back to employment in contrast to others, for instance Slovakia, Greece and Bulgaria (see Chart 16).

In general, one in five of the long-term unemployed in the EU has never worked, three quarters of them being below 35 years of age, creating a strong risk of marginalisation. In Member States where temporary contracts play an important role, repeated multiple spells of short-term unemployment are a widespread phenomenon.

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(54) See also 'Special Focus: Youth labour market adjustment and temporary contracts' in European Commission (2013d).

(55) See European Commission (2014d).

(56) The Youth Guarantee seeks to ensure that Member States offer all young people up to age 25 a quality job, continued education, an apprenticeship or a traineeship within four months of leaving formal education or becoming unemployed.

Participation in education and training helps to exit out of unemployment

Since 2008, the gap in long-term unemployment rates between low-skilled workers on the one hand and highly skilled and medium-skilled workers on the other has widened significantly (see Chart 17). In addition, low-skilled workers (and the unemployed) tend to participate less in training.

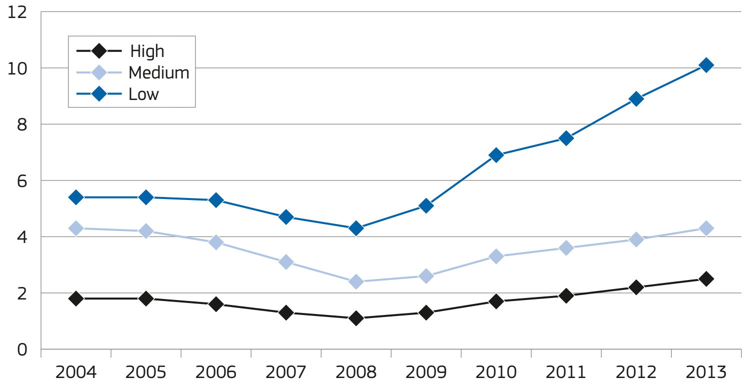
Chart 18 shows that, in general, a higher participation of unemployed people in education and training comes with a higher exit rate out of short-term unemployment. The positive impact of participation in lifelong learning on economic performance is also illustrated in Section 4.3.

Member States' labour market performance is linked to activation, lifelong learning and coverage of benefits

The countries that spend most on active labour market policies (ALMP) per person wanting to work are among those with the highest exit rates out of short-term unemployment (Chart 19). Similarly, Member States with low levels of ALMP spending prior to the recession, but who increased or maintained their ALMP spending per person wanting to work (e.g. the United Kingdom, Estonia, Latvia, Slovakia and the Czech Republic), were better able to contain levels of unemployment.

Chart 20 shows that some Member States (identified as 'top labour market performers' in Chart 21) combine high returns to employment with the high transitions from temporary to permanent contracts, while others ('bottom labour market performers' in Chart 21) have lower transition rates in both cases.

Chart 17: Long-term unemployment rates by skill level (% of labour force), 2004-13



Source: EMPL calculations based on Eurostat data.

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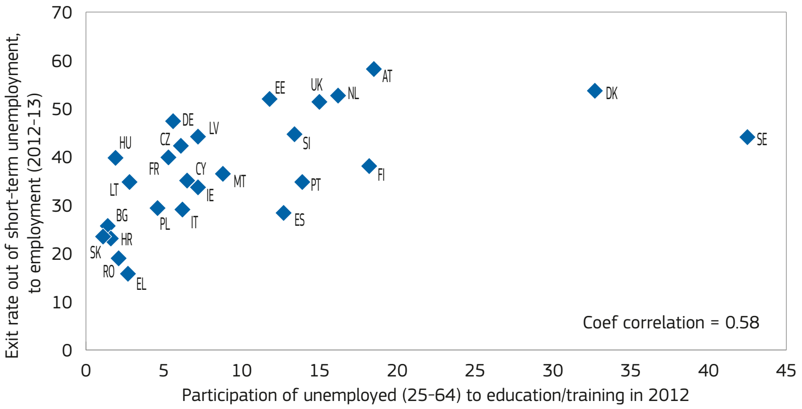
Chart 18: Participation rate of unemployed in education/training (in 2012) and exit rate out of short-term unemployment to employment (2012-13)



Source: Eurostat, EU-LFS, ad-hoc transition calculations based on longitudinal data.

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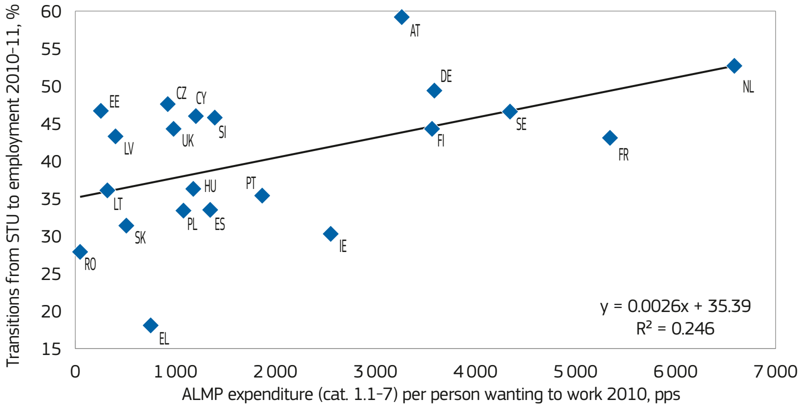
Chart 19: Higher spending on activation is associated with higher exit rates out of short-term unemployment



Source: Eurostat, EU-LFS, ad-hoc transition calculations based on longitudinal data and LMP database.

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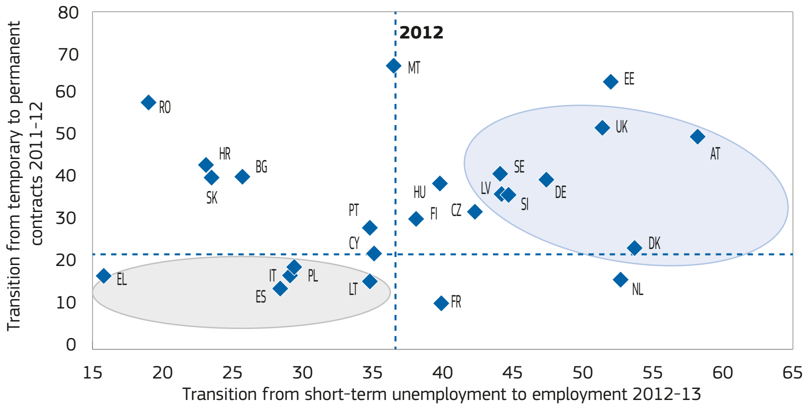
Chart 21 illustrates the potential benefits of combining policy actions in that the countries with the best labour market performance – in terms of returns to employment from short-term unemployment and transitions from temporary to permanent contracts in 2012 – have significantly higher spending on ALMP, stronger activation conditionality, a higher participation in lifelong learning and higher coverage and adequacy of unemployment benefits than the countries with the lowest performance.

During the crisis, countries with the lowest performance did reduce the strictness of their employment protection legislation, bringing some convergence of the protection of regular employment, but they did not improve on the other dimensions that seem also to have relevance, see also Chapter 1 of this review.

Chart 20: Transitions from short-term unemployment to employment (2012-13) and from temporary to permanent contracts (2011-12)



Source: Transitions from temporary to permanent contracts from Eurostat, EU-SILC.; transitions from short-term unemployment to employment from Eurostat, EU LFS, ad-hoc transition calculations based on longitudinal data.

Note: Blue line marks the EU average. 2010-11 values used for CY, HR, HU, MT, PL, PT, RO, SE and SK for transitions from temporary to permanent contracts and 2010-11 value used for NL short-term unemployment to employment transition.

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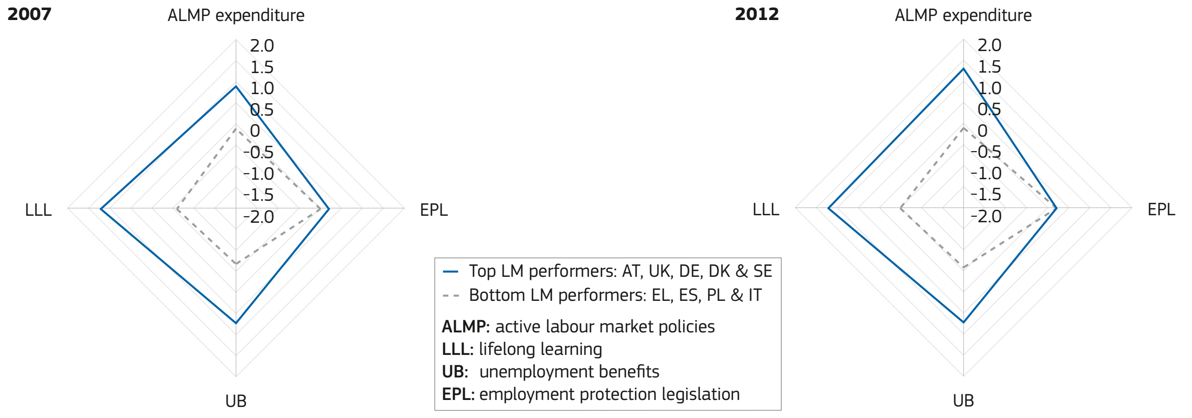
Returns to employment are linked to the coverage and adequacy of unemployment benefits

All other things being equal, there is some evidence that people receiving unemployment benefits have a better chance of taking up a job than non-recipients (57), and that adequate and widely available systems of income support do not prevent or discourage returns to employment (See Chart 22, Panel A – coverage and B – adequacy). This is likely the case for systems that are well designed (for example, reducing generosity over time) and accompanied by appropriate conditions (job search requirements, participation in training). Research also shows that receiving adequate income support also provides workers with enough time to search for a job matching their skills and/or to strengthen those skills where necessary.

Chart 21: Activation, lifelong learning and adequate coverage of unemployment benefits are associated with better labour market performance



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 IMD WCY executive survey and IMD World Competitiveness Yearbook 2012, eligibility requirements and job-search conditionalities for unemployment benefits are from Venn (2012) and EPL index is from the OECD database.

Note: The top and bottom LM performers are ranked according to their transitions from temporary to permanent contracts and exits from STU to employment with only large countries used in both groups. 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/job search conditionalities), lifelong learning (participation rates of total population 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, expect 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.

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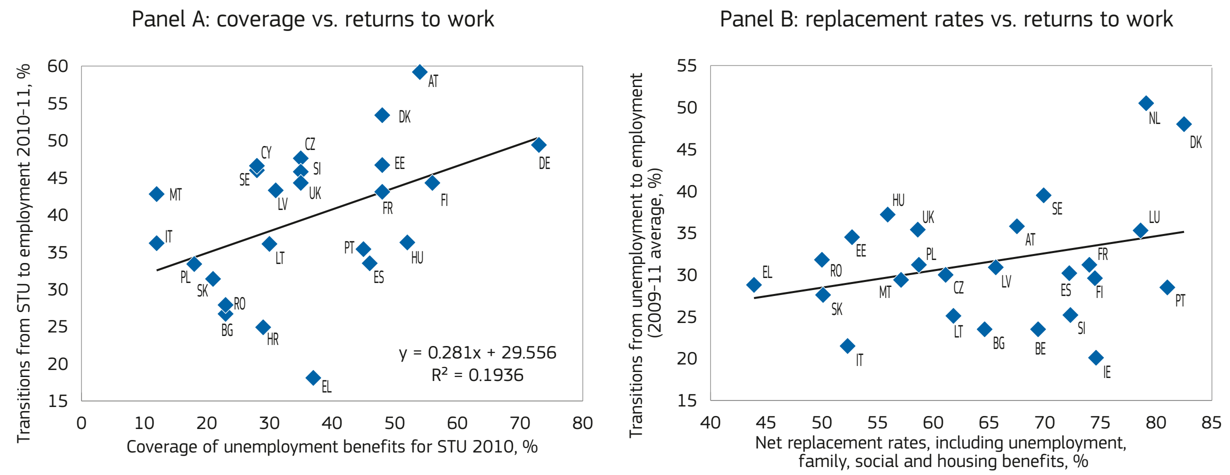
(57) See also Chapter 1 in European Commission (2014a).

Chart 22: **Higher coverage and adequacy of unemployment benefits are associated with higher returns to employment**



Panel A: coverage vs. returns to work

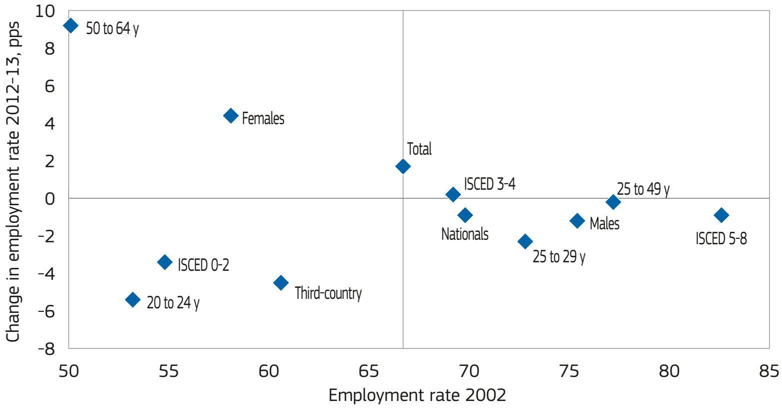
Panel B: replacement rates vs. returns to work

Source: Panel A: EU-LFS, DG EMPL calculations. 2012 value used for coverage of UK in 2010. 2011-12 value used for transitions of DE and PT. No data available for BG, IE, LU and NL. Panel B: DG EMPL calculations based on Eurostat, EU-SILC 2009–10–11 longitudinal data and OECD-EC tax-benefit model.

However, the coverage of unemployment benefits for the short term unemployed varies greatly across Member States, ranging from less than 20 % to more than 50 %. This is due to variations in eligibility criteria and in the average time spent in employment, as well as to differences in the duration of benefits and in take-up rates. The coverage of last resort (means-tested) schemes that support the long-term unemployed who have no entitlements to other benefits also varies a lot. While both unemployment benefits and social assistance schemes are increasingly associated with activation measures (job-search support, access to training, individualised support), low coverage undermines the effectiveness of activation in encouraging and supporting actual returns to work.

This suggests that in order to restrain and reduce long-term unemployment, it is first necessary to reduce the inflow into unemployment, by supporting labour demand, while using measures such as short-time work arrangements in difficult times. In addition, the newly unemployed need to be supported to return as quickly as possible to employment, through appropriate activation and support measures. Policies addressed specifically at the long-term unemployed can then be most effectively deployed.

Chart 23: **Some convergence in employment rates by groups, EU-28**



Source: Eurostat, lfsa_ergan and lfsa_ergaed.

Notes: Third-country nationals: series start in 2005 instead of 2002. Levels of education: ISCED 0-2: Pre-primary, primary and lower secondary; ISCED 3-4: Upper secondary and post-secondary non-tertiary; ISCED 5-6: First and second stage of tertiary education.

3.3. The structural issue of raising the labour market participation of specific groups

Overview: a higher employment rate among women, older people, young people and migrants is needed

The resilience of an economy depends in part on ensuring continuous wide-ranging labour market participation for all groups of workers. However, over time (58), convergence in this respect has only been seen for some groups (Chart 23).

Taking the total as the benchmark, three groups can be distinguished. A *first group* consists of women and those aged 50-64 years of both sexes, which has shown some convergence in their employment rates even though in 2013 these still lagged behind the average employment rate of the total workforce by 6 and 9 pps respectively. Those aged 50-64 years saw a large increase in their employment rate overall, but with big differences between those aged 50-59 – with a rate of over 70 % – and those aged 60-64 – with a rate of less than 35 % in 2013.

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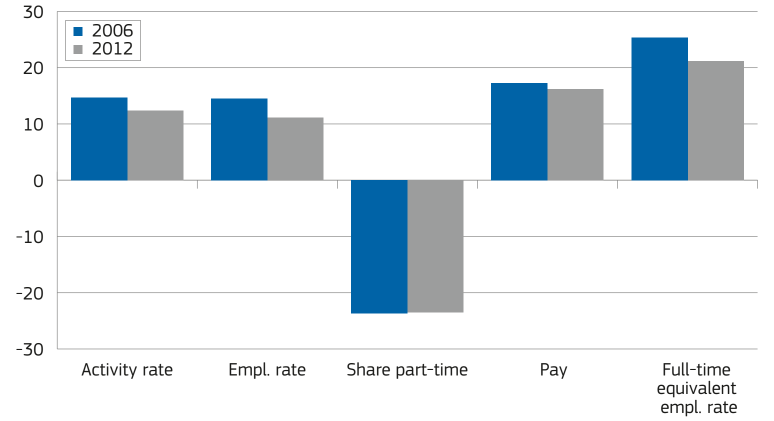
(58) Unfortunately, no comparative data is available prior to 2002.

The labour market situation of women and older workers will be analysed in further detail.

A *second group* consists of third-country nationals, workers with a low level of education (ISCED 0-2), and young people aged 20 to 24 years, who already lagged behind the average in 2002 and have performed weaker than average since.

Compared to the overall average in 2013, the employment rate of national workers is 0.5 pp higher, while the rate of foreign workers is 6.5 pps lower. Among foreign workers, a large divide has opened up between foreigners from another EU Member State (2.5 pps above the average) and third-country nationals (more than 12 pps below).

Chart 24: Gender gaps narrowed during the crisis, mainly as men were hit harder



Source: Eurostat, lfsa_argan, lfsa_ergan, fsa_eppgan, lfsa_urgan, earn_gr_gpgr2, lfsa_ewhuna and lfsa_ewhun2.

Note: The gap is the figure for males minus the corresponding figure for females. The pay gap is 2008 and 2011.

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The skills of third-country nationals residing in the EU are very much underused, in particular in the case of women. Since 2008, the employment rate gap between third-country nationals and national citizens has widened, especially in medium-skilled and high-skilled categories, noting also that many third-country nationals are over-qualified for the jobs they perform (59).

The *third group* includes all other groups of workers, who had above-average employment rates in 2002, but have not improved since. In almost all cases (the exception being ISCED 3-4) the 2013 employment rate was below its 2002 level, while remaining above the overall average.

For male workers, the above-average decline since 2008 reflects the fact that men are over-represented in sectors such as construction and manufacturing which were particularly hit in the recession.

Gender and labour market participation: fewer and worse jobs for women

While women have historically experienced unfavourable labour market (and social) outcomes compared to men, as reflected in persistent gender gaps on various criteria, women contributed more than two-thirds of the total growth in employment in the EU in the decade before the crisis and, during the crisis, the employment rate of women remained stable while it declined significantly for men (60).

The crisis actually resulted in a reduction in the gender gap on various criteria (see Chart 24). However, the underlying gender differences persisted in terms of labour market participation, pay and the risk of poverty. Moreover, since women tend to accumulate fewer total hours over their working lives than men, the total gender employment gap is larger than the simple comparison of employment rates suggests. Moreover, although this gap has narrowed during the crisis years, it is still high and persistent (61).

While the lower rates of female labour participation can reflect individual preferences and be associated with some favourable effects, it still leads to diminished career opportunities, lower pay, lower prospective pensions and an underutilisation of human capital, resulting in lower GDP. Many societal or institutional barriers and constraints remain to be tackled in this respect and such structural labour market and social inclusion challenges may harm both the supply and demand side of the EU labour market.

Although Member States perform differently in terms of hours worked by men and women, there are some different patterns: in some cases a high share of women are working but for relatively short hours; in others female participation is lower but, once in employment, women tend to work relatively longer hours. Relatively few Member States succeed in combining high female employment rates with a low gender gap in terms of the total number of hours worked.

Factors that have been identified that allow a combination of high participation and longer hours for women are gender-equal working time, widely available flexible work and employment-friendly, accessible and affordable childcare with longer day-care hours (62).

Older workers: active ageing

Despite the success in raising the employment rate of older workers over the last decade to close to 50 %, achieving the target overall employment rate of 75 % for workers of all ages by 2020 depends in part on sustained progress in this age group given that the working population in the EU is projected to age significantly in the coming decades which will pose a major challenge to the sustainability

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(59) See 'Special Focus: Labour Market Situation of Migrants' in European Commission (2011b), Supplement 'Recent trends in the geographical mobility of workers in the EU' in European Commission (2014b) and OECD/European Union (2014).

(60) When leaving out the sectors of agriculture, mining, manufacturing and construction, employment of both genders grew at about the same pace between 2010 and 2013. From 2008 to 2010, employment of women in this aggregate grew 0.8 %, while it was stable for men.

(61) See also Chapter 3, 'The gender impact of the crisis and the gap in total hours worked' in European Commission (2014a).

(62) See European social partners' agreement on parental leave http://ec.europa.eu/social/main.jsp?catId=521&langId=en&agreementId=5129, implemented by Council Directive 2010/18/EU.

of an (un)adjusted European Social Model (63) (Chart 25).

In order to encourage and assist older people to remain active longer, appropriate policy responses or incentives will need to be targeted on both workers and firms, since market forces alone are unlikely to succeed given that the decision on whether to retire or remain in the labour market is a complex one, and not just dependent on financial considerations (64).

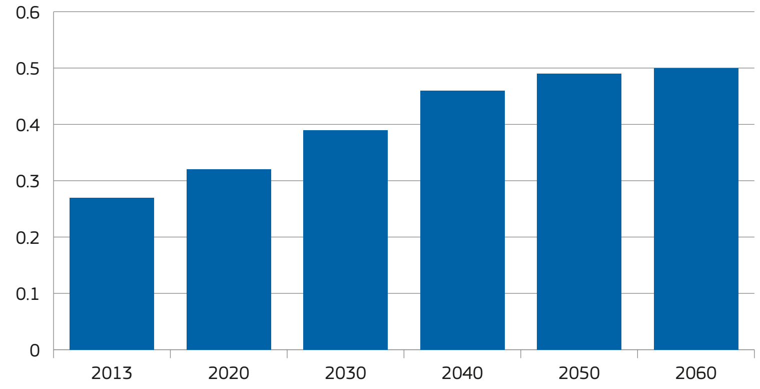
Individual and household characteristics will play their part, including the worker's education level (65), the health of both the worker and spouse, and the spouse's activity. Institutional factors include the way older earners are treated in tax-benefit schemes, the retirement eligibility conditions, and the influence of the statutory retirement age.

Factors affecting differences in employment rates, including employment protection legislation

Many factors affect the differences in labour market outcomes of different groups with their relative importance being almost always country-specific and including structural issues as labour taxation and benefits (and the associated unemployment and inactivity traps), childcare access, retirement rules, the level of minimum wages, the labour market adequacy of the education system, as well as cyclical issues such as the strength of demand.

In this chapter, some of these factors are discussed when the labour market outcome of a specific group is discussed, others when the general obstacles for job creation are reviewed. Often it is argued that employment protection legislation (EPL) – essentially the set of rules governing hiring and firing (66) of employees – has a strong link to labour market segmentation and hence can be harmful for new entrants.

Chart 25: **Old–age dependency ratio in EU-28**



Source: DG EMPL calculations on the basis of Eurostat EUROPOP2013 – Population projections.

Note: The old-age dependency ratio is the ration between the population aged 65+ and the population aged 16-64.

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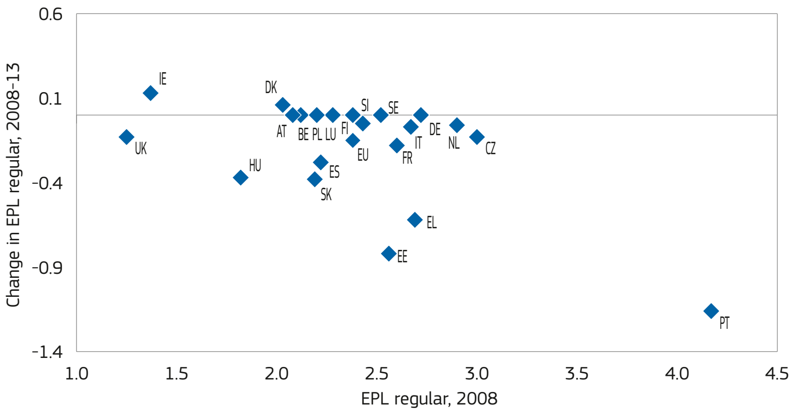
Chart 26: **Convergence in EPL on regular employment, 2008-13**



Source: OECD Employment and Labour Market Statistics, Strictness of employment protection legislation: regular employment, Version 3 (EU = median of available Member States).

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EPL seeks to balance the interests of firms and workers. Firms have to be able to adapt their operations quickly, including adjusting the size and composition of their workforce, while the workers need protection against job loss. There are the publicly borne financial and social costs linked to unemployment. Productive economies also need motivated workers willing to contribute to the success of their company and a certain degree of job protection can encourage such behaviour.

EPL legislation has evolved in recent years with around half of Member States having reduced protection on regular employment with the objective of helping to combat labour market segmentation (Chart 26), although Greece and Spain have also reduced protection of temporary contracts (67).

Large costs and rights differences between permanent and non-standard work (68) contracts are seen to encourage companies to opt for a prominent use of the latter. As a consequence, these jobs often do not serve as a stepping-stone to more permanent forms of work and rarely provide for sufficient access to lifelong learning, social protection (including pension rights) and monetary protection in the case of termination without fault. This is one aspect of labour market segmentation, with protected

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(63) See also Peschner and Fotakis (2013) and European Commission and the Economic Policy Committee (2012).

(64) See also 'Chapter 5: Active ageing' in European Commission (2011a).

(65) Older workers with higher education levels have higher participation rates.

(66) The hiring rules are the conditions for the use of standard and non-standard labour contracts. The firing rules are the rules on individual and collective dismissals of workers on standard permanent contracts.

(67) Please note that the EPL data are only available for OECD member countries, excluding the other eight EU Member States from the analysis.

(68) Such as fixed-term contracts, temporary agency work, part-time work and independent contract work.

insiders on permanent contracts versus outsiders on fixed-term contracts, often young people, who run a high risk of in-work poverty (69).

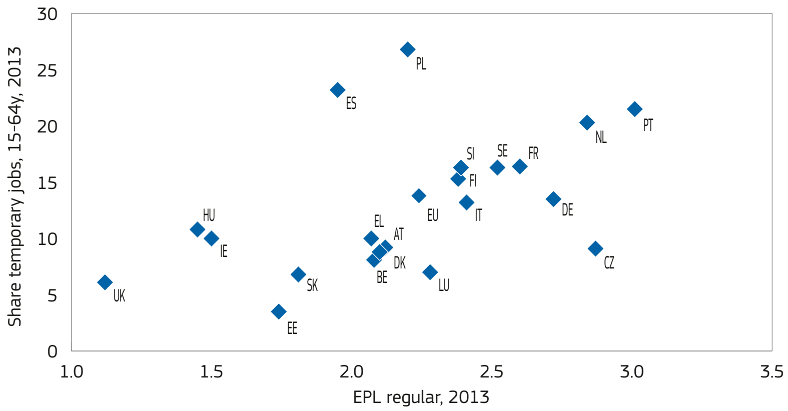
Temporary contracts are not necessarily problematic if they serve a positive purpose, as for example when they combine work and the acquirement of specific skills through training and learning by doing which could, for example, allow young workers to move from a temporary contract to a more stable employment relationship. Indeed, Chapter 1 documents huge country differences not only in the share of temporary contracts but also in positive transitions.

Chart 27 shows that a high level of employment protection for regular employment, as measured by the OECD indicator, helps to explain the share of temporary jobs. Nevertheless, attempts to assess the effect of EPL reforms on labour market outcomes are made difficult by timing issues (lags), methodological issues and the problem of attempting to do so in a period when the level of labour demand in many countries remains very low (see also Turrini et al., 2014).

Moreover, there is evidence that, in some of the most resilient Member States, their relatively high level of EPL is not necessarily damaging to well-functioning labour markets, while Member States with relatively low levels of EPL do not necessarily create more jobs. All this evidence suggests the need to take a broader approach to the assessment of the impact of EPL within different labour market and social protection systems.

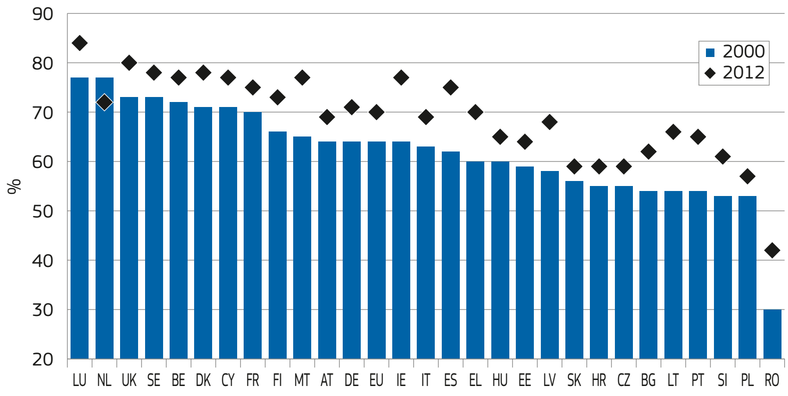
The evidence suggests that the main benefits of reforms designed to reduce labour market segmentation tend to be in terms of providing better opportunities to find jobs that match available skills and thereby improve longer-term career prospects (70). This suggests that, in order to improve their effectiveness, changes in employment protection should be supported by a range of policies such as activation and training, employment services, lifelong learning and adequate social security systems (71), as well as possible fiscal policy changes (72).

Chart 27: **EPL on regular employment and the share of temporary employment**



Source: OECD Employment and Labour Market Statistics, Strictness of employment protection legislation (EU = median of available Member States), Version 3 and Eurostat, lfsa_etpgan.

Chart 28: **Share of technology- and knowledge-intensive jobs in total service sector employment**



Source: Eurostat, Science and technology, htec_emp_nat and htec_emp_nat2.

Note: 2000 and 2012 data are not fully comparable because of change-over in NACE code. Data are for 2011 instead of 2012 for UK and EU; 2002 and 2004 instead of 2000 for Croatia and Poland respectively.

More generally, while reforming EPL may be relevant in terms of reducing segmentation, it is far from being the only way forward, with other actions – such as encouraging employers to use internal flexibility for established workers and work-training combinations for new or re-entrants – also being potentially positive options.

4. JOB CREATION WITH PRODUCTIVITY GROWTH

4.1. What sort of jobs will be created?

Technological progress, especially in key enabling technologies (73) and information and communication technologies (ICT), in combination with the forces of globalisation, are widely seen as the basis for the creation of new higher quality jobs, which the EU could exploit to its comparative advantage while enabling it to speed up productivity gains in order

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(69) See also "Segmentation of the EU labour markets" in European Commission (2012b).

(70) See Chapter 2 "Reducing labour market segmentation by supporting transitions: towards a new momentum for flexicurity" in European Commission Policy Review, 'New skills and jobs in Europe: Pathways towards full employment', Publications Office of the European Union, Luxembourg, 2012. http://ec.europa.eu/research/social-sciences/pdf/new-skils-and-jobs-in-europe_en.pdf

(71) Notably reforms in social protection that are adequate to deal with the challenges created by an increased job turnover as a result of lesser job protection.

(72) Notably, assessing the tax wedge on low-paid workers.

(73) Key enabling technologies (KETs) enable the development of new goods and services and the restructuring of industrial processes needed to modernise EU industry and make the transition to a knowledge-based and low-carbon resource-efficient economy (European Commission, 2012a).

to offset the likely impact of a declining working-age population.

At the same time, demographic trends characterised by ageing populations and changing family structures are expected to create new jobs in the health and care sectors, while the ‘greening’ of the economy and a more intensive use of ICT could result in profound changes in the skill profiles that employers want, and employees need (74).

Nevertheless, there are limits to this positive outlook in that the benefits of these transformations can only be sustained by a virtuous circle of continuous innovation, supporting strong knowledge-intensive and technology-intensive enterprise sectors backed by expanding international trade and appropriate human capital investment. Moreover, work organisation that supports the adaptability of firms to these transformations is seen to be required (see Chapter 3 of this issue).

At the same time it has to be recognised that, along the way, many existing jobs will inevitably be destroyed and there is no automatic guarantee concerning the impact of such changes on overall job quality. Skill mismatches (75), gaps and shortages are liable to be issues in this respect, with the risk of a potential worsening of the existing labour market polarisation which would further inhibit the realisation of the EU’s employment goals in 2020 and beyond.

4.2. Job and wage polarisation: a pre-crisis trend that has continued

Even before the crisis there was evidence of an increasing polarisation in the labour market, with new jobs being concentrated at the high and low ends of the skill and income scale, notably in the expanding service sectors, with a predominance of better-paid jobs.

The intensity of the 2008 recession and the consequent job reallocations destroyed many medium-paid jobs in manufacturing and construction (Chart 29) while, at the same time, the educational and skills profiles in the new service-based jobs structures have tended to be more demanding, limiting the chances of re-employment for those who had lost their jobs during the recession.

This experience highlights the importance of addressing wage-related issues in terms of factors such as wage-setting mechanisms and the income security implications of low wages; and the need for up-skilling and re-skilling of the workforce at all levels (76).

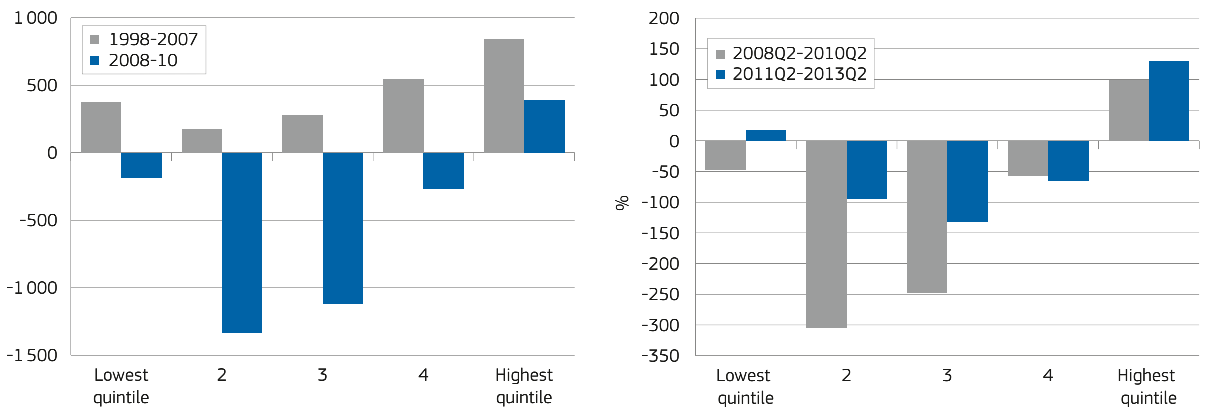
From an individual perspective, choosing which specific skills to acquire in addition to crucial transversal competences is an important factor for a successful working life. Likewise, from the perspective of the economy, it is necessary to improve the ability to forecast future skills demand, ensure effective labour market matching, promote the adaptability of enterprises and workers to change and develop new sectors with sustainable job-creation potential.

Many low-skilled jobs will continue to exist but will nevertheless require greater literacy, numeracy and other basic skills. Equally, the availability of more high-skilled jobs will not guarantee that all graduates find appropriate work unless the content of tertiary education is aligned with new needs.

4.3. A major role for lifelong learning

To ensure a virtuous circle of continuous innovation supporting a strong knowledge-intensive and technology-intensive enterprise sector, a strong and continuous investment in human capital is clearly necessary. This means not only investing in initial education and training systems, but also ensuring that the skills people acquire are used and maintained over their life course. In this respect, all stakeholders have an important role to play (77).

Chart 29: **Polarisation of jobs in the EU, 1998-2010, and 2008-12**



Source: European Commission (2011a).

Note: The Chart shows the annual average change in absolute employment by wage quintile, in thousands.

Source: Eurofound (2014), *Drivers of recent job polarisation and upgrading in Europe: European Jobs Monitor 2014*, Publications Office of the European Union, Luxembourg.

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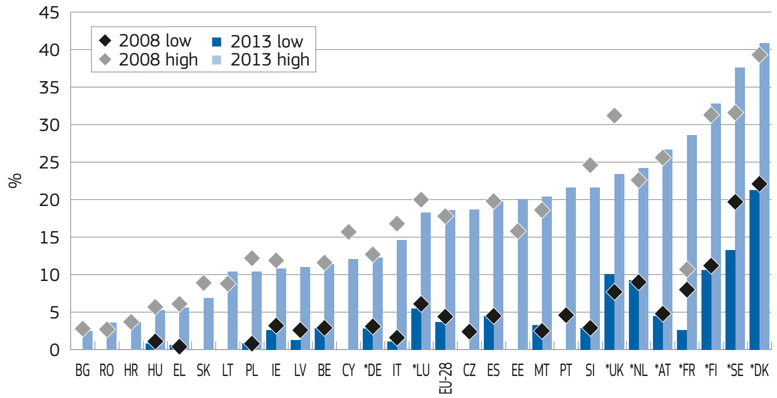
(74) See also Chapter 1, ‘EU employment in a global context: where will new jobs come from and what will they look like?’ in European Commission (2014a) and Chapter 3, ‘The Future of Work in Europe: Job Quality and Work Organization for a Smart, Sustainable and Inclusive Growth’, of this review.

(75) See also Section 2.2.

(76) See Chapter 1, ‘Shifts in the job structure in Europe during the recession’ in European Commission (2011a) and Box 3, ‘Employment polarisation in the crisis’, in European Commission (2013d).

(77) For example, social partners identify skills gaps and need, develop joint curricula, and provide training through paritarian funds.

Chart 30: **Participation in lifelong learning by education (%)**



Source: Eurostat, trng_lfse_03, 25-64 years old Member States indicated by * are among the top 25 most competitive countries in the world in 2013, according to the 'IMD World Competitiveness Yearbook 2013', International Institute for Management Development.

Note: ISCED-97 classification used: low education level corresponds to pre-primary, primary and lower secondary education (levels 0-2) and high education level corresponds to first and second stage of tertiary education (levels 5-6). Due to breaks in series, instead of 2008 values the 2009 value is used for LU and the 2010 value for NL. Due to breaks in series, there is no value for 2008 for CZ and PT, or for 2008 'high' for LV. There is no 'low' shown for BG, RO, HR, SK, LT, CY and (2008 only) EE, due to low reliability.

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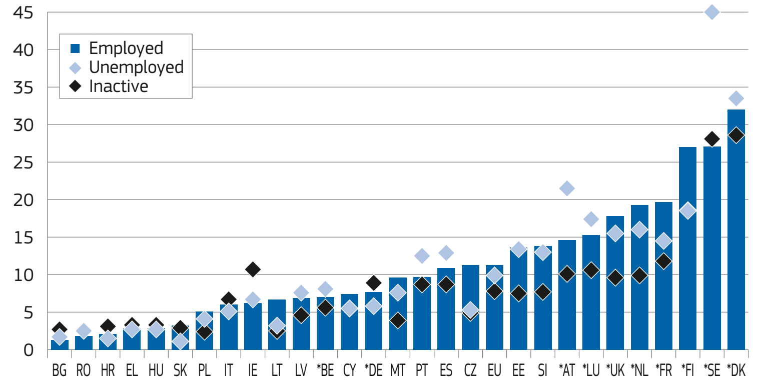
Chart 31: **Participation in lifelong learning by labour status (%), 2013**



Source: Eurostat, trng_lfse_02, 25-64 years old, Member States indicated by * are among the top-25 most competitive countries in the world in 2013, according to the 'IMD World Competitiveness Yearbook 2013', International Institute for Management Development.

Note: Values for unemployed: CY 5.5; FI 15.5.

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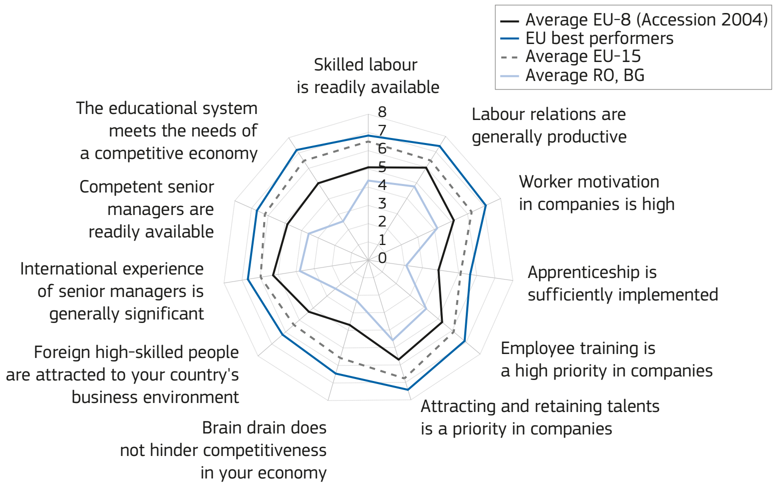
Chart 32: **Higher levels of business values and investment in skills are associated with higher competitiveness**



Source: DG EMPL calculations on the basis of Business Survey results from the 'IMD World Competitiveness Yearbook 2014', International Institute for Management Development.

Note: Index values (0-10 index points) for respective statements. Median values taken by group. EU best performers include SE, DE, DK, LU, NL, IE, UK and FI, which were ranked among top 20 competitive countries (out of 61) in 2014.

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Concerning public policies, it is encouraging that participation in lifelong learning (LLL) (78) was higher in 2013 than it had been before the recession (albeit with a slight dip in 2011 (79)). However, Member States where LLL was already the highest in 2008 have seen the most progress, specifically for the low-skilled, where progress has been lacking in some Member States (Chart 30).

Member States with the higher levels of participation in lifelong learning for both the employed and the unemployed (Chart 31) also have the highest labour market performance in terms of having the highest transition rates out of unemployment and lowest transition rates from employment to unemployment (see Section 3.1). This has positive implications for the prevention of long-term unemployment and exit rates out of unemployment.

However, Chart 31 shows that in seven Member States, only around 5% of workers participate in lifelong learning and less than 10% in a further nine. Moreover, only in a few countries is the participation of the unemployed in LLL higher than for workers although public policy might have been expected to be focused on encouraging the use of periods of unemployment to improve competencies and skills.

Business surveys show big differences in the way companies and workers see the quality of managers and in-firm training. They also show that the most competitive and resilient countries are those where companies and entrepreneurs value and invest most in skills (Chart 32). In this context, however, huge challenges clearly remain in a number of countries notably in Central and Eastern Europe and in some Southern European countries.

To mitigate the risk of accelerating labour market polarisation, a return to growth combined with adequate policy responses is needed. These responses include stronger synergies between education/training systems and the needs of enterprises, as well as a greater involvement of companies in the use and development of skills. Unless the worst performing countries make substantial

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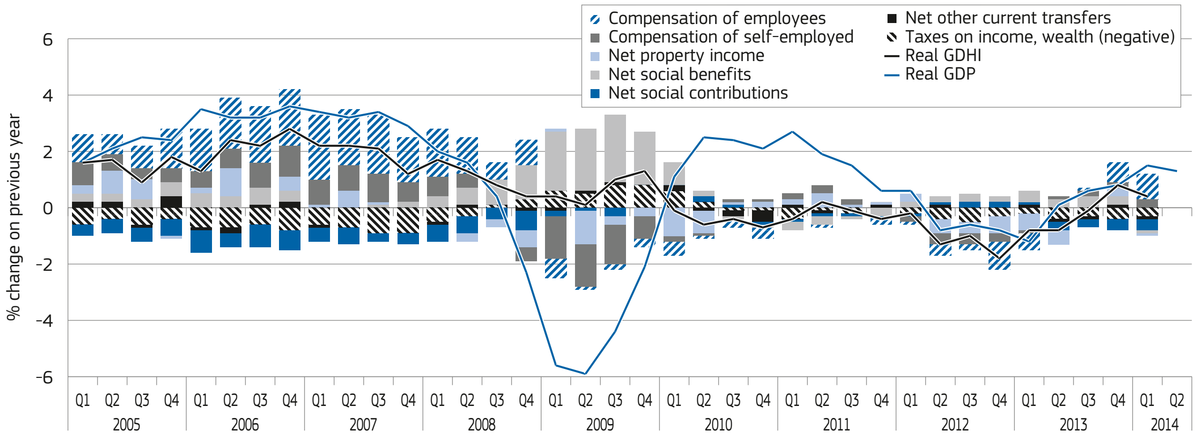
(78) Lifelong learning is measured through the participation rate in training and education in the last four weeks.

(79) Please note that comparisons over time are hampered by breaks in series, for example for France and the EU in 2013.

Chart 33: Real change in Gross Disposable Household Income by component in the EU (year on year; 2005Q1 – 2014Q2)



Source: Eurostat, National Accounts, data non-seasonally adjusted [namq_gdp_k, nasq_nf_tr and namq_fcs_p] (DG EMPL calculations).

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

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improvements in in-firm training, and this requires a big change of attitude by companies, skills and productivity will continue to languish.

5. WHO WILL BENEFIT FROM INCOME GROWTH?

5.1. Household incomes declined in the crisis but have started to recover

After nearly four years of continuous declines, gross disposable household income in the EU [80] increased in real terms in the last quarter of 2013, as result of the general economic recovery and the associated improvements in labour market conditions. The overall decline in household incomes had mainly been driven by job losses, reduced working hours and wage compression in some Member States.

In the first years of the crisis, unemployment benefit systems played an important role in stabilising income, while other items of social expenditure (notably pensions and health) also helped maintain aggregate demand (see Chart 33). Since 2011, however, the stabilisation impact of tax and benefit systems has weakened over the prolonged recession. This was due to various factors including the increasing number of long-term unemployed losing their entitlements, the partial phasing-out of the stimulus measures taken to counter the crisis, and cuts in social expenditure under pressure of budgetary consolidation. According to a recent EUROMOD analysis [81], between 2008 and 2013 the total impact of changes in the tax and benefit systems on household disposable income was particularly strong in Ireland (-17 pps), Greece (-14 pps), Portugal, Spain and Lithuania.

It is to be expected that the redistributive impact of taxes and transfers increases with unchanged policy settings when unemployment increases significantly. However, policy changes implemented during the crisis also had an impact on the income distribution. The analysis based on EUROMOD [82] shows that, in many countries, the measures taken during the crisis had either neutral or progressive impacts on income distribution, with a few notable exceptions (Germany, Estonia and Lithuania). It also shows that similar types of tools can have different distributional impacts depending on their design, and independent of the size of the adjustments.

5.2. Rising poverty mainly affects the working-age population and children

As could be expected, poverty and social exclusion in the EU worsened during the crisis and has shown little sign of improvement up to 2013, especially in Member States where economic conditions continue to worsen. The deterioration of labour market conditions has significantly increased the number of people on low income or living in jobless households, with the overall reduction in household incomes resulting in increased hardship among the poorest segments of the population, resulting in a rise in material deprivation.

The working-age population has been most affected, mainly due to rising levels of jobless or low work-intensity households and increased in-work poverty. In more than 20 Member States, the risk of poverty or social exclusion for children has risen since 2008, along with a worsening situation for their (mostly working-age) parents, with single-parent households facing the highest risks. Older people (65+) have been relatively sheltered as pensions have remained largely unaffected, while income levels for the working-age population have stagnated or fallen. In most countries, women are still more affected by old-age poverty than men.

The likelihood of entering into and exiting from poverty varies greatly across Member States and between population groups [83]. In some countries a significant proportion of the population is trapped in persistent poverty, while in others they may exit poverty for a time but nevertheless return. The key risk factors include

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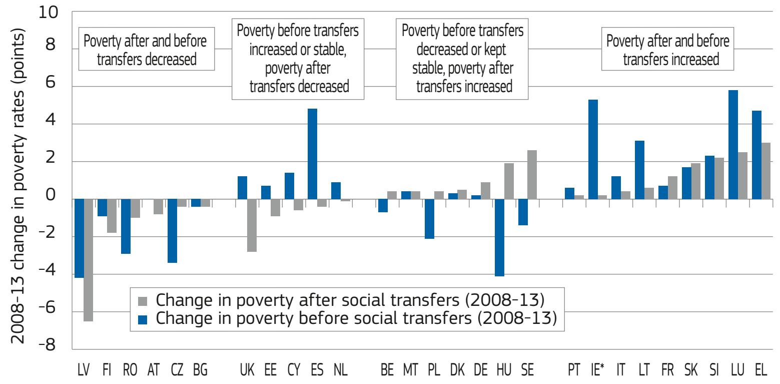
(80) Estimate based on data for 20 Member States.

(81) De Agostini P., Paulus A., Sutherland H. and Tasseva I. (2014), 'The effect of tax-benefit changes on income distribution in EU countries since the beginning of the economic crisis', EUROMOD Working Paper Series EM9/14 – 02 May 2014.

(82) De Agostini P., Paulus A., Sutherland H. and Tasseva I. (2014), 'The effect of tax-benefit changes on income distribution in EU countries since the beginning of the economic crisis', EUROMOD Working Paper Series EM9/14 – 02 May 2014.

(83) See Chapter 2 in European Commission, 2013c, Chapters 3 and 4 in European Commission, 2011a.

Chart 34: **Poverty reduction impact of social transfers (excluding pensions), 2008-13**



Source: Eurostat EU-SILC.

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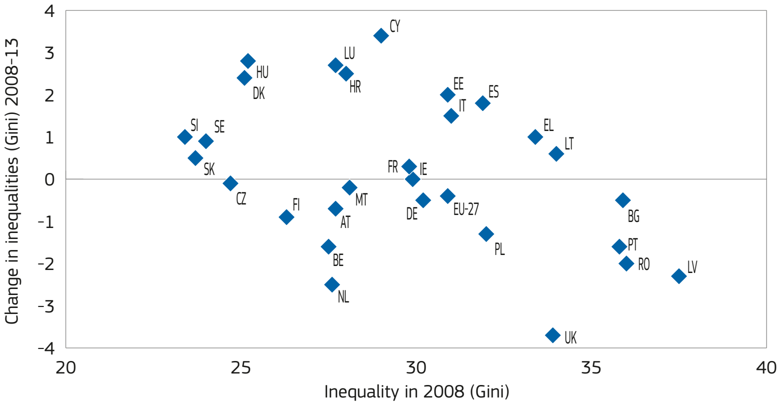
Chart 35: **Level and changes in inequalities between 2008 and 2013. Gini Index**



Source: Eurostat, Gini coefficient of equivalised disposable income (source: SILC) (ilc_di12).

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lack of strong labour market attachment, being young or old and being in particular family circumstances, including those caused by care obligations; as well as other individual characteristics, such as disability, being a migrant or coming from a minority background.

In the crisis all these factors have been reinforced by increased long-term unemployment, labour market segmentation and wage polarisation (see Section 4.2). The weakening of the poverty reduction impact of social transfers also played a role in a number of countries (see Chart 34), as measures taken to restore the financial sustainability of welfare systems included reductions in the level or duration of benefits, or tightened eligibility rules to increase incentives to seek work, and may have led to excluding beneficiaries from certain schemes. Restoring the effectiveness of such schemes and adapting them better to the economic cycle would be important.

While the deterioration of labour market conditions was a strong driver of the rise in working-age poverty, past experience has shown that improvements in the labour market do not necessarily lead to a reduction in poverty. This implies that, independent of any improvement in the economic and employment outlook, a combination of effective policy interventions is likely to be required in order to support returns to work and ensure that jobs enable workers and their families to stay out of poverty. This is especially the case for workers who have been out of work for some time or have weak ties to the labour market.

Analysis ([84]) shows that income support (unemployment and social assistance) can support returns to employment if linked with activation and well designed (see also Section 3.2). Income support also allows people both to maintain a decent standard of living and devote time to job search. Enabling services such as training, Public Employment Services, childcare or housing support the employability and active participation of people in society. At the same time, the likelihood to escape poverty on a lasting basis when moving into employment depends on the quality of jobs, including decent pay and sufficient working hours to earn a living, but also on measures supporting households willing to increase their level of labour market participation (taxation for the second earner, childcare and other reconciliation measures).

Policies to address and prevent poverty and long-term exclusion need both to prevent people from falling into persistent poverty and to reach the most excluded.

5.3. Mitigating rising inequalities requires training and quality jobs for all and improving the effectiveness of social policies

Since the beginning of the crisis, income inequalities have converged across the EU (Chart 35). They have increased in the countries with lower levels of inequality (Denmark, Croatia, Luxembourg, Hungary, Slovenia, Slovakia, Sweden), while they have decreased in a number of countries with initially high levels (Bulgaria, Latvia, Portugal, Romania). Greece, Lithuania and Spain are exceptions in so far as inequalities have increased from their already high levels.

Income inequalities are primarily formed on the labour market reflecting both labour market exclusion and a polarisation of earnings of those in work. Market income inequalities (i.e. referring to the distribution of incomes before taxes and transfers) among the working-age population ([85]) have increased in at least 15 Member States (Chart 36) with the largest increases in those countries hit hardest by the crisis notably Ireland, Greece, Spain and Estonia, but also Denmark, Slovenia, Germany, France, Austria and Italy.

While rising unemployment obviously increases the income gap between

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(84) See Chapter 2 in European Commission, 2013c, Chapters 3 and 4 in European Commission, 2011a.

(85) Inequalities are measured based on the Gini coefficient in this Chapter – OECD, Income Inequality Update 2014.

those in and out of work, the crisis has also led to a further widening of labour market inequalities among those in work. This is because well paid, full-time jobs remained relatively well protected, while lower-paid workers often ended up with fewer hours worked and less take-home pay. In fact, in the years 2011-12 most of the new permanent jobs and full-time jobs were high-paid jobs while the new low-paid jobs were increasingly part-time and temporary (see Chart 37). Likewise, job losses tended to be concentrated in low- to middle-income households, while richer households were relatively spared and more often combine two full-time jobs (see Chapter 1).

Mitigating rising inequalities therefore requires actions to address the forces driving labour market (earnings) inequality, preventing and tackling long-term unemployment and improving the effectiveness and efficiency of social protection systems.

Mitigating rising labour market inequalities

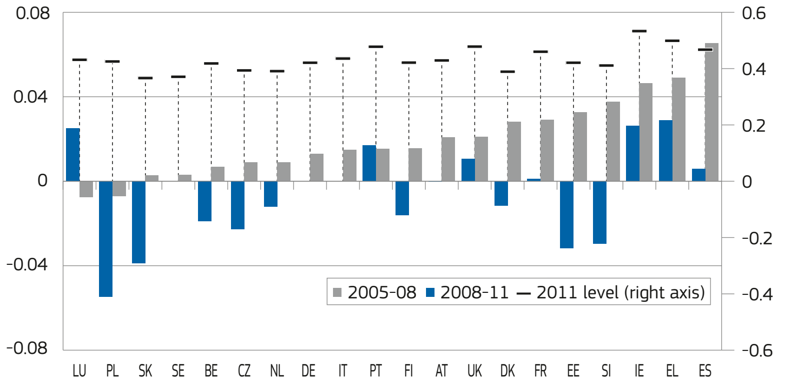
Over the long term, the main drivers of overall earnings inequalities are skills bias, technological change and policy interventions that may affect employment and earnings distribution differently, resulting in a complex impact on inequalities as analysed by the OECD in their latest report on inequalities (86).

As illustrated in Section 3.2, participation in training protects workers from unemployment and increases the chances of the short-term unemployed going back to work. At the same time, investing in skills may help more people into employment but may increase dispersion in hourly wages. Great attention has to be paid to these interactions when designing policy interventions.

Tackling labour market segmentation, improving the quality of jobs (notably by ensuring access to adequate working hours and working conditions for all workers) and tackling underemployment (e.g. involuntary part-time) can also mitigate earning inequalities and improve the overall use of human capital. This may require considering adaptations to wage-setting mechanisms, increased income security for the low waged and the up- and re-skilling of the workforce at all levels (87).

Measures to facilitate the entry of low-skilled workers into the labour market may contribute to increasing the dispersion of hours worked and wages, while narrowing the total earnings dispersion by reducing the number of individuals who are not working.

Chart 36: Trends in market income inequalities between 2005 and 2011, Gini coefficient, 18-65 population



Source: OECD, Income distribution database, own's calculations.

Note: No data for HU, HR, MT, CY, LT, LV ; no data for 2005 for SE, DE, IT; 2011 data not available for BE (2010) and NL (2012).

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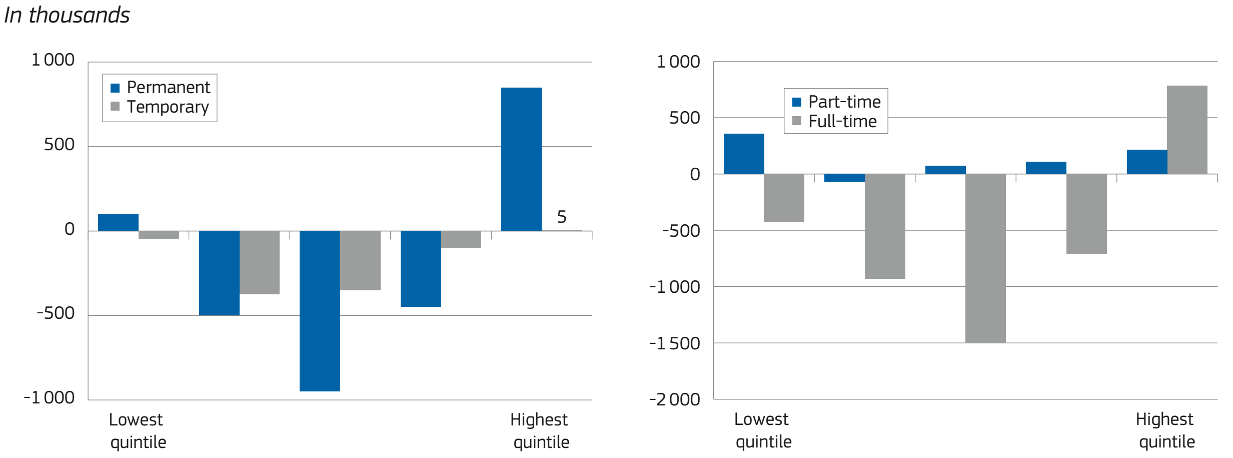
Chart 37: Employment change by job-wage quintile and full-time or part-time status (a) and temporary versus permanent (b), EU, 2011 Q2 to 2013 Q2



Source: European Job Monitor 2014, based on Eurostat, EU-LFS and SES (Eurofound calculations)

Note: Data for 26 Member States; Germany and the Netherlands excluded due to data breaks.

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(86) OECD (2013).

(87) See Chapter 1, 'Shifts in the job structure in Europe during the recession' in European Commission (2011a) and Box 3, 'Employment polarisation in the crisis' in European Commission (2013d).

Preventing and tackling long-term unemployment through activation, training and income support can also mitigate labour market inequalities. However, when faced with a prolonged recession and the increase in long-term unemployment, most welfare systems came under pressure, and there is now a need to restore their effectiveness.

Improving the effectiveness and efficiency of social spending

Tax-benefit systems helped to maintain gross household disposable income in all Member States in the first phase of the crisis. However, this also represented a further challenge to government financing as tax revenues declined in line with falling GDP, while expenditure levels did not.

While the intensity of fiscal consolidation has differed across countries, Member States used markedly different economic and social approaches and achieved somewhat different outcomes in terms of income smoothing and poverty and inequality reduction despite similar levels of spending.

The allocation of welfare expenditure to different social functions has strong implications for the overall efficiency and effectiveness of social protection ([88]). In 2010, EU Member States had different welfare expenditure patterns. For instance, Member States such as Italy or Poland have a strong orientation towards pension expenditure, associated with relatively strong pension adequacy, but also with a low level of labour market attachment among older workers. In such cases, there may be scope to improve the efficiency of old-age spending and shift the spending towards other functions that support those of working age.

As analysed in Chapter 1 of this review, countries that have directed their social investment expenditure efforts to helping people return to work, through active labour market policies combined with widely available and well-designed unemployment benefits, have shown better signs of resilience in the recession. However, most welfare systems were not designed for a prolonged crisis and recent reforms of unemployment benefits systems have not introduced measures to improve the reactivity of the systems to the economic cycle (e.g. automatic triggers) in the event of future recessions.

Table 3: Evolution of the social investment orientation of social spending in EU Member States

Investments in 2007		Between 2007 and 2011		
		Decreased	**Stable**	**Increased**
Overall level of spending oriented towards social investment	**High**	DK	FI	SE
	Medium	EL, ES, IT, HU, PT, RO, SI, UK		AT, BE, DE, FR, LU, LV, NL
	Low	BG, CZ, IE, CY, LT, PL	EE	MT, SK

Source: European Commission (2014) Chapter 1.

Notes: Member States in Group 1 have high expenditure in 2007, Group 2 medium and Group 3 low. Levels refer to expenditure in child day care per relevant child population, education expenditure per relevant young population and mostly active unemployment expenditure per unemployed in 2007. In the columns Member States are grouped according to the real evolution of expenditure between 2007 and 2011. Stable real growth is defined for changes between 1.5% and −1.5% for education expenditure, −4% and +4% for unemployment and family, and, −5% and +5% for active unemployment. The level of overall expenditure in 2007 is based on the social investment score, which assigns an equal weight to the three areas. Overall trend is based on the average growth in the three areas. For NL the social investment score is based only on education and child day care expenditure as data for mostly active unemployment measures are not reliable in ESSPROS.

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Furthermore, while the strictness of employment protection legislation has been further reduced in most countries, the coverage and adequacy of benefits did not improve, the financing of active labour market policies has declined slightly and participation in training and lifelong learning has fallen slightly, although it did recover slightly in 2013. Hence renewed attention needs to be paid to the orientation of social expenditure and the interaction of income support schemes with labour market regulations.

During the recession social investment in children and families (notably through early childhood education and care) continued to strengthen ([89]), but there have been signs of a weakening investment in education and the unemployed in some Member States. Table 3 summarises the evolution of the social investment orientation of social spending. It shows that while a number of Member States seem to be moving towards a social investment model, others seem to be departing from it.

The crisis has also shown that Member States with better coverage and more adequate unemployment benefits achieved better automatic stabilisation. However, while these systems proved adequate in the first phase of the crisis in sustaining household income, they were not designed for a prolonged crisis. Faced with a prolonged recession and the increase in long-term unemployment most countries did not, or could not, strengthen the automatic stabilisation dimension of their welfare systems, thus undermining the effectiveness of social protection.

Analysis presented in Chapter 1 of this review shows that the responsiveness of unemployment benefits to the economic cycle can be increased by allowing a temporary increase in the duration of benefits and a relaxation of the eligibility criteria during recessions. Other measures, such as minimum income schemes linked to activation and a more responsive indexation of family benefits and pensions can also play a role.

Overall the evidence indicates that adequate levels of social investment, investment in lifelong learning, social expenditure that are more responsive to the economic cycle and integrated welfare reforms supported by well-functioning labour markets all help mitigate excessive inequalities.

([88]) As analysed in European Commission, (2014e), efficiency gains can be obtained by shifting expenditure from functions in which high levels of spending are associated with comparatively low economic or social outcomes, towards functions where relatively low spending levels may explain their below EU average outcomes.

([89]) A recent report of the OECD analyses in detail the 'relative efficiency of cash versus in-kind family benefits'. See OECD (October 2014). It provides insight on the potential efficiency gains of several combinations of cash and in-kind benefits for different levels of spending and policy goals.

6. SOCIAL AND LABOUR MARKET IMBALANCES IMPACT GDP GROWTH

6.1. How unemployment, poverty and inequality might affect GDP growth, also across national borders

While GDP growth is the central pillar of economic performance, it is important to recognise that growth alone is not enough to bring jobs (see Section 2), that employment growth does not necessarily bring sufficient earnings growth (see Section 5.1), and that tax-benefit systems do not necessarily ensure adequate redistribution (see Section 5.3).

It is also necessary to consider the interactions from the opposite direction: how do labour market conditions and levels of inequality and poverty affect GDP growth? All three possible causalities come with a time dimension:

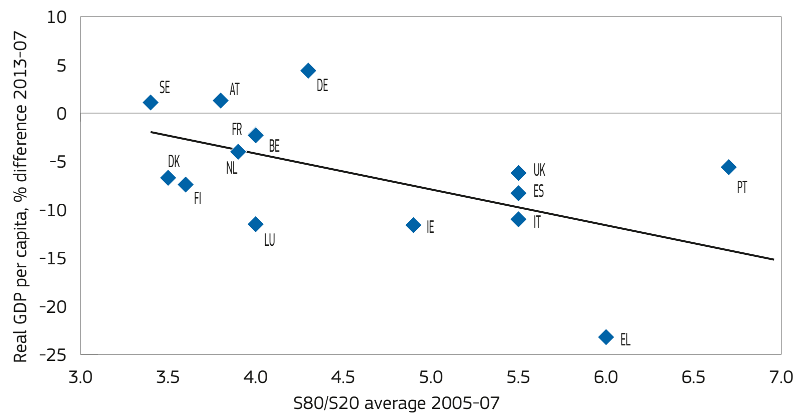
In the short term, higher unemployment, inequality and poverty are expected to curb GDP growth through constraints on demand (90).

In the medium term, the associated lack of available financial resources can lead to the build-up of unsustainable household debt levels, which potentially endangers future GDP growth (via increased financial risks).

In the long term, higher inequality and poverty can affect potential GDP, through reduced access for many households to education and health services, affecting human capital.

Higher unemployment can, over the medium term, affect GDP growth through diminished human capital, through skills loss of the (long-term) unemployed and young workers, whose access to the labour market is blocked. Higher unemployment, inequality and poverty can, rather quickly, bring the risk of social unrest and a lack of support for government, both of which might endanger the implementation of necessary reforms. In turn, this lack of reform can restrain future GDP growth.

Chart 38: Inequality and resilience since 2008



Source: Eurostat, ilc_di11 and AMECO, HVGTP.

Note: S80/S20: Income quintile share ratio: the ratio of total income received by the 20% of the population with the highest income to that received by the 20% of the population with the lowest income.

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Given that lower growth tends to impair public debt sustainability, policymakers have to weigh the direct (cost) effect of social welfare on public finances against its indirect (beneficial) effect via economic growth.

Moreover, these effects do not stop at national borders. The effects spill over to other countries, both directly through the intensive intra-EU trade and indirectly through the effect on the confidence in the common European project (91), contributing to the divergence in the EU.

6.2. The impact of inequality on GDP growth: theory and recent evidence

Theoretically the effect of inequality on GDP growth is ambiguous (92). While inequality may promote growth through higher incentives for innovation and entrepreneurship, and in so far as the rich save and invest a higher share of their income, it may equally reduce the ability of the poor to accumulate human capital (education and skills) for themselves and their children.

More generally, inequality might generate social and political instability, which harms investment and growth and may harm consensus on necessary reforms, restraining future growth. Moreover, the large increases in borrowing in a number of Member States prior to the crisis might have been related to high and rising levels of inequality, implying that this partly contributed to the build-up of today's problems (Darvas and Wolff, 2014).

In terms of empirical analysis on the growth impact of inequality, three recent studies stand out. Ostry et al. (2014) found that lower net inequality (after taxes and benefits) is robustly correlated with faster and more durable growth for a given level of redistribution. Redistribution appears generally benign in terms of its impact on growth; only in extreme cases is there evidence that it may have direct negative effects on growth. Thus the combined direct and indirect effects of redistribution – including the growth effect of the resultant lower inequality – are on average pro-growth.

Econometric analysis by Cingano (2014) on data covering OECD countries over the past thirty years suggests that income inequality has a sizeable and statistically significant negative impact on growth, and that redistributive policies achieving greater equality in disposable income have no adverse growth consequences. Causa et al. (2014, *forthcoming*) also find evidence that, in OECD countries, higher levels of inequality can reduce GDP per capita (93).

Chart 38 suggests that, in the EU, more equal societies withstood the recent crisis better than less equal ones. This relationship holds well for Member States who were in the EU before 2004. When all Member States are considered, the picture is blurred by developments in four

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(90) This goes via disposable income, domestic demand and foreign demand (cross-border spill-overs). The higher propensity to consume of households with low income is a vital factor in this process.

(91) See also Chapter 4 of this review.

(92) See also Cingano (2014).

(93) Moreover, the results are invariant to whether the rise in inequality takes place mainly in the upper or lower half of the distribution.

catching-up Member States with a high level of inequality whose real GDP per capita in 2013 was at least 10% higher than it had been in 2007 (Bulgaria, Lithuania, Poland and Romania).

It can also be noted that in the present 'secular stagnation' debate on lower long-term growth perspectives for the US economy, several authors mention inequality as one of the contributing factors (see Teulings and Baldwin, 2014 and S&P Capital IQ, 2014).

6.3. Lessons from the different interactions between GDP growth and labour market and social developments

Some overall conclusions could be drawn from the literature and the analysis presented in this Chapter (with cross-references to other chapters).

Firstly, more equal societies appear to do better in terms of growth and employment resilience. This is linked to differences in the propensity to spend (short-term growth) and differences in access to education and health services (affecting human capital and long-term growth).

Secondly, high-employment societies show higher resilience, pointing to the added value of well-designed combinations of social protection and activation. Some of these societies did so, while having relatively strict employment protection legislation. At the same time less resilient societies have loosened EPL in recent years and may need to address other policy challenges.

Thirdly, societies that invest more in human capital and share human capital more equally also show higher resilience. This is linked to the impact that productivity has on growth, which is likely to increase over time, given the likely reduction in the size of the working-age population due to ageing.

These conclusions suggest that the EU should try to develop its comparative advantage on issues such as apprenticeship, enterprise training, internal flexibility, workers' involvement and participation, ensuring that opportunities are widely shared and that access to the labour market at all levels is not decided simply by market forces.

They also imply that the EU would benefit by restoring the sustainability and effectiveness of its social model, notably by improving its design (e.g. combining protection and activation) and by the orientation of its expenditure towards greater social investment.

Such developments will need significant reforms and investments (specifically in education, training, ALMPs and health). Such reforms and investments require a stronger growth environment, as structural reforms need stronger aggregate demand (and vice versa) and investments need to be paid for.

Among these reforms, tax shifts away from labour could have a vital role to play by reducing labour costs for the low-skilled and the young, where such reductions can have a strong impact and are most needed. This makes handling the distributional implications of such shifts even more important.

Stronger aggregate demand can come either from the public or private sector, but it is important that it occurs in a way that does not weaken the structural improvements in budgets – hence an EU-led public investment initiative is such an attractive idea since it paves the way for more productivity in the months and years to come.

As ECB President Draghi concluded: 'the way back to higher employment… is a policy mix that combines monetary, fiscal and structural measures at the union level and at the national level. This will allow each member of our union to achieve a sustainably high level of employment' (94).

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(94) Draghi (2014).

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Chapter 1

The legacy of the crisis: resilience and challenges [1]

1. INTRODUCTION

The most severe financial and economic crisis to have hit Europe since the 1930s has had a major impact on the employment and social situation across the Union. Unemployment, poverty and inequality have seriously worsened in many countries and a return to pre-crisis levels is not foreseen before some time. Individuals and households have been obliged to develop coping strategies in the face of the deteriorating economic situation and with the prospect of only a slow and uncertain recovery. All of this is liable to have negative long-term effects on labour market participation and to lead to a permanent loss of human capital. Meanwhile, rising level of inequalities and the ability of institutions to deal with the crisis also impacted the trust in institutions.

The recession has also been a live stress-test for both social protections and labour market systems and institutions, with Member States' performances diverging in terms of economic as well as of employment and social outcomes. They have shown different degrees of *resilience* i.e. their capacity to limit the initial impact of the economic shock on labour markets and incomes; to recover quickly; and to progressively ensure a job-rich and inclusive growth.

This chapter focuses on the potential contribution of employment and social policies to resilience, paying particular attention to the effects of imbalances (such as high levels of unemployment and inequalities, under-investment in education, levels of household debt, etc.) as well as their differing mixes of social and labour market policies both prior to, and during, the crisis.

- Section 2 of the chapter reviews how labour markets and social outcomes have developed since the onset of the recession, in particular with severe impacts for some groups and countries and changes in participation to education and the labour market.

- Section 3 highlights the possible long-term consequences of unemployment and economic hardship including potential scarring effects on unemployed young people, 'coping strategies' during the crisis and the weakening trust in institutions.

- Section 4 analyses the developments of social spending in terms of its three main functions: investment, stabilisation and protection and their link to labour market outcomes as well as the potential role of better synchronising benefits to the economic cycle for the resilience of Member States and the role of the financing of social protection.

- Section 5 investigates the impact of labour market institutions such as unemployment benefits, employment protection legislation and active labour market policies during the recession as well as policy changes since 2008.

- The concluding section summarises both the findings and the main policy implications.

2. THE LEGACY OF THE CRISIS ON THE EMPLOYMENT AND SOCIAL SITUATION

2.1. Long and protracted recession

Various impacts of the economic downturn on employment and incomes

Since 2008, the EU has experienced a recession of exceptional magnitude and duration from which it has been slow to emerge, with real GDP in 2014 exceeding pre-recession levels by only around 1 % in the EU and with euro area GDP still below its 2007 level.

This contrasts with the United States where real GDP is now 8 % higher than it was in 2007. Moreover, within the EU, there is a growing gap between the countries that experienced a double dip recession in 2012 and the others. Five years into the recession, real GDP remains substantially below (5 % or more) pre-crisis levels in many countries including Italy, Spain, Portugal, Greece, Slovenia and Finland. This is especially worrying, given the long-term effects of the comparatively milder recession of the 1990s (2) when employment rates declined and took several years to recover, notably in the Nordic countries (3).

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(1) By Laurent Aujean, Virginia Maestri, Filip Tanay and Céline Thévenot.

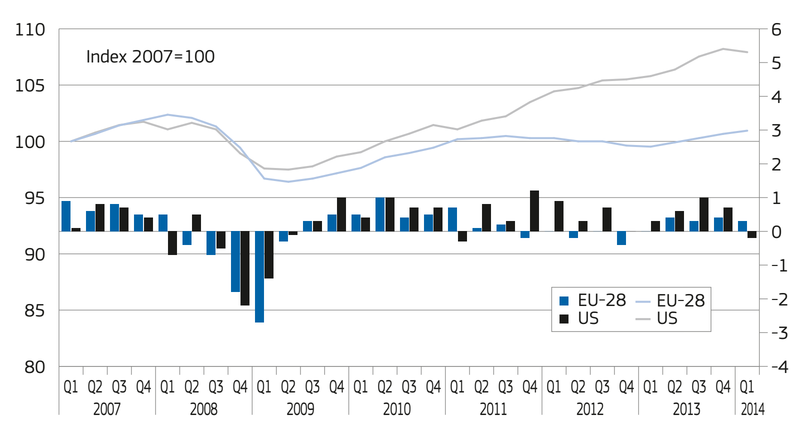
(2) In the 1990s, most EU countries experienced only one year of negative growth and after five years real GDP had increased by 5 to 15 %, with the exception of Sweden and Finland which experienced long and deep recessions.

(3) Social situation monitor, Scarring effects of the crisis, Research note 06/2014.

In the first phase of the crisis (2008–10) the fall in employment in most EU Member States was significantly less than the decline in economic activity especially when compared with the United States [4].

However the decline in economic activity had a much greater impact on employment in some Member States [5] see Chart 2. Some of this can be explained by structural factors. In Spain, for example, the disproportionate impact on employment (almost twice as large as the economic shock) [6], reflected the relative importance of the construction sector and the country's highly segmented labour market [7]. In contrast, the strong decline in GDP in Germany was absorbed through a reduction of working time (as well as productivity) rather than a reduction of employment, notably due to the widespread use of short-time working arrangements (as also used in Austria and Belgium) [8]. Finally, it should also be noted that the more or less large transmission in terms of employment and income impacted later on GDP through the channel of aggregate demand.

Chart 1: Real GDP in the EU, euro area and United States (left), and percentage changes over the previous quarter (right)



Source: Eurostat, National Accounts, data seasonally adjusted [namq_gdp_k].

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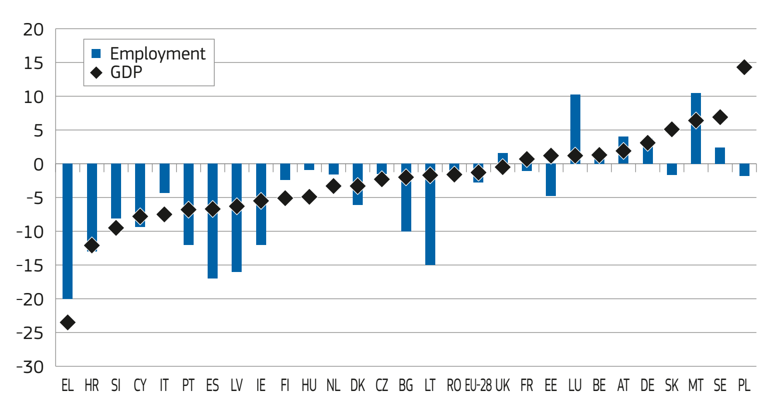
Chart 2: Change in GDP and employment between 2008 and 2013, EU Member States, in %



Source: Eurostat, nama_gdp_k and nama_aux_pem.

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Variations in the stabilising impact of national welfare systems also explain some of the differences in the impacts of job losses and reduced working time on household disposable income across different countries (GDHI, see Chart 3). For instance, in Italy, the decline in employment resulted quickly in a disproportionate drop in household incomes while the sharp decline in employment in 2009 in Spain and Ireland did not result in any immediate fall in income due to the effects of a fiscal stimulus and automatic stabilisers (though income levels did drop later as benefit payments ran out). In the United Kingdom, the moderate impact on employment was nevertheless followed by a drop in household incomes, while in Sweden and France the declines in employment levels did not translate into reduced income levels.

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(4) European Commission (2010a), Employment in Europe.

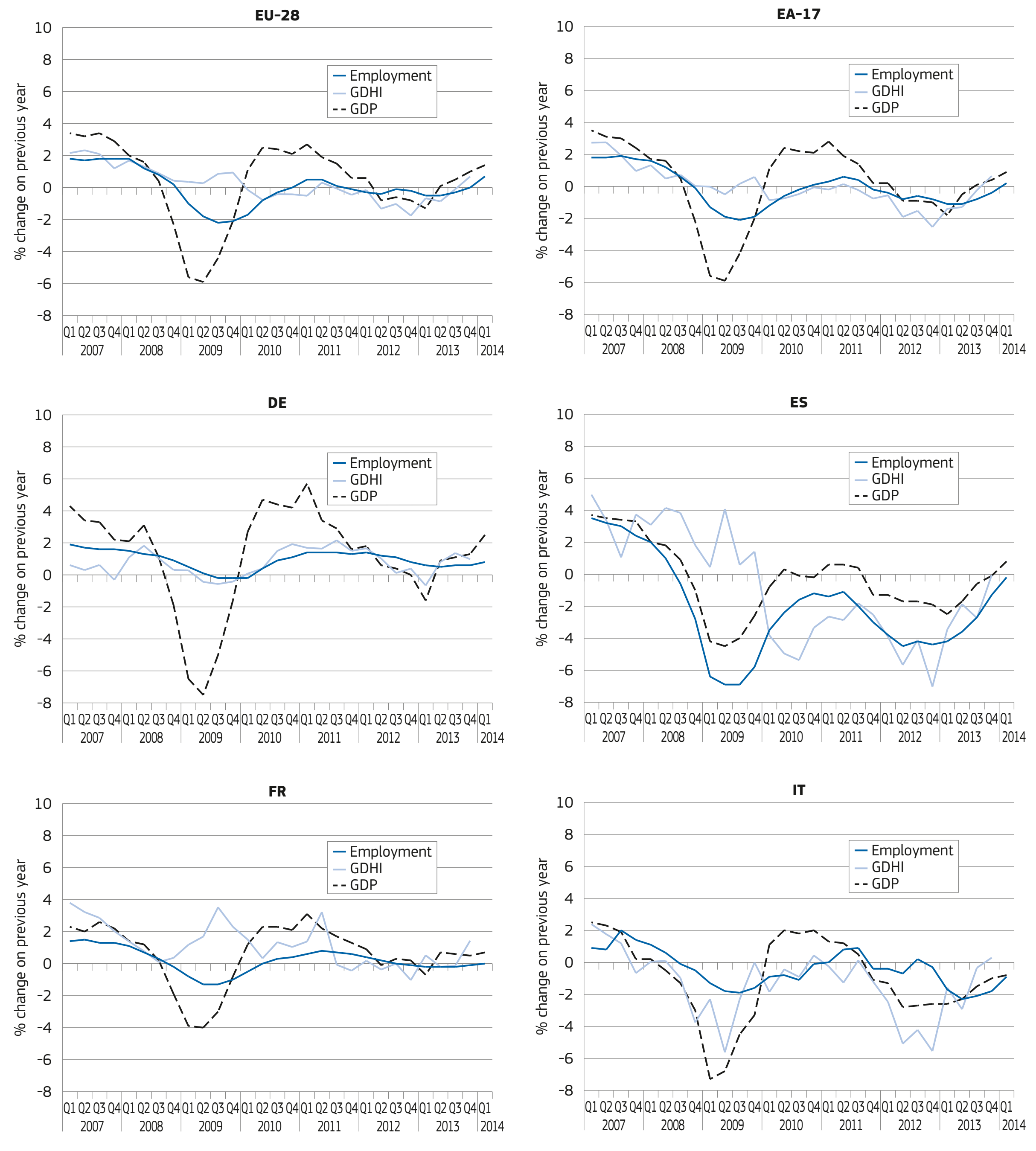
(5) By contrast, in Germany the manufacturing sector was badly hit by plummeting exports but high productivity levels led to a comparatively small fall in employment relative to that in GDP.

(6) i.e. employment volume declining by almost 7 % in the year to 2009 Q3, compared to a decline of the GDP by around 4 %.

(7) In Poland the high share of temporary workers also explains the decline in employment that occurred despite a rather favourable change in terms of GDP (decline in growth but no recession).

(8) The cost of adjustment was spread across the workforce instead of, in case of extensive reliance on layoffs, being concentrated on a relatively small number of workers suffering large losses of income (Cahuc and Carcillo (2011)).

Chart 3: Real GDP growth, real Gross Disposable Household Income (GDHI) growth and employment growth (No of persons employed), year-on-year change



Source: Eurostat, National Accounts [namq_gdp_k, namq_aux_pem, nasq_nf_tr and namq_fcs_p] (DG EMPL calculations).

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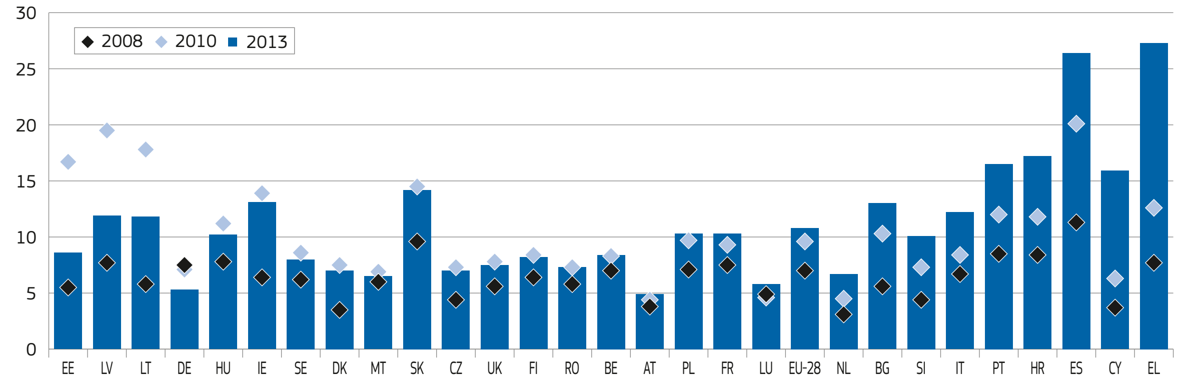
A strong and uneven impact on unemployment

For the EU as a whole, the unemployment rate rose from 7.0 % in 2008 to 9.6 % in 2010, reaching 10.8 % in 2013. Chart 4 shows that, in two-thirds of EU countries, unemployment increased mainly in the period up to 2010 but that in those countries that experienced a double recession, unemployment rose substantially after 2011. The impact was strongest (in terms of percentage points) for the young, the low-skilled and non-EU foreign workers — groups that already faced higher risks of joblessness before the recession.

Chart 4: **Unemployment rates by EU Member States, 2008, 2010 and 2013 (% of active population, 15–74)**



Source: Eurostat, une_rt_a.

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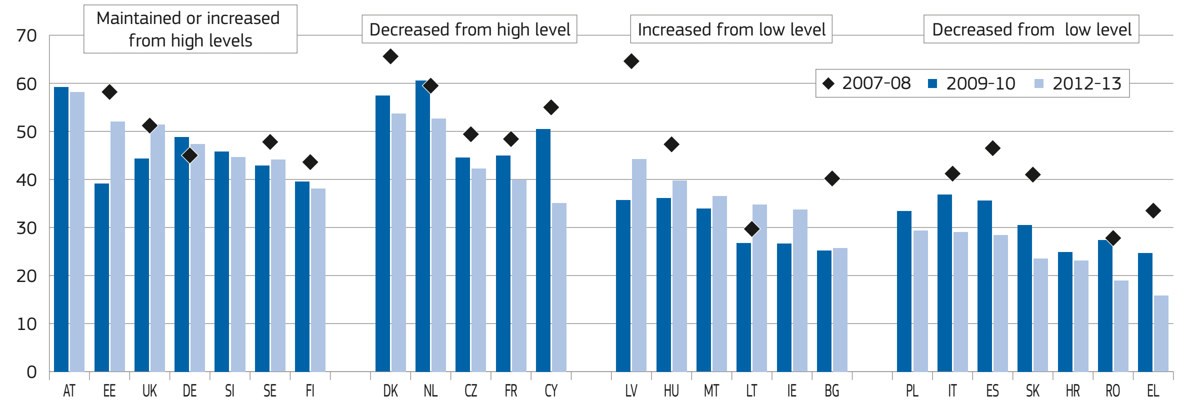
Chart 5: **Exit rate from short-term unemployment (less than one year) into employment between 2012/13 and changes compared to between 2009/10**



Source: Eurostat, EU-LFS, ad-hoc transition calculations based on longitudinal data. No data for BE, LU and PT. Exceptions to the reference year: NL: 2011/12 instead of 2012/13; AT, HR, PL, SI and UK: 2010/11 instead of 2009/10; DE and LT: 2008/09 instead of 2007/08. Member States with high (low) levels in 2009/10 are those having an exit rate higher (lower) than 39%. Member States with decreasing (maintaining/increasing) levels are those where the exit rate decreased by more (less) than 1.5 pp between 2009/10 and 2012/13.

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The persistence of unemployment (likelihood to remain unemployed after one year) has increased during the crisis with 38 % of people who became unemployed in 2012 still looking for a job in 2013, compared to 27 % between 2007/08 (9). This persistence rate was much higher for the long-term unemployed (63 % between 2012/13, compared to 50 % between 2007/08) confirming previous research findings (10).

While exit rates from short-term unemployment into employment (11) worsened in almost all Member States between 2007/08 and 2009/10, there have been divergent developments since then. In some countries, the chances to return to employment improved again between 2010 and 2013, while they worsened further in others. Labour demand is a key factor explaining differences in the exit rates out of short-term unemployment (12) although other factors are at play (13) such as differences in labour market institutions between Member States, see European Commission (2012a) and Section 5.

In 2013, the number of long-term unemployed (without work for 12 months or longer) exceeded 5 % of the active population in 2013, almost double the rate of 2008 (14) (see Chart 7). Given the slow pace of economic recovery in most countries, there is thus a serious risk that many long-term unemployed will remain without a job for a long time. Indeed, transition rates for the long-term unemployed into employment worsened between 2007/08 and 2009/10 in most Member States, and have stayed low since.

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(9) Persistence rate estimated as the ratio between the number of unemployed with a duration of 12–24 months and those unemployed for fewer than 12 months one year before.

(10) Individual characteristics also matter: those who become long-term unemployed are likely to be those for whom finding a job was initially the most difficult. Cockx and Dejemeppe (2012) shows for various European countries that the duration dependence may be a *spurious* one.

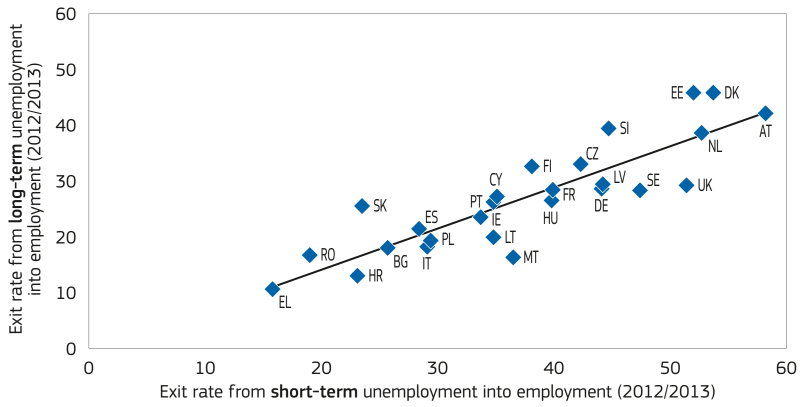
(11) Based on longitudinal data from the EU-LFS.

(12) For instance, for the 22 Member States for which the data is available, there is a positive correlation (+0.59, significant at 1 %) between the exit rate from short-term unemployment (into employment) in 2012-13 and the job vacancy rate in 2012.

(13) Recently (2010–13), changes in employment appear less correlated with the variations of the exit rates out of short-term unemployment into employment than in the initial phase of the recession (2008–10), i.e. equal to 0.70 and 0.92 respectively (both significant at 1 %).

(14) In absolute terms, the number of long-term unemployed in the EU-28 increased from 6.2 million in 2008 to 12.3 million in 2013.

Chart 6: **Exit rate from short-term unemployment (less than one year) and long-term unemployment (more than 1 year) into employment between 2012/13**



Source: Eurostat, EU-LFS, ad-hoc transition calculations based on longitudinal data. No data for BE and LU. Exceptions to the reference year: NL: 2011/12 instead of 2012/13.

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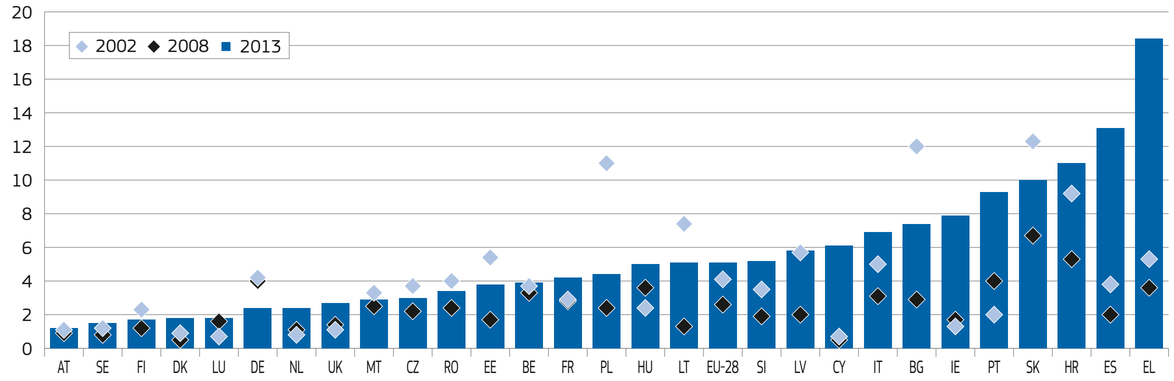
Chart 7: **Long-term unemployment in % of active population for EU Member States (2002–2008–2013)**



Source: Eurostat, EU-LFS [une_ltu_a].

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While most countries with high exit rates from short-term unemployment also have high exit rates for the long-term unemployed, a few countries (such as Germany and the United Kingdom) that manage to ensure rapid rates returns to employment for the short-term unemployed, have nevertheless relatively low exit rates for the long-term unemployed [15], see Chart 6. In these countries, a limited proportion of the unemployed become long-term unemployed but when they do, they have difficulties returning to employment.

Exit rates out of long-term unemployment seem less sensitive to changes in the economic cycle [16] than they are for the short-term unemployed, which suggests that an economic recovery may not bring back into employment many of those who are currently long-term unemployed. This is likely to have lasting negative consequences, such as the depreciation of human capital, negative signalling effects for potential employers and demotivation for those concerned, with further risks in terms of benefits dependency, poverty and social exclusion.

It should also be noted that 20% of the long-term unemployed in 2013 have never worked before and are likely to need various forms of support in order to find a first job. This raises concerns regarding access to benefits and the risk of social and economic marginalisation.

Young people tend to experience shorter spells of unemployment and higher transition rates into employment than other age groups, but this is less true now than it was in the past [17], with an increase in the share of long-term unemployed among the young unemployed, especially for the age group 25–34 [18]. Significantly, however, having a tertiary degree appears to be a form of protection against long-term unemployment, albeit probably at the expense of less qualified young people competing for the same jobs.

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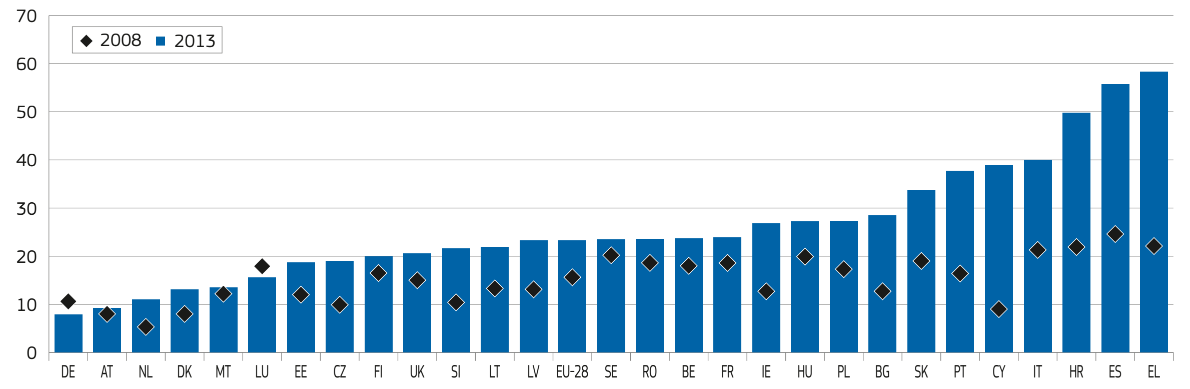
[15] The gap between the exit rates for short versus long-term unemployed is much higher in the UK and Germany (respectively 22 and 19 pps) than the EU average (11 pps, with rates of 38 % and 27 %). On the contrary Denmark and Estonia manage to maintain high exit rates into employment also for the long-term unemployed and have relative low gaps between the two rates (respectively 8 and 6 pps).

[16] For instance, the coefficient of correlation with changes in employment over 2008–10 is much stronger for the exit rates out of short-term unemployment into employment (0.92, significant at 1%) than with the exit rates out of long-term unemployment (0.53, significant at 5%).

[17] According to longitudinal data of the EU-LFS (European Commission (2012a), Chapter 1), even if young people continued to have better exit rates out of unemployment than older workers, their situation worsened since 2008. In 2010-11, they had a much higher chance of losing their job (8 %) compared to prime-age (3 %) and older (2 %) workers. In addition their transition rate back into employment had sharply diminished, from 40 to 30 %. These findings are confirmed by analysis of RWI (2014) drawing on micro-data from the EU-SILC.

[18] Strictly speaking the group of young people is defined as those aged 15–24; however for many indicators analysis of the age group 25–34 is also meaningful as this age group has also been strongly affected by the crisis.

Chart 8: Youth unemployment in % of active population (aged 15–24)



Source: Eurostat, EU-LFS [lfsa_urgan].

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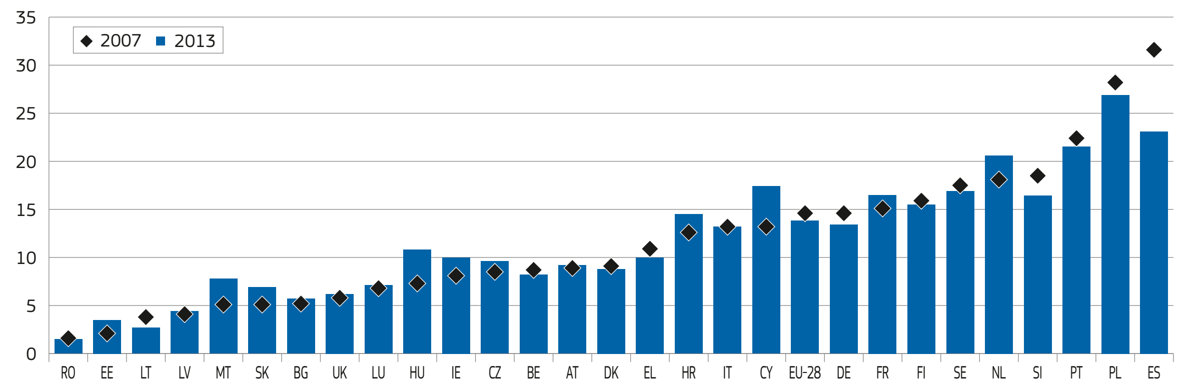
Chart 9: Temporary employment as percentage of the total number of employees



Source: Eurostat, EU-LFS [lfsa_etpgan].

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Levels of unemployment among youth tend to vary more than total unemployment because their job prospects are more sensitive to the business cycle (19) and because of the variety of policies and institutions supporting school to work transitions (education and training systems, contractual arrangements, minimum wage, etc.) (20). In this respect, the apprenticeship systems in Germany and Austria are commonly highlighted as being mechanisms that overcome many of the obstacles and, in particular, ensure high transition rates from temporary to permanent contracts (Eichhorst et al, 2012).

In 2013 the proportion of young people aged 15–24 in the EU who were neither in employment, education or training (commonly called NEETs) was 13 % in 2013 (compared to 10.8 % in 2008), and exceeding 20 % in Greece, Bulgaria and Italy (21). In most countries, however, the increase in the NEET rate since 2008 has been mainly the result of an increase in unemployment, rather than inactivity (22), which implies that most 'newly' NEET young people are actually looking for work.

Changes affecting those in work: non-standard employment, job quality and informality

Since the recession, not only has the quantity of jobs been affected but also their quality as reflected by various indicators (see also Chapter 3). In this regard the share of part-time jobs in overall employment rose from 17.5 % in 2008

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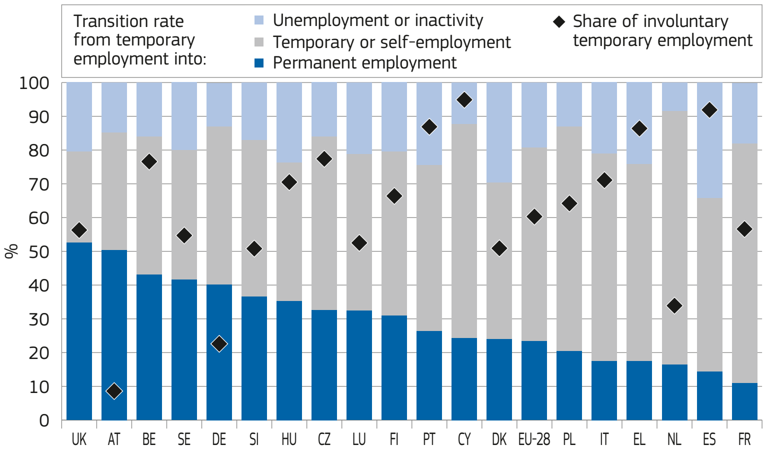
(19) According to IMF (2014), the business cycle 'explains up to 70 % of changes in the youth (15–24) unemployment rates in stressed euro area countries'. It estimates that an additional percentage point of annual growth could lower the unemployment rate from 0.8 pp in Greece and Portugal to 1.9 pps in Spain.

(20) Another factor explaining the wide variation of the youth unemployment rate across Member States is the very diverse level of participation of young people in the labour market while still being in education.

(21) In Bulgaria, Romania and Italy the majority of young NEET were inactive, in Greece, Spain or Croatia most of them (around 70 %) were unemployed (i.e. looking for a job).

(22) At EU level, the share of unemployed in the whole age class 15–24 has risen by 2.6 pps (from 6.6 % to 9.2 %) while the number of inactive (not in education or training) only slightly changed (by 0.3 pp, from 7.4 to 7.7 %).

Chart 10: **Transition rates from temporary to permanent employment, temporary or self-employment and unemployment or inactivity (2011/12) and share of involuntary temporary employment (2012)**



Source: Eurostat, EU-LFS (lfsa_etgar) and EU-SILC (ilc_lvhl32). Exception to the reference year: Sweden (2010/2011 instead of 2011/2012).

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to 19.5 % in 2013, with an increase in the number of part-time jobs at a time when the number of full-time positions was falling (23). Moreover, there has been a sharp increase in the number of men working part-time. The rise in the share of part-time jobs also partly reflected a sectoral composition effect (24). At EU level, the share of involuntary part-time workers (those who work part-time because they are unable to find full-time work) has increased strongly between 2007 (22.4 %) and 2013 (29.6 %).

On the other hand, the overall share of temporary contracts among total employment has slightly declined since 2007 (from 14.6 % to 13.8 %), although with wide variations across Member States (see Chart 9). In countries like Portugal and Spain, which previously had high shares of temporary contracts, these served as an initial adjustment mechanism to the shock — while in other countries such contracts were also the first to grow, as risk-averse employers began to hire again. High shares of temporary contracts in total employment may increase employment volatility in times of economic downturn (25).

Moreover, temporary contracts are associated, in some countries, with pronounced labour market segmentation, with a negative correlation between the overall share of temporary workers and the transition rates towards permanent jobs (26). As evidenced in European Commission (2012a) (27), temporary contracts often carry a wage penalty which is a particular concern in countries when the share of involuntary temporary work is high and transition rates towards better paid or permanent contracts are low.

However, the usage and impact of temporary contracts varies across Member States. In some countries (e.g. Austria and to some extent, Germany) temporary contracts seem to act as a stepping stone (28) with high transition rates from temporary to permanent contracts, and a low share of involuntary temporary contracts (29). In countries such as Spain, France, Greece or Italy, though, there are low transition rates to permanent jobs and a high share of involuntary temporary contracts, with detrimental consequences for the employees' chances to access stable and better paid jobs with appropriate social protection as well as the opportunity to participate in lifelong learning (30). This can also be seen in the share of temporary workers becoming unemployed or inactive in the following year (around 25 % in Portugal and Greece, and 30 % or more in Denmark and Spain).

An analysis by OECD (2014b) (31) reported some positive 'stepping-stone effects for non-standard work' in many countries but also confirmed that a temporary job often involves wage penalties and a greater likelihood of becoming unemployed or inactive the following year, especially in the case of young people.

People unable to find a regular job may turn to undeclared work or accept work with 'envelope' wages, see European Commission (2013). However, since undeclared work is often a last resort choice, it is strongly correlated with long-term unemployment, raising a range of policy issues in terms of labour rights, entitlement to social protection, future pensions and workers' rights (see Annex 3, Extract 1).

Significant increases in poverty and social exclusion

Poverty and social exclusion in the EU has almost inevitably worsened during the crisis with little signs of improvement so far. The situation worsened even further in some countries in 2013, notably in countries where it was already high.

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(23) Over 2008–13, the absolute number of part-time jobs has increased by 3.1 million (or +8 %) while the number of full-time positions declined by 9.4 million (or –5.2 %).

(24) Some sectors (Administrative and support service activities, Human health and social work activities, education) that were less affected by the crisis had a relatively high share of part-time jobs.

(25) Member States which had below EU average shares of temporary contracts in 2007 saw either a relatively small increase in unemployment during the recession e.g. United Kingdom, Austria, Czech Republic, Germany or a fall in their unemployment rate following a substantial initial increase as in Estonia, Latvia, Slovakia, Ireland and Hungary.

(26) Correlation coefficient –0.69 in 2011/12 (significant at 1 %).

(27) European Commission (2012a), Chapter 4, Table 2.

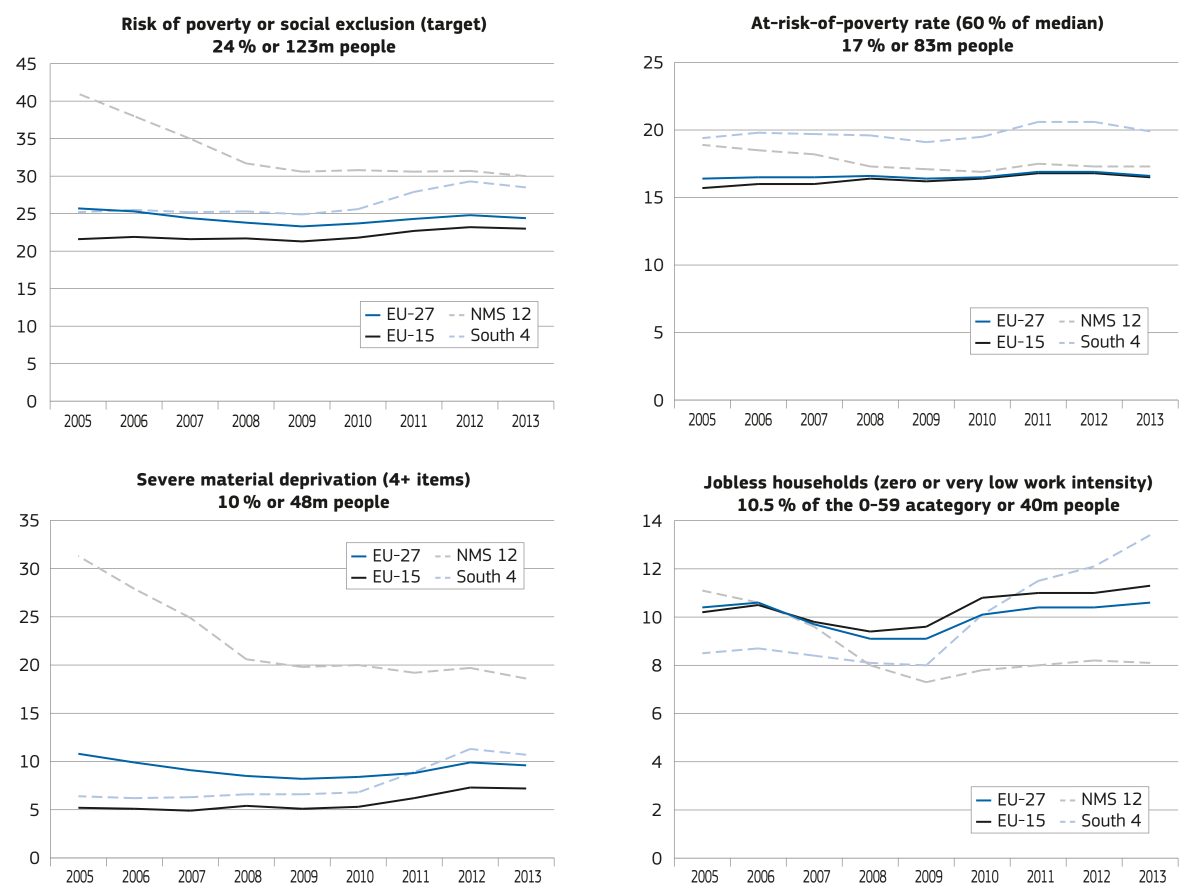
(28) Another sign of *stepping stone* effect is that, in those two countries, the share of temporary contracts is high for young people (due to apprenticeship systems) but much lower for the older age groups, whereas in countries such as Spain, Poland or Portugal the share of temporary workers remains high (>20 %) among those aged 25–49.

(29) In the Netherlands the share involuntary temporary contracts is also low and while most of the temporary workers remain in that status the year later, a rather low share (8.5 % compared to 19.3 % at EU level) fall into unemployment or inactivity.

(30) For instance, OECD (2014a), Employment Outlook, shows, based on PIAAC data, that on average being on temporary contracts reduces the probability of receiving employer-sponsored training by 14 %.

(31) OECD (2014b), 'Jobs, Wages and Inequality and the Role of Non-Standard Work', *forthcoming*.

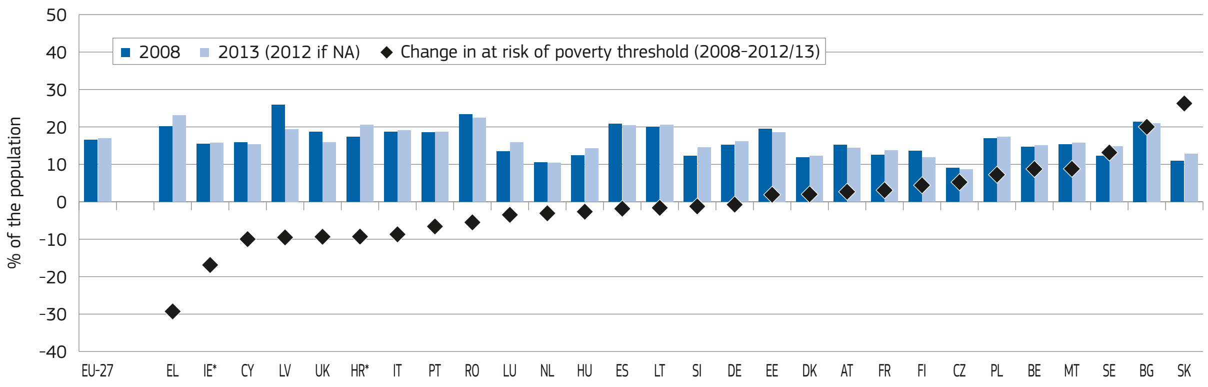
Chart 11: Evolution of the risk of poverty or social exclusion, in %



Source: Eurostat, EU-SILC (peps01, li02, mddd11, lvhl11).

Note: South4 refers to EL, ES, IT and PT.

Chart 12: Risk of poverty and changes in the poverty threshold, % of the population



Source: Eurostat, EU-SILC (ilc_li01,ilc_li02). *Data for IE and HR refers to 2012.

The main drivers of poverty and social exclusion are seen to be long-term unemployment, labour market segmentation and wage polarisation, but also the weakening of the redistributive impact of tax and benefits systems.

Overall, the risk-of-poverty rate has increased in more than ten Member States since 2008. However, declining levels of household disposable incomes in general have led to a reduction in the national poverty lines in Member States such as Latvia and Greece, meaning that decreases in the poverty rate do not necessarily indicate any improvement in absolute terms.

As a consequence of this deteriorating situation, poverty defined in terms of severe material deprivation (32) has also increased across Europe, and most

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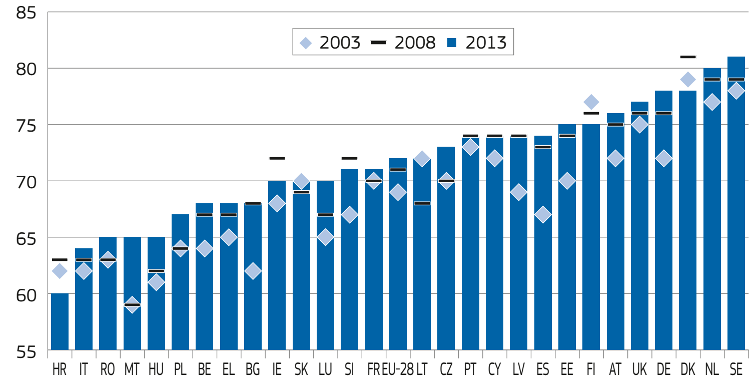
(32) Severely materially deprived persons have living conditions severely constrained by a lack of resources. They experience at least 4 out of 9 of the following deprivations: cannot afford i) to pay rent or utility bills, ii) to keep the home adequately warm, iii) to face unexpected expenses, iv) to eat meat, fish or a protein equivalent every second day, v) a week holiday away from home, vi) a car, vii) a washing machine, viii) a colour TV, or ix) a telephone.

strongly in those Member States most affected by the crisis (Spain, Italy, Ireland, Malta, United Kingdom). In some Eastern/Southern countries where deprivation had been improving before the crisis, the trend reversed and material deprivation increased dramatically after the crisis (Lithuania, Latvia, Estonia, Cyprus, Greece, Hungary and to a lesser extent Bulgaria).

Working age adults have been especially affected, reflecting the deterioration of labour market conditions, with the worst hit countries being Spain, Italy, Greece, the Baltic States, but also the United Kingdom (33). Moreover, since many such working age adults live in households with children, child poverty has also risen across Europe as a whole. In contrast, the risk-of-poverty indicator for older people showed a significant decline in most Member States between 2008 and 2013 reflecting the fact that pensions have, to a large extent, remain unchanged during the crisis.

Chart 13: **Activity rate across EU Member States, 2003, 2008 and 2013, in % of population aged 15–64**



Source: Eurostat, EU-LFS [lfsi_act_a].

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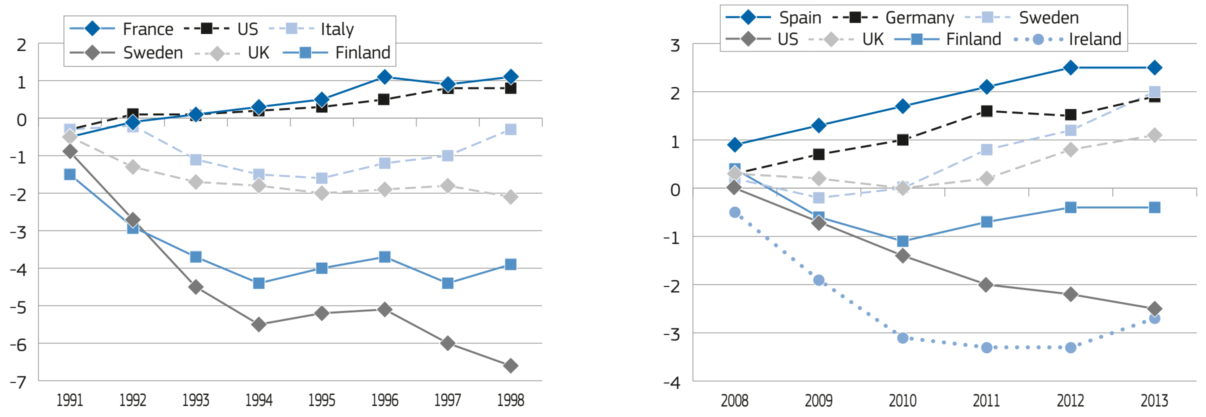
Due to the combination of life expectancy, lower participation in the labour market and household composition (single parent families), women are at higher risk of poverty or social exclusion than men in all Member States, with the exception of Spain and Portugal.

2.2. Participation in education and in the labour market continued to rise

Economic participation, as measured by the activity rate indicator (34), has continued to increase since 2008 in most Member States, in contrast to the experience in past recessions. While the employment rate declined from 65.7 % in 2008 to 64.1 % in 2013 for the EU as a whole, the activity rate increased from 70.7 % in 2008 to 71.9 % in 2013. It implies that the drop in the number of jobs mainly translated into a rising number of unemployed and, only to a limited extent, a rising number of 'discouraged workers' (see Section below). This EU experience also contrasts with the decline in activity rate witnessed in the United States since 2008 (35).

Reductions in activity rates in previous crises are attributed to a higher share of working-age persons withdrawing

Chart 14: **Activity rate (15–64) compared to 1990 and 2007 levels, for selected countries, in pps**



Source: OECD.

Source: Eurostat, EU-LFS and OECD data for the US.

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(33) See European Commission (2014a).

(34) The activity rate measures the share, among the working-age population, of those being economically active, i.e. either in employment or unemployed, according to the ILO definitions. While this indicator counts the total number of people in employment and unemployment and *country-comparisons* may be influenced by differences in institutional factors (such as incentives to be registered as unemployed), the analysis of changes of activity rate *over time* remains meaningful, in particular to analyse behavioural changes compared to previous recessions.

(35) Note that for the US, several papers (e.g. Barnes et al (2013)) show that the decline in participation since 2008 reflects, to a great extent, long-term demographic and behavioural changes rather than cyclical developments.

from the labour market, resulting in their decline between 1990 and 1994 and a very slow return to previous levels, substantially so for Sweden and Finland, while increasing slightly in France (and the United States), see Chart 14. By contrast, since 2007, activity rates have continued to increase in many EU countries, even those strongly affected by the recession.

Increase in activity continued to be driven by women and older workers

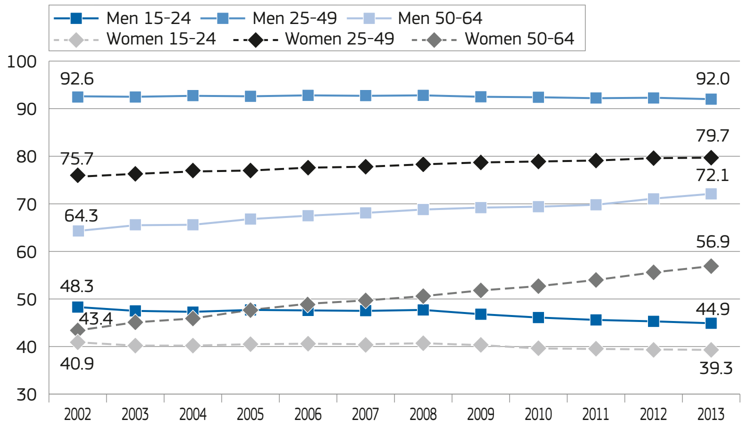
The increase in the activity rate since 2008 has mainly been driven by the rising participation of women and older workers throughout the recession see Chart 15. This is seen to be due to a number of factors: structural increases in their activity rate due to cohort effects and rising levels of education; policy measures designed to encourage increased female and older workers participation([36]); and the fact that the initial labour market shock did not hit women and older workers as strongly as prime-age males.

Chart 17 shows that the decline in activity rate for prime-age men was limited (−0.8 pp) compared to the decline in their employment rate (−4.8 pps), indicating that they were the group least likely to fall into inactivity if they lost their job. LFS data for 2013 also shows that, if prime-age men become unemployed, they are more likely to receive unemployment benefits (43 %) than young people (18 %) or prime-age women (36 %), notably due to their more favourable employment histories. This is one of the factors that promote continuation of job search rather than 'discouragement' and inactivity.

Since 2008, the activity rates of older workers (55–64) increased substantially in most countries even in the most affected countries ([37]) while they had been decreasing during the 1990s recession ([38]). Several changes explain this difference.

- Older workers have been (in comparison to the 1990s) less affected by job losses (see Chart 18) notably because their educational levels

Chart 15: Activity rate by group (age and sex), EU-28, 2002–13 (in %)



Source: Eurostat, EU-LFS, [lfsi_agan].

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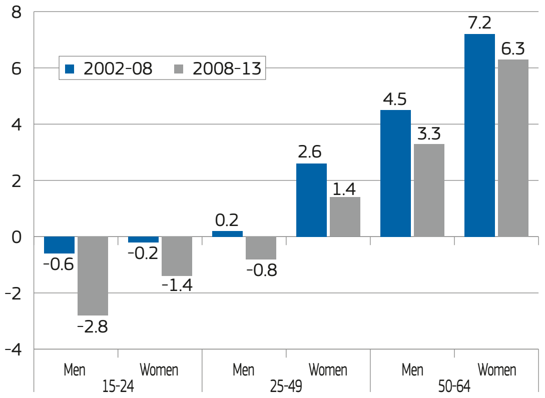
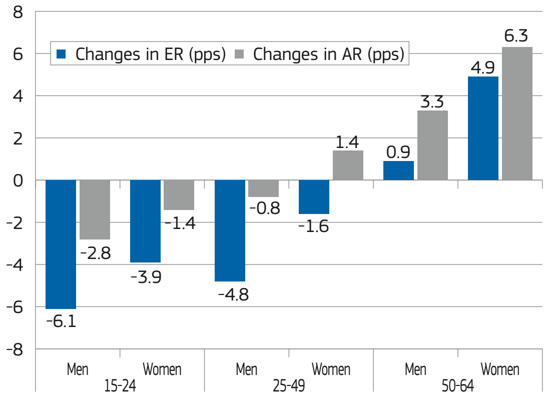
Chart 16: Change in the activity rate by group (age and sex) in EU-28, 2008–13 compared to 2002–08, in percentage points



Source: Eurostat, EU-LFS, [lfsa_argan].

Chart 17: Change in the employment and activity rates by group (age and sex) in EU-28, 2008–13, in percentage points



Source: Eurostat, EU-LFS, [lfsa_argan] and [lfsa_ergan].

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[36] The increase in older workers participation over the last decades was also driven by an overall improvement in their health status, see European Commission (2011a), Chapter 5.

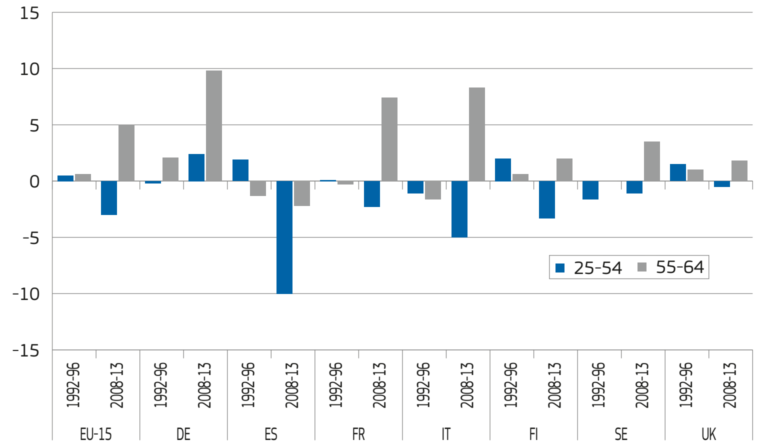
[37] In Spain, Portugal and Ireland, decreases for men were more than offset by increases for women.

[38] For instance: in the UK (−1.6 pps over 1990–95), Italy (−4.2 pps over 1991–95) and Germany (−2.9 pps over 1992–96) with more pronounced drops for men (respectively −5.8 pps, −7.3 pps and 4.9 pps).

have improved (39) and the sectors in which they are employed have changed. Moreover, employers are often reluctant to lay off their most experienced workers, who also often benefit from a better protection (higher severance pay) than younger workers due to longer employment histories (40).

- If they become unemployed, older workers are less likely than before to withdraw from the labour market not least because of policies introduced over the last two decades to extend working lives, such as reforms in pension schemes (general increase in the statutory retirement age), and early retirement schemes. Moreover, alternative options such as disability schemes have been closed or made less accessible (41).

Chart 18: **Older workers less affected by job losses since 2008 than in the 1990s: changes in employment rates for prime-age (25–54) and older (55–64) age groups in 1992–96 and 2008–13, in percentage points, selected Member States**



Source: Eurostat, EU-LFS, [lfsi_emp_a].

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The continued increase in female activity rates also results from a combination of factors.

- Women tend to work in sectors that are less hit by the recession (42) (see also European Commission (2013), Chapter 3). This seems to explain most of the better performance of women's employment during the crisis, while the 'added-workers' effects may also have played a part (see Box 1).
- There has been a structural increase in the participation of women, mainly due to rising levels of education of women over time (43). This has brought the behaviour of women in the labour market much closer to that of men with a rising share of dual-earner households.
- Measures supporting female participation such as flexible working arrangements, the removal of financial disincentives for second earners, childcare and elderly care facilities have also played a role, together with measures to retain older women longer in the labour market (44). Until 2013, there were no signs of a reversal in the policies supporting female participation (see Section 4) although this may no longer be the case in some countries that have applied major fiscal consolidation measures (45). Moreover, women tend to be over-represented in public and non-market service sectors that are now becoming more adversely affected by fiscal consolidation in many Member States (46).

Moreover, recent trends have not led to a substantial decrease in the large gender inequalities in the labour market that persist in many EU Member States to the disadvantage of women, in terms of activity and employment rates as well as in terms of part-time work and earnings.

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(39) Between 1992 and 2008, the overall level of education of older workers increased more quickly than for prime-age workers, even when excluding the effects of the rising level of education among women. EU-LFS data for EU-15 countries shows that the share of low-educated among male older workers dropped sharply, from 53.9 % in 1992 to 32.3 % in 2008 (–21.6 pp) compared to prime age workers (from 40.2 % to 28.2 % or –12.0 pps). The share of tertiary educated persons among older men increased more sharply than among prime-age workers.

(40) The share of older workers under involuntary temporary contract is also much lower (4.4 % among those aged 55–64 compared to 8.1 % for prime-age and 14.7 % for young workers, i.e. EU-LFS data for EU-28 in 2013).

(41) European Commission (2011), Chapter 5.

(42) Female employment was less affected by the recession than male (respectively –0.6 % over 2008–13 against –4.7 %). While the two male-dominated sectors (manufacturing and construction) were strongly affected by the crisis, the two main female-dominated sectors (education and human health and social work) resisted well.

(43) For instance, among women aged 25–49 (50–64) the share of those with not more than lower secondary education decreased from 41 to 22 % (64 to 38 %) between 1995 and 2013, or –19 pps (–26 pps), to the profit of the medium and high educational groups (based on EU-LFS data on EU-15).

(44) Analysis by age and education confirms that the overall increase in female activity rate is not only due to change in the composition (i.e. increase in average level of education) and affected most sub-groups of women.

(45) European Commission (2012b).

(46) European Parliament (2014).

Box 1: Some mixed evidence about 'added-worker effects' during the recession

A recession can impact on labour market participation of 'partnered' women in two ways: (a) it can discourage women from looking for a job or postpone their decision (*discouragement effect*) or (b) it can foster participation in order to compensate for the job loss of the partner (*added-worker effect*). It is hard to determine whether the increase in female participation was due partly to the latter — or whether it was entirely caused by other structural factors due to education and cohort effects. Several reports support the added worker hypothesis without being totally conclusive:

- European Commission (2011b) shows that the activity rate of married women with children was more reactive to male unemployment and that it has increased faster since 2008 than for other women*.
- OECD (2012a) shows that in many countries partnered women were more likely to have increased their working hours during the crisis than single women.
- European Commission (2012b) points out that over 2007–09, dual-earner couples had lost ground mainly to the benefit of female breadwinner couples.
- European Commission (2013) shows that over 2007–11, the share of working women with a non-working male partner increased in most Member States.
- Bredtmann et al (2014) found that women whose partner becomes unemployed have a higher chances of entering the labour market and changing from part-time to full-time employment than women whose partner remains employed. The added worker effect varies over both the business cycle and the different welfare regimes within Europe**.
- EU-SILC*** data do not show such added-worker effect, as women's transitions from inactivity to employment and from part-time to full-time employment do not increase between 2007 and 2012.

While there is no robust evidence of an added-worker effect during the crisis, the stronger share of women in employment, hours worked and earnings and the increasing share of dual-earner households has helped to cushion the impact of the recession on household incomes (OECD (2014c)).

Notes: * However, this is not true for all countries and may be due to other effects — for instance the increase in investment in childcare facilities. ** For instance, for the UK, Bryan and Longhi (2013) found an increase in job searches but only among single earner couples —which does not translate into more success in finding work (consistent with declining job-finding rate), at least in the short-term. *** Eurostat, EU-SILC, [ilc_lvhl30]. Note that these indicators are not available for different groups of women (partnered or not, with or without children).

Limited increase in discouraged workers during the recession

The number of persons available and wanting to work but not looking for a job (47) (the 'discouraged workers') increased from 7.4 million in 2008 to 9.3 million in 2013 (or from 3.1% to 3.8% of the labour force). This increase was much lower than the increase in unemployment and long-term unemployment (48) and can be viewed as a positive sign insofar as it means that unemployed persons continue to look for a job and can potentially benefit from activation or (re)training.

Institutional factors can contribute to limiting the number of discouraged workers. For instance, countries where the share of discouraged workers is the highest tend to be those with relatively limited support for the unemployed or the long-term unemployed (49). Generally speaking, the countries that recorded increases in discouraged workers since 2008 (50) were those that combined a strong labour market impact of the crisis and relatively weak support services to the unemployed (51), whether in terms of spending on active labour market policies or income support.

There can also be other explanatory factors such as the extent to which there are, or are not, incentives to register as unemployed, the link to social assistance schemes, or the actual probability of finding a job. The availability of care services for children or dependents may also affect the labour supply given that 36% of 'discouraged workers' in 2013 were women of prime-age (25–54), a group more likely to be affected by issues related to the combination of work and family life. This share was highest in Spain (41%), Italy (47%) and Greece (49%), all countries recognised as being poor performers in terms of supporting improved work-life balance (52).

Remaining in education

Since 2008, an increasing number of young people have remained in, or have returned to, education, notably within the younger age group (18–24) and especially in Member States where youth unemployment was especially high (Spain, Ireland and Portugal) and where the share of young people in education had been below the EU average in 2004. In some countries however, participation in education has either stalled (Greece, Italy, Romania, the Czech Republic and Slovakia), or even declined (Poland and Hungary).

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(47) These are jobless persons (neither employed nor unemployed) who do not qualify for recording as unemployed (from the ILO definition) because they are not actively looking for a job (anymore), despite the fact that they want to work and are available for work. According to Eurostat, they include 'discouraged workers but also persons prevented from job seeking due to personal or family circumstances'. However, for convenience, this Section uses the term 'discouraged workers' to refer to all the inactive persons wanting to work but not looking for a job.

(48) Since 2008, the number of unemployed increased from 16.8 million to 26.4 million in 2013, and the number of long-term unemployed almost doubled in the same period (from 6.2 million to 12.3 million).

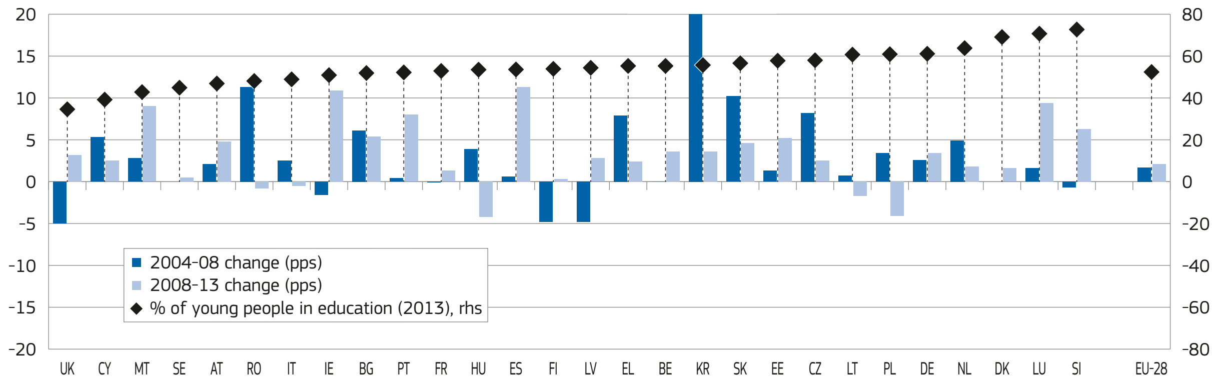
(49) In 2013, a very low share of long-term unemployed were receiving unemployment benefits (or assistance) in Italy (2%), Croatia (10%), Bulgaria (1%), Latvia (3%) or Estonia (4%), all characterised by a higher than average share of discouraged workers –while the receipt rate of benefits was rather high in some of the countries displaying a low share of 'discouraged workers' such as France, Germany, Malta, Belgium and Denmark.

(50) Croatia and Cyprus (strong increase) and Finland, Romania, Spain, Italy, Hungary, Greece and Slovenia (significant increase).

(51) According to typology presented in Stovicek and Turrini (2012)

(52) They display high gender employment gaps, high incidence of inactivity due to family obligations as well as relatively insufficient provision of child and/or dependent care facilities (see European Commission (2013), Chapter 3).

Chart 19: Proportion of young people in education or training, 18–24, % of age group



Source: EU-LFS, Social Situation Monitor calculations.

Notes: Only young people in education or training not economically active are measured. Countries are sorted by 2013 levels.

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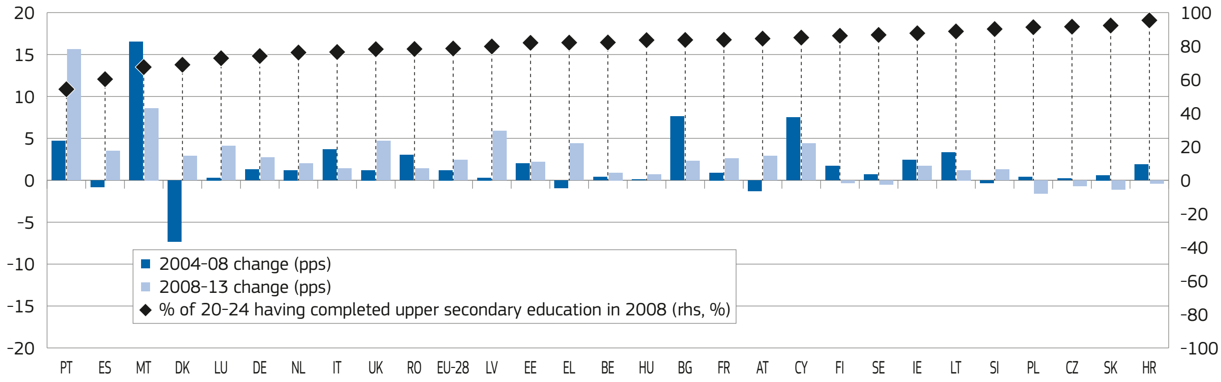
Chart 20: Share of 20-24 having completed upper secondary education in 2008 in % and changes over 2004-08 and 2008-13 in percentage points



Source: Eurostat, EU-LFS [edat_lfse_08]; sorted by 2008 level.

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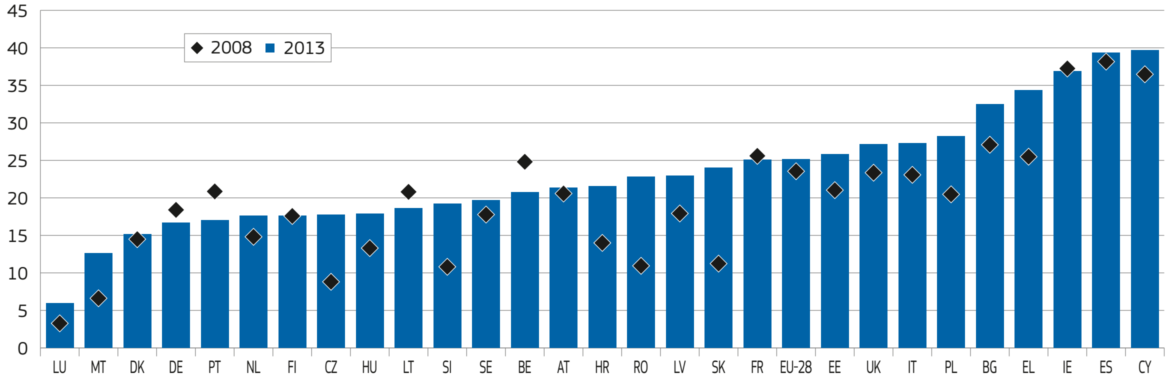
Chart 21: Over-qualification rate: share of tertiary-educated workers working in low or medium-skilled occupations (in %), age group 25–34, 2008 and 2013



Source: Eurostat, EU-LFS and DG EMPL calculations.

Notes: tertiary-educated is defined as workers having the highest level of qualification equal or above ISCED 5–6; low and medium-skilled occupations are defined as occupational groups ISCO 4 to 9.

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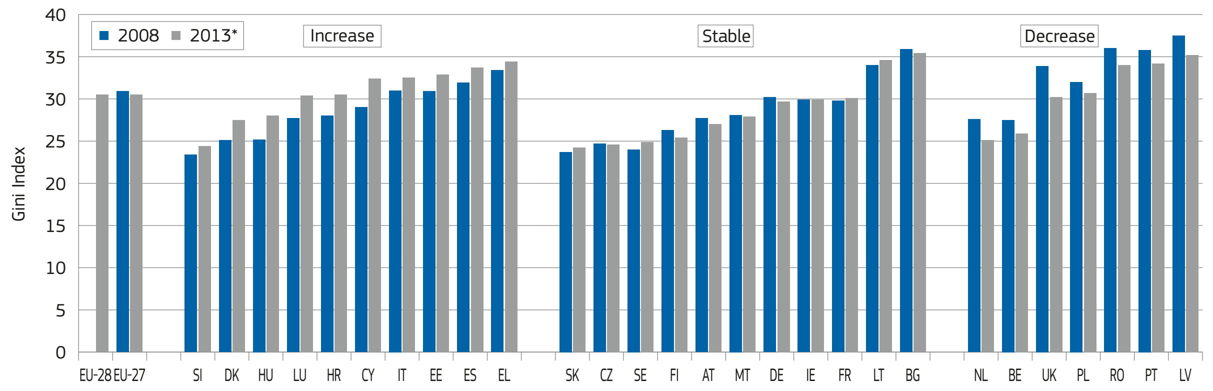
Overall, educational outcomes have improved in most Member States (see Chart 20) but especially so in those countries where they were less favourable ten years ago and the share of early school leavers from education and training decreased. Delaying labour market entry by remaining in education is a rational response in times of recession, but it is not yet clear whether this will result in better labour market outcomes in terms of human capital and skills development. The long-term impact of increased educational level will notably depend on the quality of education, on whether the skills acquired are adapted to labour market needs, as well as on whether cuts in spending affect the quality of education in the short to medium term (see Section 4.3).

Chart 22: **Income inequality in 2008 and 2013, Gini index**



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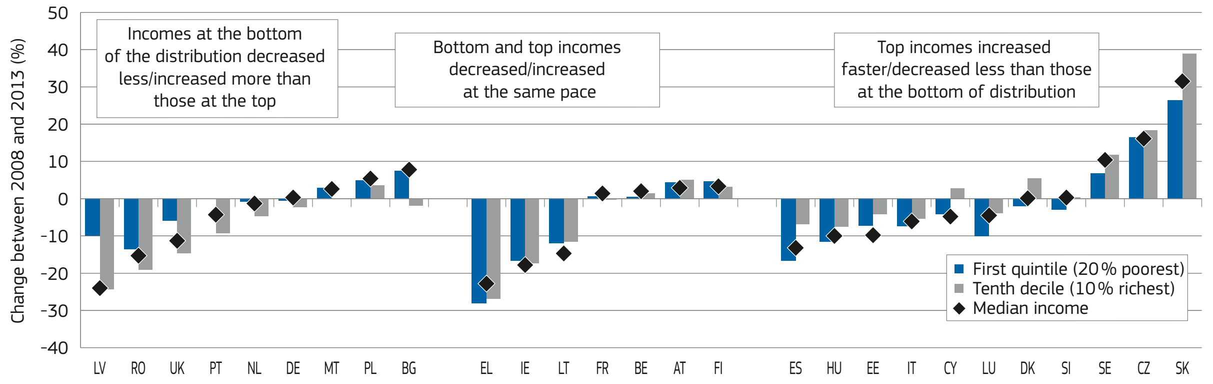
Source: Eurostat, EU-SILC, ilc_di12.

Note: *Data for IE refers to 2012.

Chart 23: **Incomes changes at several points of the distribution (1st quintile, median, 10th decile) — 2008–13**



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Source: Eurostat, EU-SILC, prices adjusted by consumer prices (HICP), Eurostat.

Note: The graph refers to 20 % lowest incomes and 10 % highest incomes. Asymmetrical percentiles have been chosen for the following reasons. The lowest 10 % incomes are generally considered as difficult to capture (see Atkinson-Marlier 2010). Studies on top incomes generally focus on the upper part of the distribution, often top 1pc incomes or 5pc top incomes (see OECD 2013a). Data for IE refers to 2012.

Returns on investment in education can also be limited if they result in over-qualification. Since 2008, over-qualification (53) has increased, especially for those aged 25–34, as reflected in the difficulties university graduates find in obtaining jobs in line with their qualification. For this age group, the rate in 2013 was highest, at over 30 %, in Cyprus, Spain, Ireland, Greece and Bulgaria, where this skill mismatch may have made the labour market less resilient to the economic shock. Nevertheless, the rate of over-qualification has also increased in many Central and Eastern Member States which previously had lower than average rates.

2.3. Falling incomes and rising market income inequalities put tax and transfers systems under pressure

The deterioration of economic and employment conditions has inevitably resulted in an overall decline in household incomes in most Member States, although the impact on income distribution has varied. Since 2008 disposable income inequalities (54) have increased in 10 Member States, notably in Spain, Hungary and Denmark, while they have fallen in seven others, notably in Latvia and Portugal as well as in Belgium and the Netherlands.

These developments reflect the ways in which rich and poor have been affected. In some countries (e.g. Spain, Hungary, Denmark), incomes at the bottom of the distribution (first quintile) were hit harder than those at the top (tenth decile) while in others (Latvia, Romania, the United Kingdom, Portugal, the Netherlands), incomes at the bottom of the distribution were relatively protected, in the sense that they fell less than those at the top.

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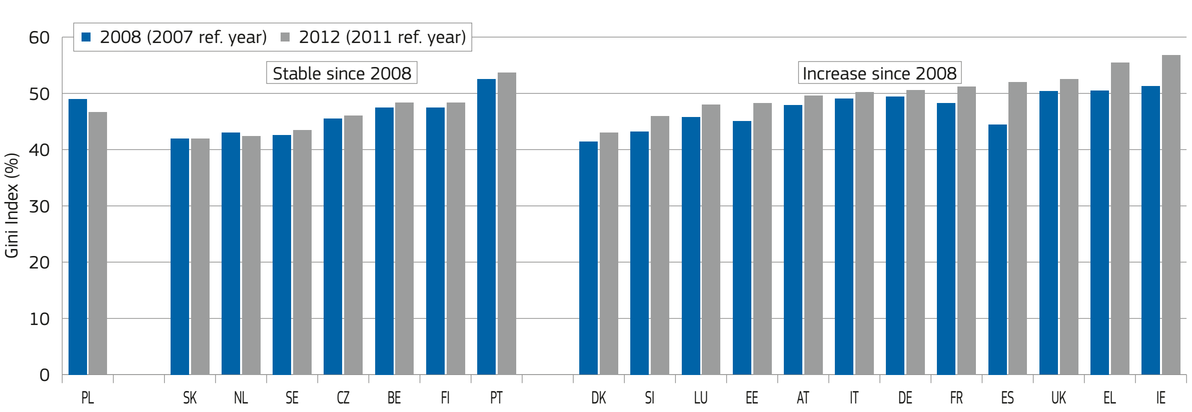
(53) Measured as the share of tertiary-educated (ISCED 5–8) workers who are in low or medium-skilled occupations (ISCO 4–9), i.e. that theoretically do not require a tertiary education level.

(54) Inequalities are measured here through the Gini index. It measures the degree of inequality of the income distribution by taking all income distribution into account. It varies from 0 to 100, with 0 corresponding to perfect equality (everyone has the same income) and 100 to extreme inequality (one person has all the income, everyone else has nothing). Other measures of inequalities (e.g. S80/S20 ratio) are also available for disposable income inequality, but not for market income inequalities. For this reason, only the Gini coefficient is used.

Chart 24: Trends in market income inequalities between 2008 and 2012, Gini coefficient



Source: OECD, income distribution database.

Note: year refers to SILC production year and not reference year. 2008 data not available for SE, DE, IT, FR, IT. 2012 data not available for BE. No data for HU.

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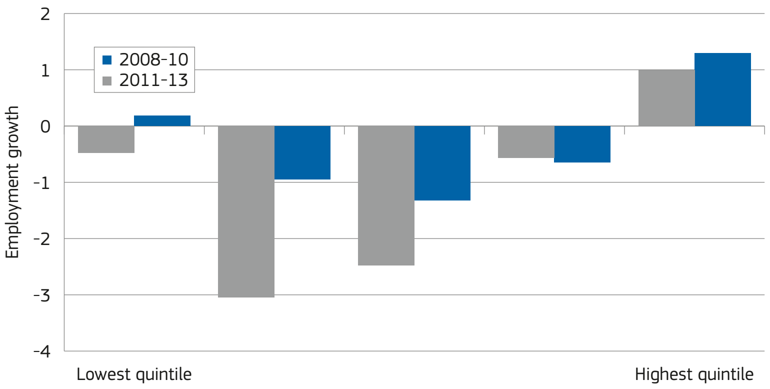
Chart 25: Net employment change (%) by job-wage quintile, 2011 to 2013, EU-28



Source: Eurofound (2014c) calculations, based on Eurostat, EU-LFS.

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Market incomes: polarisation and upgrading in the top of the distribution

Market income inequalities (before taxes and transfers) (55) have increased in most Member States (see Chart 24) since 2008, as a result of both increased joblessness and increased earnings polarisation for those in work. Following the worsening of unemployment from 2008 onwards, the share of households with no income from work increased, especially in Ireland, Spain, Lithuania and Greece. In addition, the polarisation of earnings from work increased as a result of the widening of the hourly wage distribution, a greater dispersion in the quantity of work among those employed, and of the quantity of work within households.

In recent years, the trend towards a hollowing out of jobs at the middle of the wage distribution has continued (see Chapter 3 and Eurofound 2014c). Top-paid jobs were resilient even in the countries where employment losses were substantial (Italy, Greece, Ireland, see Annex 1) and contributed positively to job growth in countries where the recession was milder (Austria, Belgium and Germany). Jobs at the bottom of the wage distribution either decreased less markedly than in the middle, or even expanded significantly, as in France, Greece and the United Kingdom.

The increased polarisation of household market incomes can also be explained in part by the respective shares of job-rich and job-poor households. Before the recession the share of adults living in very high work intensity households was increasing with growing labour market participation of women as second earners. During the crisis, this trend reversed, with an increase in lower job intensity households and reductions in the number of high work intensity households due to unemployment and part-time work (see Chart 26), although experiences varied across Member States.

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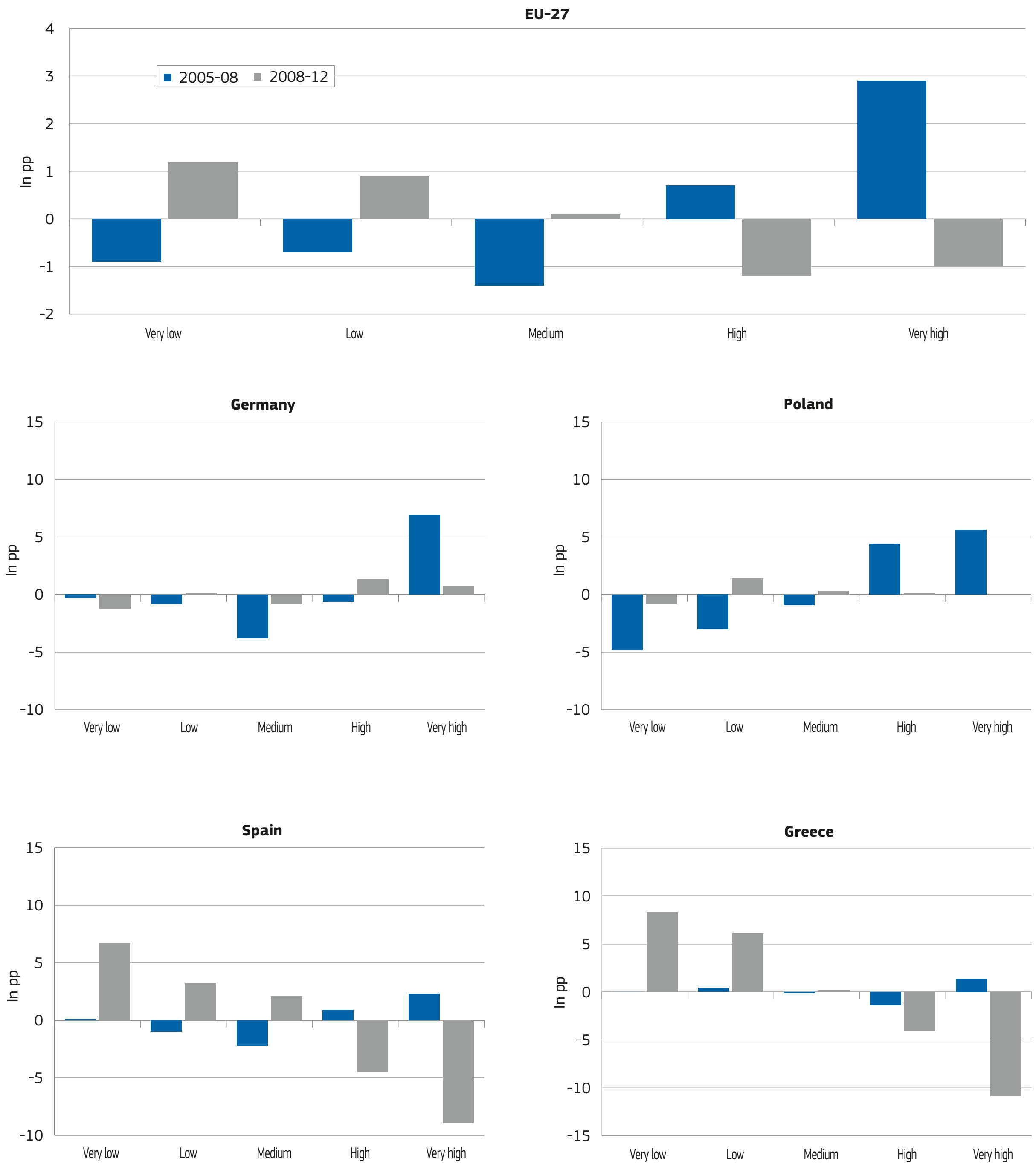
(55) Market incomes refer to gross earnings and capital income. Inequalities are measured based on the Gini coefficient in this Chapter.

Chart 26: Changes in the distribution of population by household work intensity (2005–08 and 2008–13) EU-27, in percentage points



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Source: EU-SILC, Eurostat (ilc_lvps03).

The role of tax and transfers in mitigating inequalities increased in most countries

Overall, while social spending had played a significant role in sustaining household incomes in most countries in 2008/2009, this contribution lessened from 2010 onwards (56). Nevertheless, the redistributive role of tax and transfer systems helped limit the increase in market income inequality (see Chart 27), as expected when a large number of workers lose their jobs. In a few countries, however, market income inequality declined while after-tax and transfers inequality increased.

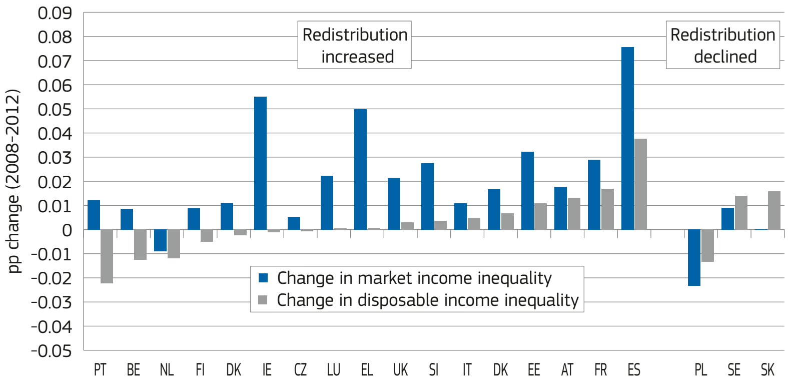
A Euromod micro-simulation study of 13 EU countries found that the policy changes undertaken between 2008 and 2013 resulted in a reduction of income in aggregate terms which directly contributed to increased hardship especially among low income households, whose budgets were already very constrained (De Agostini et al., 2014). Nevertheless the distributional effects of these changes have been broadly progressive, with some country exceptions, despite increases in VAT rates which are normally judged to be regressive.

But the poverty reduction impact of social transfers declined in one third of countries

While the reduction of poverty that can be attributed to social transfers has changed significantly in a number of Member States since 2008, it has remained at a very low level in Greece, Bulgaria, Romania and Italy where weak or absent safety nets (unemployment benefits and social assistance) are combined with limited support for those at work. In contrast, the impact of social transfers in reducing poverty increased significantly after the crisis in Spain, Latvia, the United Kingdom, Ireland and Finland.

Changes in the impact of social transfers on reducing poverty may be due to policy changes or to changes in the composition of the population at risk of poverty (e.g. an increased share of unemployed or working poor). In some Member States which had previously had high levels of social transfers, the impact of social transfers on poverty reduction decreased significantly during the recession. This is especially the case in Sweden, Hungary, Germany, Denmark, Belgium and France (Chart 28). In some other Member States, such as the United Kingdom Spain and Ireland, social transfers contributed to smoothing the impact of the crisis on poverty. Lastly, in some Member States, the impact of transfers on reducing poverty has lowered significantly, as in the Czech Republic and Poland.

Chart 27: **Changes in market income and disposable income inequalities (2008–12), Gini index**



Source: OECD, income sources database.

Note: Year refers to SILC production year and not reference year. 2008 data not available for SE, DE, IT, FR, IT. 2012 data not available for BE. No data for Hungary.

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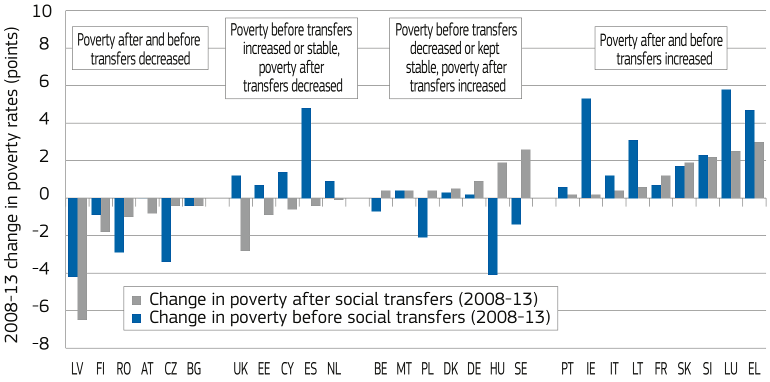
Chart 28: **Evolution of the risk of poverty after and before social transfers 2008–13**



Source: Eurostat EU-SILC (ilc_li02).

Note: 2012 data for IE.

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(56) See European Commission (2013c) and European Commission (2014a). The lessening observed from 2010 is explained by the increase in the number of long-term unemployed losing their entitlements along with the partial phasing-out of the measures put in place to counter the crisis and the tapering off of the impact of social spending in Member States where the economic situation improved.

3. THE POTENTIAL LONG-TERM IMPACTS ON PEOPLE AND SOCIETY

The long-term impact of the prolonged recession, and the contribution of policies intended to mitigate its effects, can be reviewed in the following terms:

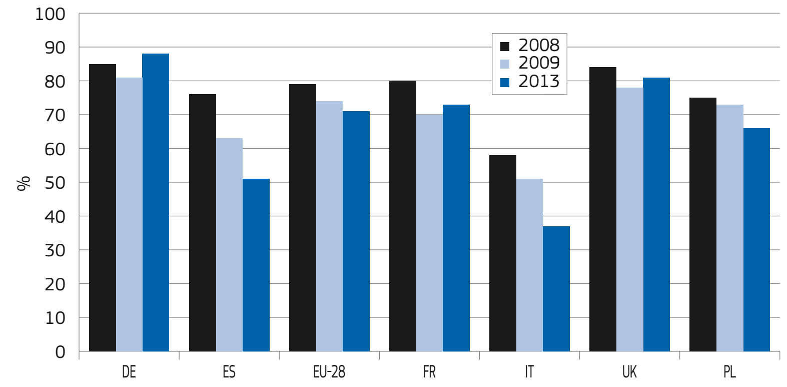
- The scarring effect of early career unemployment for future employment outcomes
- The ability of households to adapt to adverse economic circumstances, drawing on their savings or going into debt, by adjusting their consumption or pulling resources
- The impacts on health and on access to healthcare
- The extent to which declining confidence in the ability of public institutions to address problems may impact on social cohesion, weaken democracies, and inhibit effective policy making.

3.1. Scarring effects of unemployment — evidence from most recent data

The scarring effects of early career unemployment on individuals: lessons from the past

There is considerable existing knowledge about 'scarring effects' for early career unemployment (57) based on research that pre-dates the current recession. Such research shows that, while young people tend to experience spells of unemployment more frequently than adults, they generally face shorter spells of unemployment. In this context, a higher unemployment rate among youth is generally explained by the time needed to make the transition from education to an appropriate job. However, there is evidence that unemployment among young people is less and less a 'temporary nuisance' as spells increase in length. Delays in making the transition to working life, and the lack of opportunity to acquire on-the-job skills and knowledge, can have negative consequences for the individual and society as a whole (Eurofound 2012).

Chart 29: **Employment rate one year after obtaining highest education level (persons 20–29, not in education or training) in 2008, 2009 and 2013**



Source: Eurostat, LFS, DG EMPL calculations. Year of obtaining highest level of education is the variable HATYEAR.

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These 'scarring effects' in early stage of a life or career can impact on future employment outcomes, earnings prospects, as well on health and general well-being (58). This occurs in various ways such as a depreciation (or non-accumulation) of skills, negative signalling effects for potential employers, or simply demotivation. A high level of education tends to attenuate potential scarring effects, and impacts on the channels through which they happen. In all cases, it seems that some work experience, even if limited, is key to prevention (59). Annex 2 contains an overview of literature on the subject.

Entering the labour market in bad times for a whole generation: attempts to measure current impact

While long-term effects are not yet fully observable, analysing the labour market trajectories of those who entered the labour market during the crisis compared to the previous generation — as carried out here — can be informative (60).

Studies comparing the outcomes of those entering the labour market in bad times (i.e. when unemployment is high or increasing) to previous or future generations ('better-off') (61) suggests that the negative effect of being unemployed at entry on future employment rates disappears relatively quickly (i.e. in a three-year period), though the catch-up period regarding wages can be longer, or even permanent (62).

These somewhat different findings (compared to most papers on scarring effects, see Annex 2) may be due to the fact that they are based on data for a whole generation rather than individuals, but they may also reflect the fact that the stigma attached to having been unemployed may be weaker in times of crisis (63). However, such 'scarring effects' are generally seen in terms of their long-term effects, and findings relating to experiences in the 1980s and 1990s cannot necessarily be relevant to the current period.

Chart 29 shows that, over the period of the recent crisis, the employment rate of young people (aged 20–29 and no longer in education or training) one year after having obtained their highest level

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(57) The focus is mainly on young people due to the strong impact of the recession and because several authors argue that long-term scarring effects are more likely to occur when unemployment is experimented early in the career, see for instance Bell and Blanchflower (2011).

(58) The literature on scarring effects for early-career unemployment has been reviewed in Eurofound (2012); European Commission (2013), Chapter 1; European Commission (2012c); Schmillen and Umkehrer (2013); Scarpetta et al. (2010). Most of the papers claim evidence of 'true state dependence' scarring effects in individual unemployment histories but conclusions about the existence and magnitude of the effects somewhat vary.

(59) See recent paper by IAB (2014) as well as Cockx and Picchio (2011) or Doiron and Gørgens (2008).

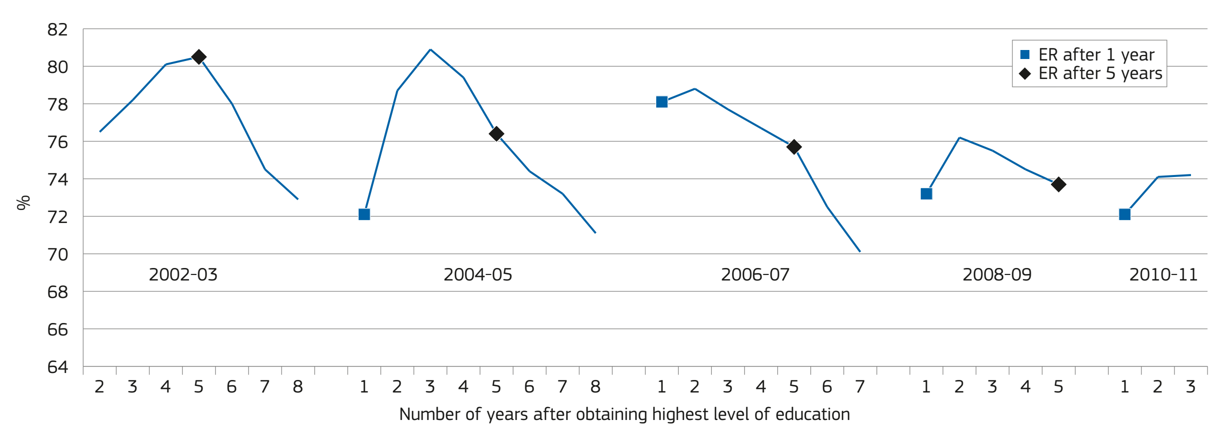
(60) Such methodological approach differs from most papers on scarring effects as it measures the overall impact on a generation, rather than focusing on the scars for those individuals having experienced unemployment spells.

(61) Such comparisons have been documented in numerous countries, notably in Austria, Canada, Germany, Japan, Norway, Sweden and the US, see for example the review of papers conducted by Gaini et al (2012).

(62) See for instance Oreopoulos et al. (2012) for Canada or Kahn (2010), for the US.

(63) For instance, Biewen and Steffes (2010) argue for Germany that 'if unemployment is relatively high, the stigma connected to it is lower because it is a more widespread phenomenon'. Gaini et al (2012) also found, for France, that 'unlucky' young people (i.e. leaving school during a recession) catch up quickly (3 years) in terms of employment with 'lucky' ones (i.e. who entered the labour market during a boom).

Chart 30: Employment rate of young people (20–29) no longer in education or training, by number of years after obtaining highest level of education, for various cohorts (i.e. year when obtaining highest level of education), EU-28



Source: Eurostat, LFS, DG EMPL calculations. Year of obtaining highest level of education is the variable HATYEAR.

Note: For the cohort 200607, the employment rate after 7 years is only available for those having left education in 2006; the same is true for the cohort 2008–09 after 5 years (only 2008 included) and for the cohort 2010–11 after 3 years (only 2010 included). For the cohort 2002–03, the employment rate after one year is not available and the employment rate after one year is only available for those having left education in 2003.

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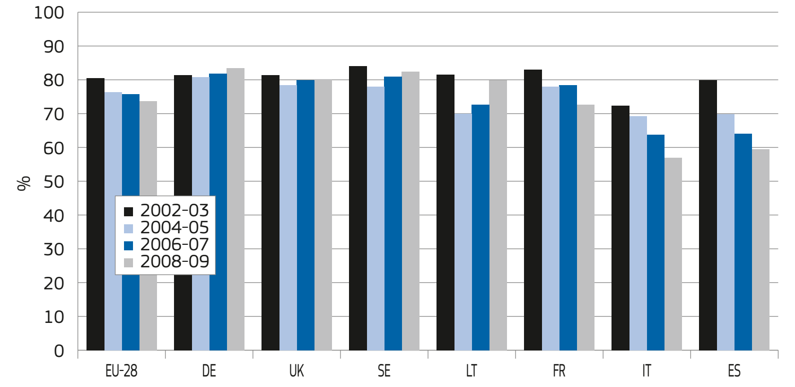
of education (64) dropped from 79 % in 2008 to 71 % in 2013.

What appears to be important from an operational and policy perspective is whether the effects of these negative labour market experiences for current generations will persist over time. In this respect Chart 26 shows that, before the crisis, the employment rate of entrants was relatively low in the first year but steadily increased in the following years. This is not the case for the cohorts of young people who left education after 2006 and have had to face the full effects of the recent recession.

In fact, some five years after entering the labour market, the employment rate of the 2008–09 cohort is below the level recorded for the two previous cohorts (2004–05 and 2006–07). While the gap between the 2008–09 generation and the previous ones diminishes over time (65), this is due to a worsening outcome of the previous generations rather than a real catch up effect.

Chart 31: Employment rate 5 years after completion of highest level of education, by cohort by country, in % (for young people aged 20–29, no longer in education or training)



Source: Eurostat, LFS, DG EMPL calculations. Year of obtaining highest level of education is the variable HATYEAR.

Note: For the cohort 2008–09, the employment rate after 5 years is only available for those having left education in 2008.

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Since employment rates are largely influenced by the economic cycle, it is difficult to judge whether the long-term effects are already visible. In addition, it is not yet possible to observe the outcomes for a prospective generation that will hopefully be entering the labour market at a time of robust economic recovery or even to use the previous generation as a reference point.

The labour market outcomes of young people five years after completing their highest level of education vary across countries (see Chart 31). In Germany, the employment rate increased for all cohorts while in the United Kingdom, Sweden and Lithuania the 2008–09 generation seems to have suffered less than previous cohorts. In Lithuania this may be explained by the rather strong economic recovery and also by the fact that many young people migrated to other countries. In Italy and Spain (and to some extent France), sharp declines in the employment rate can be seen five years after having left education, with each generation performing worse than the previous one (66).

The level of education appears to have played a protective role during the

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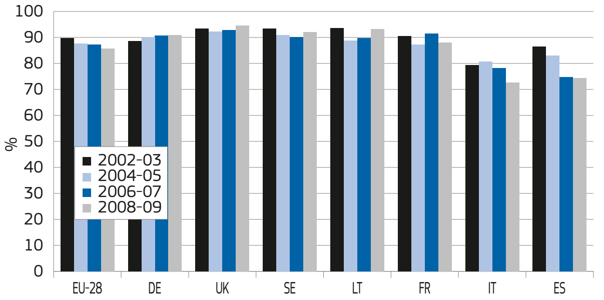
(64) The EU-LFS does not indicate the year of entry into the labour market and one has to use a proxy which is the ‘year of obtaining highest level of education’. As young people may have continued their studies after that year without obtaining necessarily a higher level diploma, there may some bias as those having for instance a theoretical presence of 3 years in the labour market may have just entered after having been three years in education though without succeeding in getting a higher diploma.

(65) The outcome of the ‘unlucky’ 2008-9 cohort is, relative to the previous one (2006-7), less unfavourable after 5 years (gap by 2 pps) than after one year (gap by 5 pps).

(66) In Spain and Italy, the 2008-9 cohort has, five years after having left education, employment rates of around 20 and 15 pps respectively below those for the 2002-03 cohort, while it is around 10 pps for France.

Chart 32: **Employment rate 5 years after completion of highest level of education, by cohort, in % (for young people aged 20–29, no longer in education or training and having a high level of education)**



Source: Eurostat, LFS, DG EMPL calculations. Year of obtaining highest level of education is the variable HATYEAR.

Note: For the cohort 2008–09, the employment rate after 5 years is only available for those having left education in 2008.

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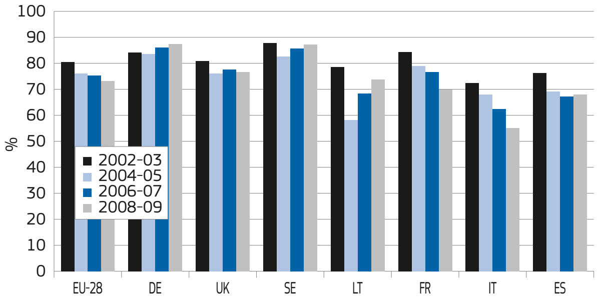
Chart 33: **Employment rate 5 years after completion of highest level of education, by cohort, in % (for young people aged 20–29, no longer in education or training and having a medium level of education)**



Source: Eurostat, LFS, DG EMPL calculations. Year of obtaining highest level of education is the variable HATYEAR.

Note: For the cohort 2008–09, the employment rate after 5 years is only available for those having left education in 2008.

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recession, with the clearest evidence being in France and, to some extent, in Italy, while it is much less true in Spain. Chart 32 suggests that those who obtained a tertiary level education after 2008 have rather similar employment rates to those achieved by previous generations. In contrast, the outcomes of those having no more than upper secondary education are much worse compared with previous cohorts (Chart 33).

This protective role of higher education has been referred to in several studies drawing on the experience of past recessions, where the impact of unemployment at graduation on future income, life satisfaction and health outcomes being lower for the highly educated, see Cutler et al (2014). Likewise, a lasting effect of adverse labour market conditions at entry has been found for the low-skilled, but not the mid-skilled or high-skilled, underlining the risk of polarisation and increased inequalities, see Burgess et al (2013).

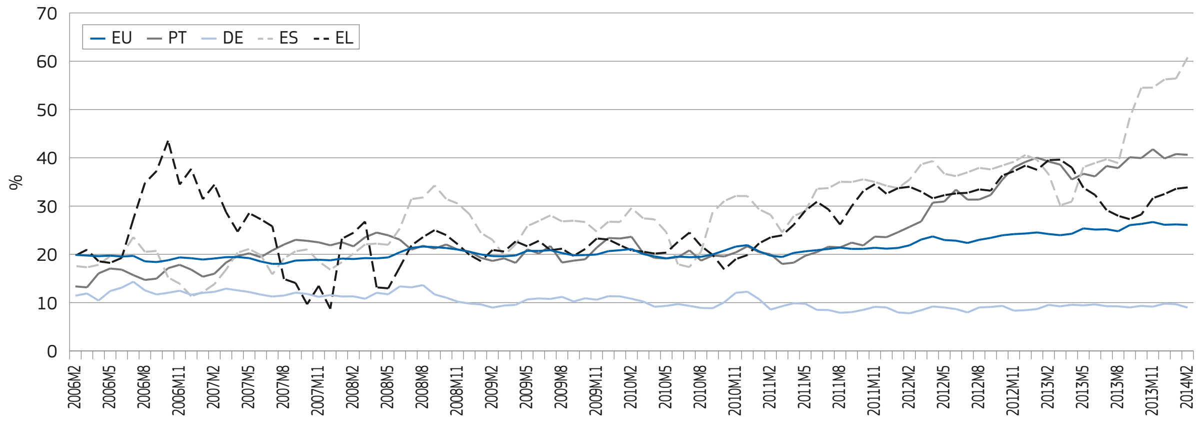
Another factor impacting the transitions from education to professional life is gender. European Commission (2013i) demonstrated that despite the stronger impact of the crisis on the labour market conditions of young men (particularly those aged 15–24) than young women, the latter still face worse labour market conditions overall, especially in southern and eastern EU Member States, notably due to care and family responsibilities. Nevertheless, educational attainment is an important factor in employment opportunities for young women and the gender gaps in employment are smaller for young people with a tertiary education.

3.2. Households: running into debt, adjusting consumption and pooling resources

Running into debt

Household debt levels increased significantly in a number of Euro area countries prior to the onset of the recession (European Commission, 2014d). Household financial

Chart 34: **Financial distress of people in low-income households Reported financial distress of the lowest quartile (share of adults reporting necessity to draw on savings and share of adults reporting need to run into debt), 2000–14**



Source: European Commission DG ECFIN, Business and Consumer Surveys (DG EMPL calculations), data non-seasonally adjusted.

Note: Three-month moving averages.

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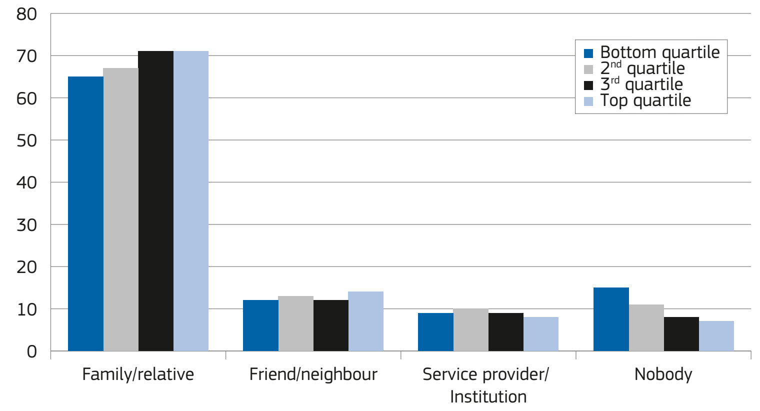
distress (67) in 2014 is now way above the long-term trend. Its recent easing in some Member States has not yet reached low-income households, who remain in the most acute financial situation (see Chart 34).

While the number of poor people with debt problems has grown as a result of the crisis, much of the increase in indebtedness has been among people who had been in well-paid employment, had lost their jobs and are now left with large outstanding mortgages on their homes with limited prospect of obtaining alternative income anytime soon (Eurofound, 2013).

Reduced access to finance following the onset of the recession has increased the vulnerability of people and families and friends to whom they might otherwise have been able to turn to for financial support (see Chart 35) (Eurofound, 2013). In this context some people — notably those who were unemployed for over a year, unable to work due to illness or disability or retired — report being unable to turn to anybody when they need money (68).

Chart 35: Sources of emergency financial support, by income quartile (%)



Source: Eurofound.

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Adjusting consumption

Faced with economic hardship, people naturally adjust their consumption behaviour, and are in some cases led to cut down on essentials such as food, shelter, and healthcare. An analysis based on SILC longitudinal data (Guio and Pomati, 2014) shows that people experiencing economic hardship first cut expenditures on holidays and leisure activities, but retain a car insofar as it is necessary in order to maintain employability, while strictly limiting its use. In countries most hit by the crisis, and in poorer sections of society, this also leads to cutbacks on essentials such as food, clothing, heating and healthcare. These survey findings are further illustrated by qualitative analysis (see Annex 3, Extract 3).

Pooling resources

If there is insufficient income support, people experiencing hardship have to rely on other income sources, such as financial help from the family, informal work or sometimes non-governmental support (soup kitchen, food banks, etc.). A typical example in some countries would involve pooling resources within multi-generational households, with pensions received by elderly household members serving as a major source of income for all (69).

A study on ways in which households seek to mitigate the effects of unemployment (Bentolila, 2008) shows that in Member States where the 'welfare state fails to mitigate the consequences of unemployment, the role of family support is stronger' and that 'family networks represent an important device that allows households to insure against labour market risk.' This can lead to changes in the composition of households, with adult children staying longer or moving back to the parental home, or separated partners sharing the same property.

Table 1: Order of renouncement to deprivation items

	EU-27	AT	BE	BG	CY	CZ	DK	EE	ES	FI	HU	IT	LT	LU	LV	MT	NL	PL	PT	RO	UK
Holidays	1	2	1	2	1	1	2	1	1	2	2	1	2	2	2	1	2	1	1	1	2
Unexpected expenses	2	1	2	3	2	2	1	2	2	1	1	2	1	1	1	2	1	2	3	2	1
Meat/ chicken/ fish	3	3	5	4	5	4	4	4	5	5	3	5	4	4	3	3	5	3	6	6	5
Home warm	4	6	4	1	3	5	5	6	4	6	6	4	3	5	6	6	4	4	2	5	4
Arrears	5	4	3	5	4	6	3	3	3	3	4	3	6	3	5	4	3	5	5	4	3
Car	6	5	6	6	6	3	6	5	6	4	5	6	5	6	4	5	6	6	4	3	6

Source: Guio and Pomati, 2014, own calculations based on EU-SILC 2011 longitudinal data.

Note: The ranking shows the more frequent order of renouncement of items within households as long as their deprivation increases.

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(67) Financial distress is measured as the need to draw on savings or to run into debt (*Source:* European Commission, DG ECFIN, Business and Consumers Surveys); see European Commission 2014a.

(68) Evidence supported by qualitative reports indicates that people most hit by economic hardship face the greatest difficulties accessing credit or obtaining support from banks (see Annex 3, Extract 2).

(69) This trade-off between government income support and household solidarity is documented in European Commission, 2013a. It shows that Member States with widely available income support have lower shares of working age adults living in intergenerational households and depending on the pensions of the elderly.

Across the EU as a whole, there is little evidence that the recession *as such* led to any major change as regards young people living with their parents (see Chart 36) although there have been substantial increases (e.g. + 4 percentage points) in the proportion of young people living with their parents in Ireland, Spain, and Greece since 2008. Qualitative research shows that people sometimes have had no other choice than to rely on family solidarity (see Annex 3, Extract 4).

3.3. Impact on health and access to healthcare

The potential long-term impact of the crisis on health determinants (i.e., unemployment, quality of work, precarious living conditions) is threatening to increase health inequalities between social groups and Member States. There is extensive research documenting the negative impact of economic hardship on the health status of individuals, which in a recession may be further exacerbated by greater difficulties in accessing or paying for healthcare.

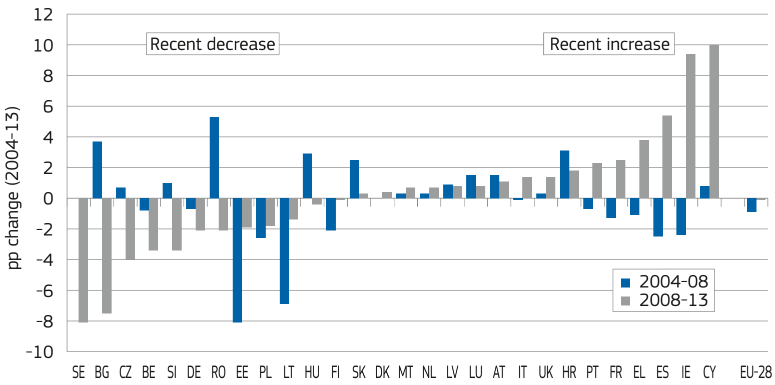
Many studies report that, during recessions, individuals are more likely to suffer from depression and stress (Cooper, 2011). Otterbach (2014) also reports, on the basis of long-lasting panel data, that being unemployed or insecure in one's job has a strong negative effect on life satisfaction and health.

OECD (2014d) also notes evidence of a possible link between the economic crisis and obesity. Many families, especially in the worst hit countries, have been forced to cut food consumption or to switch to lower-priced and less healthy foods. Brenner (2013) identified unemployment as an important risk factor for heart disease mortality at the start of the 2008/9 recession. Stuckler et al. 2011, Reeves et al. 2012 reports a higher suicide rate during recessions. In Italy, the suicide rate increased by 10% among men younger than 65 between 2006 and 2010, with an increase by 25% within the 50–54 age group (70).

The harmful and hazardous use of alcohol and other substances are also key factors in the development of social and health inequalities in the EU, influenced by unemployment and economic downturns (European Commission, 2013, Marmot et al. 2013).

Chart 37 shows that, in many Member States, the unmet need for healthcare is much greater among the unemployed than among the employed. Eurofound (2014, forthcoming) also identified situations in which people lost access to healthcare during

Chart 36: Access to autonomy: changes in the share of young people living with their parents (2004–13), in percentage points



Source: Social Situation Monitor, based on LFS data.

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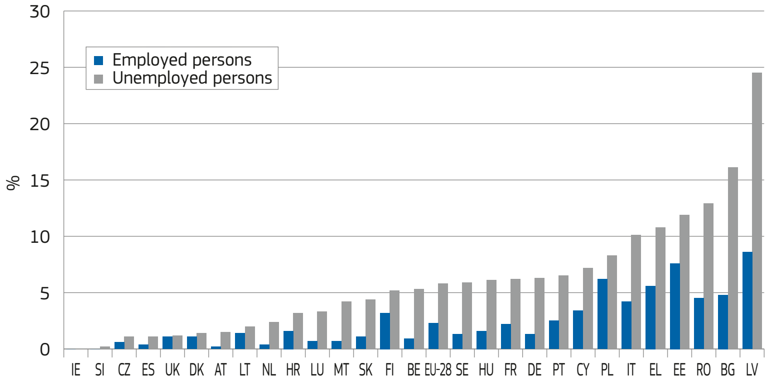
Chart 37: Unmet need for healthcare by employment status



Source: EU-SILC, Eurostat. Unmet need for healthcare is measured as the share of individuals renouncing healthcare because of: cost, i.e. the person cannot afford to pay for it (too expensive); the waiting list; or distance or means of transportation (1).

(1) This definition also applies to the European Core Health Indicator (ECHI) on Equity of access to healthcare service (ECHI 80) for total population and by educational level.

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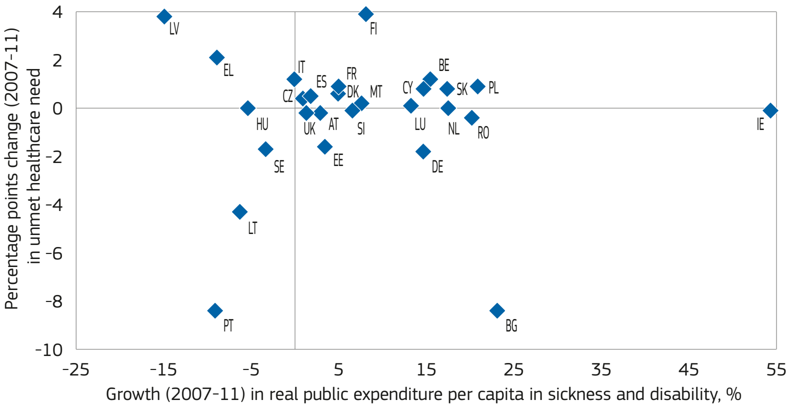
Chart 38: Correlation of real expenditure per capita on sickness, healthcare, disability and unmet healthcare needs, 2007–11



Source: ESSPROS for expenditure in sickness, healthcare and disability and EU-SILC, Eurostat for unmet need for healthcare.

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(70) *Source:* Eurostat, Causes of death — crude death rate per 100 000 inhabitants [hlth_cd_acdr].

the crisis (71). These findings are also illustrated by the qualitative analysis (see Annex 3, Extract 5).

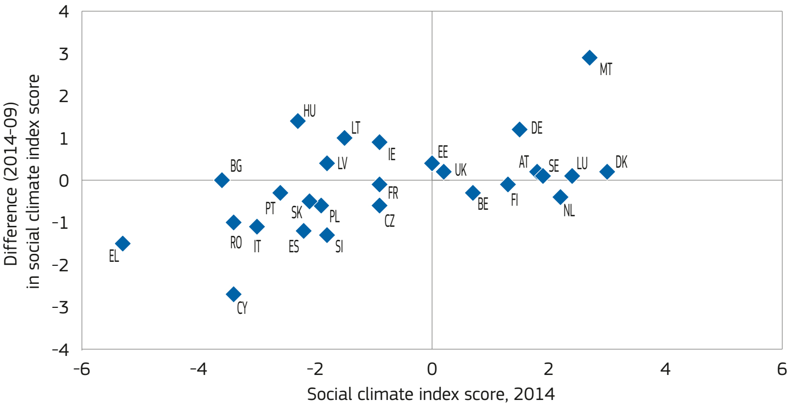
The share of the population with self-reported unmet healthcare needs in terms of medical examinations or treatment (72) increased between 2007 and 2011 in the majority of Member States. Despite greater needs in the wake of the crisis, many governments have cut spending on healthcare services (Eurofound, 2014), especially in countries most hit by the crisis since 2010 (OECD, 2014c). Unmet healthcare needs also increased in some Member States where per capita real expenditure in sickness, healthcare and disability is still higher than it had been in 2007 (Chart 38). This may be explained by other health expenditure being cut such as for medical equipment and investments in hospitals (73).

Clearly the relationship between expenditure and outcomes in health is not straightforward. Reforms cutting public health expenditure aimed at improving efficiency may have undesired effects (74), shift the burden of healthcare payments to the user's ability to pay, reduce the bundle of healthcare services, increase waiting time and affect particularly disadvantaged groups. It is also possible to reduce expenditure without reducing access or improving outcomes via cost-effective reforms. Taking into account gender-specific needs can contribute to the efficiency and sustainability of health systems. Supplementary measures of health outcomes (such as social gradient in health), a longer time-horizon and country-specific analyses are needed for a better assessment.

3.4. Weakening trust in institutions

Trust is a necessary condition for the maintenance of democratic institutions and respect for civic society rules. Since the recession, this trust has decreased across the Union, although a clear divergence can be seen between countries that were less affected by the recession and show a more positive perception of social climate and trust in institutions compared with countries that were more affected and show a more negative perception of trust in institutions (see Chart 41).

Chart 39: **Mean Social Climate index scores, 2014 and 2009–14 change**



Source: Fabian at al. (2014) based on Eurobarometer.

Note: Numbers are mean scores of responses to fifteen questions about personal and general situations and perceived social protection and inclusion policy factors. SC-index scores have a theoretical range of –10 to +10.

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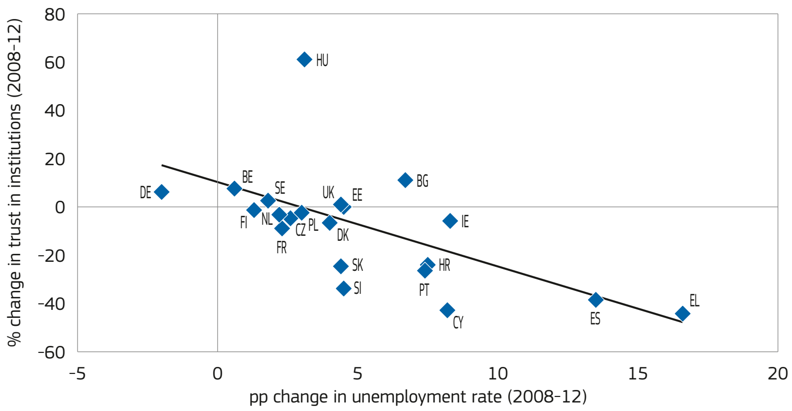
Chart 40: **Changes in unemployment and trust in national political institutions, 2008–12**



Source: Eurostat, EU-LFS and European Social Survey, Social Situation Monitor calculations.

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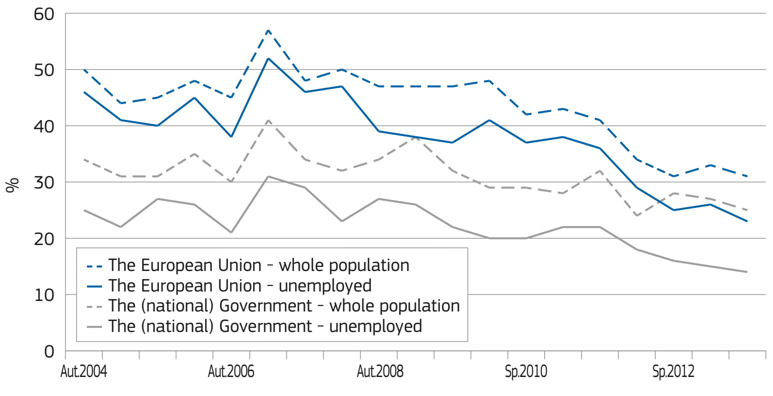
Chart 41: **Distrust in institutions over time: unemployed and whole population**

Percentage of trust among the population



Source: Standard Eurobarometer 80/ Autumn 2013: TNS opinion & social, 2013.

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(71) People experiencing: a) reduced disposable income, increased living cost or debt problems; b) loss of insurance; c) the 'twilight zone', being marginally beyond the entitlement threshold; d) new situations, not familiar with entitlements or entitlements not adjusted to these situations; e) reduced coverage; f) need for services particularly affected by cuts; g) being part of an increased-need patient group; h) closure of nearby healthcare providers with insufficient 'replacement services'; i) decentralised financing of healthcare services and taxes in areas affected by the crisis; j) staff shortages; and k) discrimination with increased xenophobia and crisis-induced migration.

(72) Unmet need may also serve as a possible proxy for health outcome as health outcomes are in part determined by access to healthcare services. The indicator on self-reported unmet need for medical care may induce some comparability issues due to cultural differences between countries. However, over time changes can be more directly linked to changes in health expenditure. http://www.echim.org/docs/Final_Report_II_2012.pdf

(73) In Ireland, for instance, while expenditure for sickness and disability did not decrease over the period 2007–11, per capita health spending has experienced a sharp decline since 2010 (OECD, 2014c).

(74) For instance, in 2006 the Netherlands introduced a dual system with obligatory private health insurance (covering short-term care) and public health expenditure (covering long-term care) increased in real terms by 10 %, while between 2000 and 2005 it grew by an annual average of 2 %.

Factors such as the evolution of the unemployment rate across the EU countries, appear to be closely related to these changes (Fabian, 2014) with increases in unemployment being related with lower levels of institutional trust, less favourable attitudes towards immigrants, and lower life satisfaction (also when controlling for other variables).

Within the population as a whole, the unemployed have the least trust in institutions, whether at EU or national level, with trust levels in the EU having fallen much further over the course of the recession for them. Qualitative evidence demonstrates the extent to which unemployed people feel ignored by their representatives. It also illustrates the fact that, while public services are often seen as a source of support, they are sometimes rejected along with other institutions in some Member States (see Annex 3, Extracts 6 and 7).

4. THE IMPACT OF THE RECESSION ON WELFARE SYSTEMS

4.1. The three functions of social spending: investment, stabilisation and protection

Social spending covers three broad functions: investment, protection and stabilisation.

- Social investment means investing in people, rather than simply compensating them, with a view to future returns in terms of employment and social participation. Expenditure in policy areas such as education, quality childcare, healthcare, training, job-search assistance and rehabilitation is seen as a productive factor for strengthening people's skills and capacities in order to prepare them for working life over the longer term (Van Kersbergen and Hemerijck, 2012).
- Social protection seeks to support and protect people against life-cycle and income risks.
- The overall objective in terms of stabilisation is to sustain households' incomes (and, consequently, aggregate demand), notably during recessions.

While there is no unique relationship between specific social policies and these three functions — investment, protection and stabilisation — specific policies may be more oriented towards one or other of these functions. For example, policies on childcare, labour market activation, rehabilitation, education or training are particularly related to the social investment function, while healthcare provision is related to both protection and investment (including the prevention of disease). On the other hand, pension systems and unemployment benefit systems may address all three social functions (European Commission, 2013e).

Box 2: Government and social protection data

At European level, there are two different accounting frameworks for the monitoring of social spending:

The European System of Integrated Social Protection Statistics (ESSPROS) covers social protection, defined as all interventions from public and private bodies intended to relieve households and individuals of the burden of a defined set of risks and needs (1).

The Classification of the Functions of Government (COFOG) covers all transactions undertaken by units in the general government sector (2), including government spending for the three functions discussed above (included under the COFOG functions of health, education and social protection).

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(1) Provided that there is neither simultaneous reciprocal nor an individual arrangement involved (see Eurostat, ESSPROS Manual, 2011).

(2) These transactions included in COFOG correspond to those defined and recorded in national accounts under ESA95 (see Eurostat, Manual on sources and methods for the compilation of COFOG statistics, 2007).

Within this framework:

- Section 4.2 presents the development of government spending and benchmarks the evolution of social spending (including social protection, health and education) against other categories of expenditure.
- Section 4.3 presents the changes in social investment for different population groups (children and families, youth, working age).
- Section 4.4 considers the developments of social protection as automatic stabiliser.
- Section 4.5 discusses whether changes in the financing of social protection can have an impact on the coverage of social protection.

4.2. The developments of government and social expenditure during the crisis

The development of social spending is not fully explained by cyclical factors

Social spending, including for education, health and social protection, accounts for two-thirds of total government expenditure, with social protection being the largest component (Chart 42). During the current recession, the share of total EU GDP absorbed by government expenditure increased from 46 % in 2007 to almost 50 % in 2012 with social spending increasing by 11 % while overall government expenditure increased by 8 % at EU level (Chart 43). Within these average EU figures, however, the balance and development of government expenditure between different categories can vary considerably between Member States.

The counter-cyclical nature of social protection — rising in periods of recession and falling in periods of recovery — largely explains its contribution to increased government spending in the first phase of the crisis. However, this cannot explain its contribution (together with education and health expenditure) to the fall in the second phase, from 2011 to 2012 (Chart 44). In some Member States social protection was reduced proportionally more than total government expenditure, while biases towards specific categories of expenditure were not addressed (as in Greece and the Netherlands) or introduced (as in Spain for economic affairs (75)).

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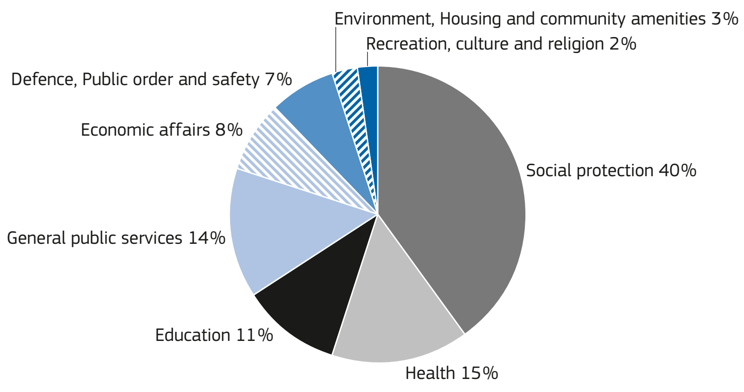
(75) Economic affairs corresponds to expenditure for General economic, commercial and labour affairs, Agriculture, forestry, fishing and hunting, Fuel and energy, Mining, manufacturing and construction, Transport, Communication, Other industries, R&D, Economic affairs, including expenditure for the bailout of banks.

Chart 42: Composition of government expenditure, EU-28 2012



Source: COFOG.

Notes: General public services corresponds to executive and legislative organs, financial, fiscal, external affairs, foreign economic aid, general services, basic research, R&D general public services, general public services n.e.c., public debt transactions, transfers of a general character between different levels of government.

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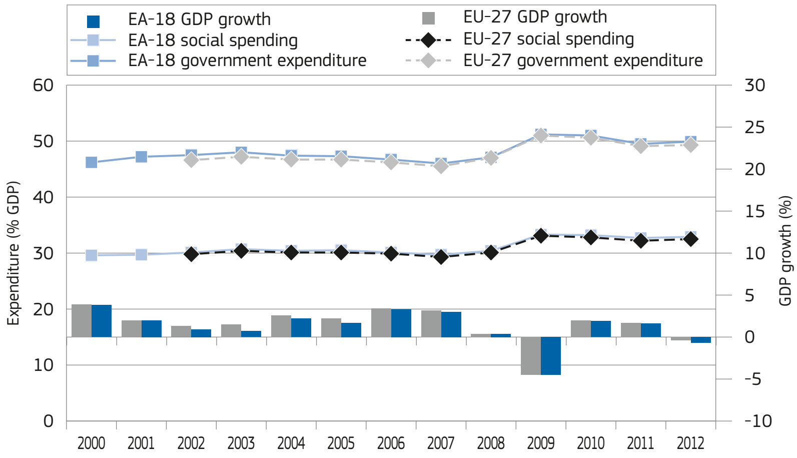
Chart 43: Share of government and social spending (education, health, social protection) in GDP, EU-27 and EA-18



Source: COFOG.

Notes: Social spending includes public expenditure in healthcare, education and social protection.

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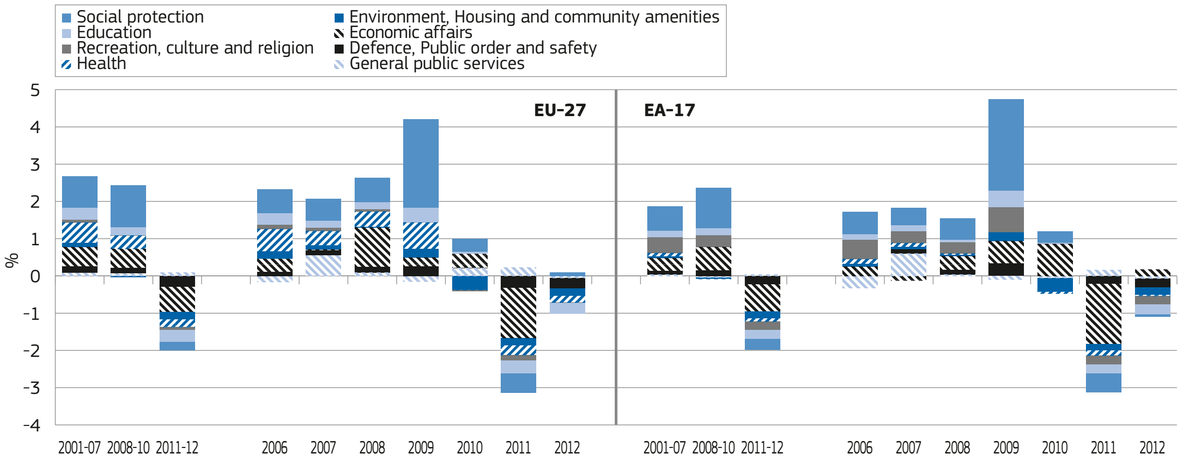
After 2010 average unemployment benefits per unemployed person and in-kind (health) benefits were reduced

In the initial phase of the crisis, increases in social expenditure were mostly due to expenditure on sickness and disability support, pension expenditure, unemployment and family expenditure on children, with the rise in pension and family expenditure per beneficiary being partly explained by the lagged effects of the indexation mechanism in place (European Commission, 2013a).

In 2011, however, social protection expenditure declined on average in the EU-27 and in most individual Member States, mostly due to a decrease in the average expenditure per unemployed person (itself partly explained by the phasing-out of benefits for the long-term unemployed), as well as by reductions in expenditure on sickness and disability and on average family expenditure per child.

While declines in social expenditure in 2011 affected both cash and in-kind services, in 2012 they were concentrated on in-kind benefits. This is mainly explained by a reduction in in-kind sickness and disability benefits, although in-kind family benefits increased in many Member States despite the reduction in average expenditure per child. Such reductions in in-kind benefits are not reflected in household incomes and measurements of monetary income poverty, but they might be reflected in measures of households' access and provision of services (European Commission, 2013a).

Chart 44: Changes in real government expenditure, EU-27 and EA-17



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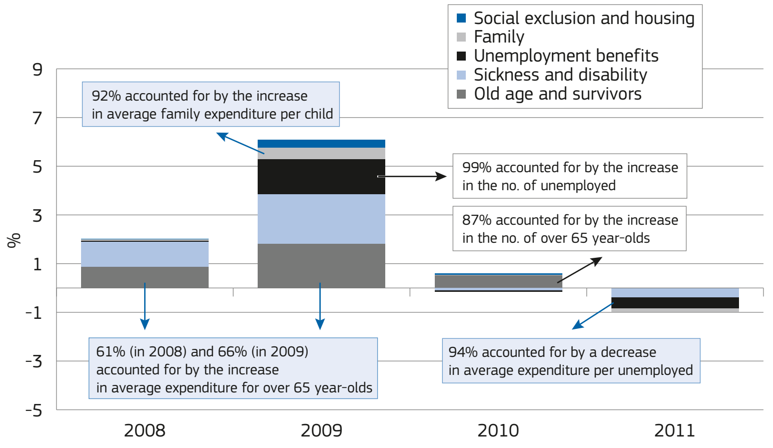
Source: COFOG.

Chart 45: Real growth of social protection, by function and decomposition, EU-27 (2008–11)



Source: ESSPROS, elaborations from European Commission, 2013a.

Notes: shaded boxes correspond to changes in expenditure not due to socio-demographic factors.

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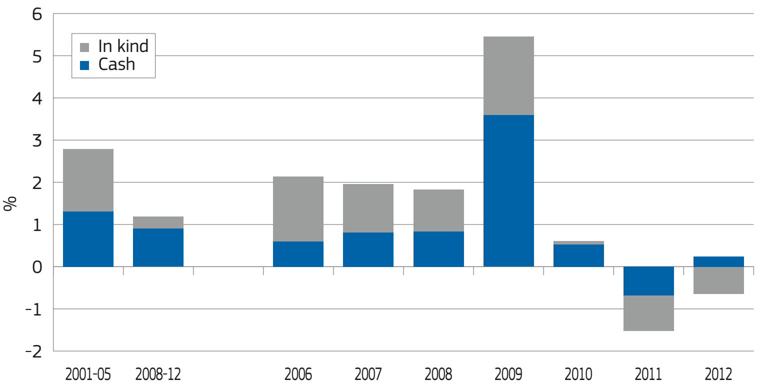
Chart 46: Annual change in real public social expenditure, by cash and in-kind benefits



Source: National Accounts.

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Box 3: The multiple functions of childcare

There is a growing awareness of the crucial importance of addressing early child development in a positive way. Several long-term studies have highlighted the benefit of quality childcare on child development through into adulthood (see European Commission 2014e) — something that is seen as particularly important for the most disadvantaged.

The availability, the quality and the flexibility of childcare is also seen to influence the employment participation decisions of parents. Widely available full-day and after-school care in the Nordic countries and France have made it easier for parents to work full-time if they wish, whereas in Austria, Germany or Luxembourg, kindergartens typically operate short days or have long breaks that may not be compatible with full-time work.

Enrolment hours can also have particular implications for female participation in the labour market. In those Member States where more women work shorter part-time hours, the offer of a formal care system is also lower. Nevertheless, as enrolment can contribute to the achievement of a work-life balance and overcome the trade-off between inactivity and part-time employment, it can still be seen as preferential to no enrolment at all. On the other side, longer enrolment hours of care tend, in practice, to be matched with longer working hours of females.

Finally, an expansion of childcare services contributes to increasing formal employment opportunities for women.

4.3. Investing in children and families, young and working-age population

Social investment as a broad policy perspective emerged in the 1990s with the aim of ensuring the sustainability of the welfare state in the face of new social risks and changing economic needs and challenges. The key aims of social investment expenditure are seen to be to promote active employment and social participation, social cohesion and stability (Van Kersbergen and Hemerijk, 2012) based on support for the development of human capital and strengthened family links to the economy through employment (Vanderbroucke et al., 2011). As such, the policy focus has been on education, active labour market policies, early childhood education, preventive healthcare, health and safety at work, and retraining and lifelong education (see the Social Investment Package).

Investments in childcare are intended to help reconcile the working and family life of parents, while improving future educational performance, particularly of disadvantaged children. Investments in education, while primarily intended to enhance the quality of lives of future generations, are also expected to raise skill levels and improve employment outcomes, while reducing inequality and poverty. Active labour market measures aim to improve and maintain employability of both the employed and the unemployed.

From a demand-side perspective, they also provide a positive stimulus by reducing costs of labour, mitigating risks for employers of recruiting new workers, and providing training support as well as financial incentives to the self-employed. Even in times of weak labour demand, they may increase employability, help the unemployed to remain active with the support of public employment services, with such measures having been found to have a positive impact as reflected in higher employment rates — see Kluve (2010).

Van Kersbergen and Hemerijk (2012) consider that, in the period leading up to the recession, a number of European welfare systems had been developing in the direction of the social investment model, and that this had resulted in increased labour market participation. At the same time, however, this focus on activation may have distracted attention away from policies designed to cover social risks, with the further risk that the recession could endanger the continuing progress of the social investment model. Some authors suggest that the crisis has increased the need for social investment, although countries most in need of social investment tend to lag behind (Kvist, 2013 (76)).

Since the onset of the recession, the pattern of social investment expenditure has changed somewhat. While the trend towards increasing social investment in children and families through childcare has continued, investments targeted on the unemployed and on education have weakened. However, such patterns differ widely between Member States with some clearly moving towards a social investment model, while others appear to be moving away from it.

The importance of investing and protecting people

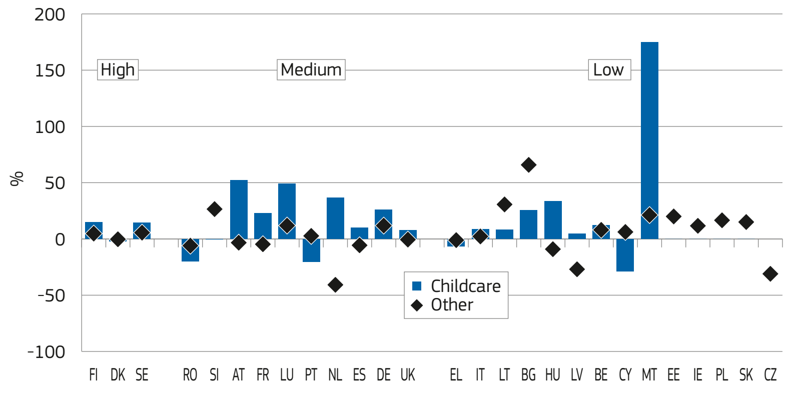
The evidence from the crisis suggests that an adequate level of social investment helps people to continue to remain active or available for work, even in periods of recession. Social investment alone may not be enough, however. For instance, increasing investments in education in most Member States during the last decades have not contained growing income inequalities just as improved employment opportunities have not always resulted in lower levels of poverty (Salverda et al., 2014; OECD, 2011). In that respect it has been argued that more direct measures aiming at equality of outcomes may be more effective than indirect measures through educational systems (Solga, 2014).

Investments in childcare continue and are improving in some Member States

In terms of family expenditure since the onset of the recession, it is useful to distinguish between investments — as in child day care — and benefits such as income maintenance in the event of childbirth, birth grants, parental leave benefits, family or child allowances, accommodation, home help and other benefits.

Expenditure for child day care and families was on the increase before the recession but, since the onset of the crisis, increases in family expenditure have slowed although the share of expenditure for childcare has been preserved and even improved in some Member States. Chart 47 shows that real expenditure for child day care has increased in most Member States since the recession,

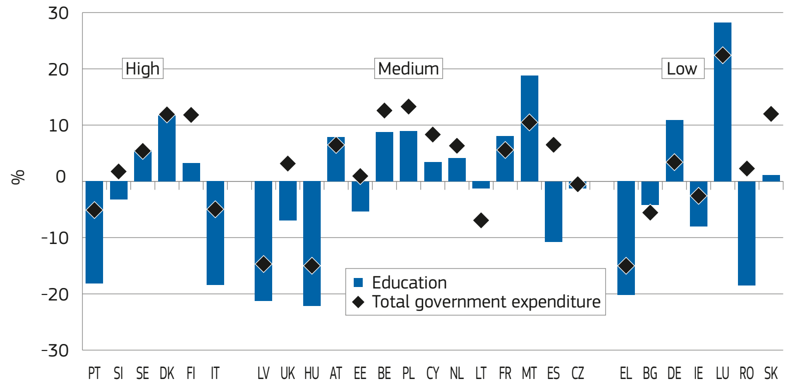
Chart 47: **Real growth of family expenditure by type (child day care versus all other) (2007–11)**



Source: ESSPROS.

Notes: The ranking of Member States is based on child day care expenditure per child in terms of GDP per capita in 2007 (Group High: above 50% of maximum value; Group Medium: between 20% and 50%; Group Low: below 20%). The children population is defined from age 0 until the age at which at least 85% of the children are enrolled in child day care. Data on child day care expenditure for EE, IE, PL, SK and CZ are not reported as they are not reliable (ESSPROS report zero spending for one or more years).

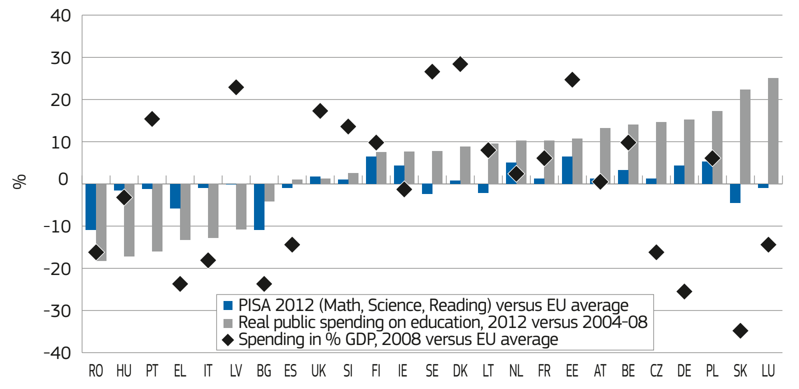
Chart 48a: **Real growth in education versus total government expenditure (2007-12)**



Source: COFOG.

Notes: The ranking of Member States is based on education expenditure per young in terms of GDP per capita in 2007 (Group High: above 90% of maximum value; Group Medium: between 70% and 90%; Group Low: below 70%). The young population is defined from the age until less than 85% of the children are not enrolled anymore in child day care until 24.

Chart 48b: **Real development in education expenditure (2012 versus 2004–08) and relative educational performance (PISA test scores, 2012)**



Source: Vandenbroucke (2014).

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(76) This study analyses social investment in terms of coverage it seems, not in terms of expenditure.

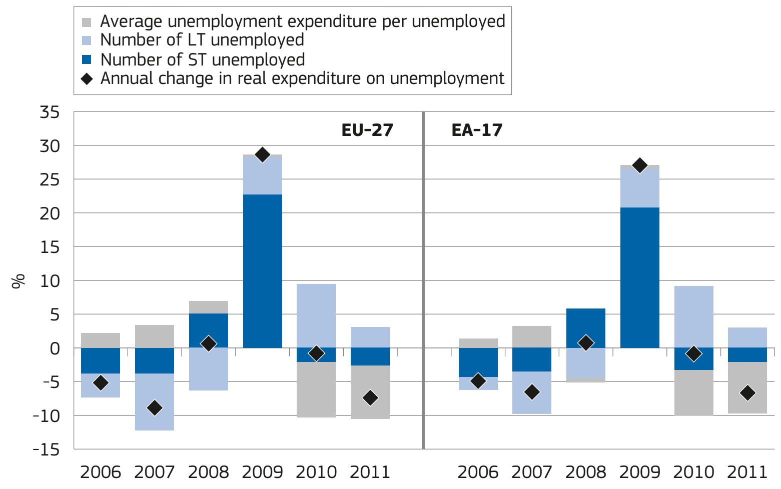
and has also increased more than other family expenditures. This has been notably the case in Malta and, to a lesser extent in Austria, Hungary, Germany, France, Luxembourg and the Netherlands. However, child day care expenditure actually decreased in real terms between 2007 and 2011 in Greece, Cyprus, Portugal and Romania.

Since the recession investments in education decreased in around half of the EU-27 Member States

While investments in education had been increasing in all Member States before the recession, they began to decrease in around half of the countries as the crisis developed. Chart 48a shows the evolution of real expenditure in education between 2007 and 2012, compared to the evolution of total real government expenditure.

The reduction in investment in education was particularly strong in Romania (almost 40%), Hungary (more than 30%), United Kingdom, Latvia, Greece, Italy and Portugal (around 20%), especially in most recent years with anticipations of further cuts in Cyprus, Portugal and the United Kingdom (European Commission, 2013f). Cuts in education have resulted in teachers' salary cuts and freezes, a reduction in the number of teachers, restrictions to financial support for students, and an increased targeting of adult education in some Member States, although budgets for ITC resources were generally preserved (European Commission, 2013f). Cuts in education spending are further aggravated by the fact that they occurred in Member States with a poor educational performance, as shown in Chart 48b. Although there is a certain correlation between expenditure in education and educational performance, more spending does not necessarily guarantee a better performance, but cuts are not a sign of progress either (Vandenbroucke, 2014). In Member States where education expenditure did increase, however, a split can be seen between those where it increased proportionally less than total government expenditure, and those where it increased more, as in Sweden, Austria, France, Luxembourg and, especially, in Malta and Germany.

Chart 49: **Contributions to the annual change in real unemployment expenditure (2006–11)**



Source: ESSPROS from European Commission, 2013a.

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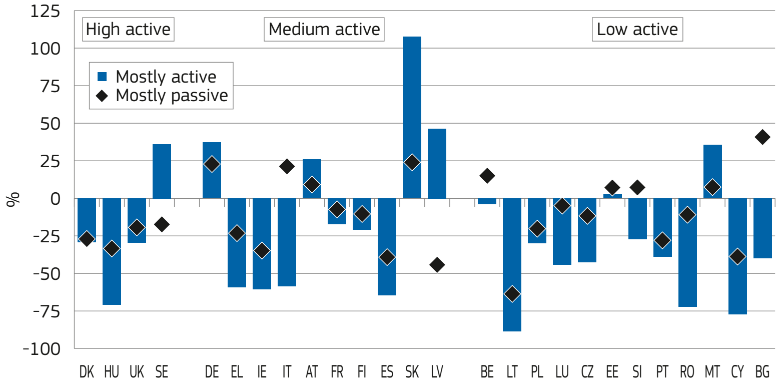
Chart 50: **Real growth of unemployment expenditure per unemployed by type (primarily active, primarily passive) (2007–11)**



Source: ESSPROS.

Notes: Member States are grouped according to the level of unemployment expenditure per unemployed in mostly active measures in 2007 (in % GDP). NL is missing as data breakdown is not reliable.

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Investment in the working-age population through mostly active unemployment measures has reduced

With regard to unemployment-related expenditure, it is useful to distinguish between measures that can be categorised as primarily active (vocational training allowance, vocational training in-kind, placement services and job-search assistance) and those than can be categorised as mainly passive (full and partial (77) unemployment benefits, early retirement benefits for labour market reasons, redundancy compensation, mobility and resettlements and other benefits) (78). Measures defined as mostly passive (such as unemployment benefits) may nevertheless include an activation part through, for instance, the use of conditionality with respect to job-search requirements.

The activation component depends very much on the design of unemployment benefits, which varies considerably across Member States in terms of the strictness of the eligibility criteria for their receipt. For instance, job-search monitoring is more demanding in Slovakia, United Kingdom, Portugal and the Netherlands than it is in Italy, Greece and Sweden, while job-search and availability requirements are more demanding in Germany, Denmark and Slovakia than they are in Belgium, Greece and Bulgaria. Likewise sanctions are stricter in Greece, Slovenia and Romania than they are in the Netherlands, Germany and Austria (Venn, 2012 (79)).

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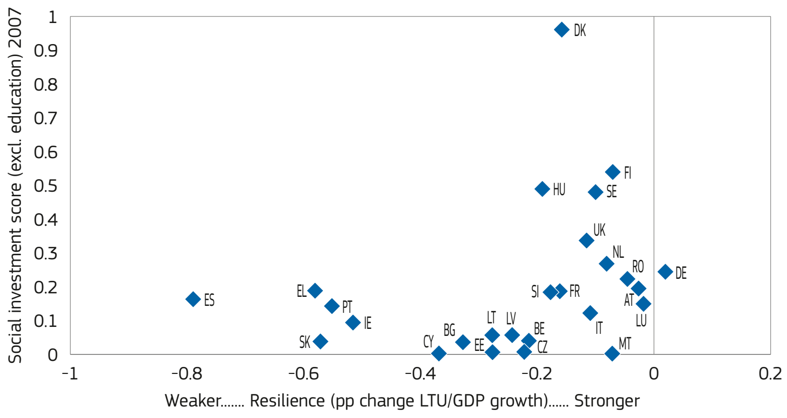
(77) In this framework we define partial unemployment benefits as a mostly passive measure. However, given their importance to keep people in the labour market they are analysed more in detail in Section 5.4, together with short-time working arrangements.

(78) These correspond to the types of benefits available in the ESSPROS framework. Some active measures, in particular those helping both business and the unemployed (wage subsidies, exemptions from paying employers' SSC, etc.) are not included in the ESSPROS Core system (ESSPROS Manual).

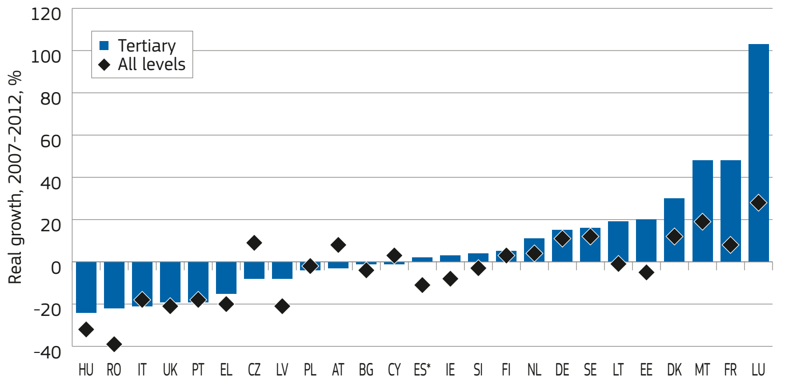
(79) Data refer to 2010.

Chart 51: **Correlation between social investment (excluding education) and resilience (pp change in LTU / pp change in GDP)**



Notes: The social investment score is based on 2007 values of child day care and mostly active unemployment expenditure per unemployed, where both areas are assigned equal weight. Resilience is measured by the ratio between the pp change in LTU in 2009–2010 and GDP growth in 2008–2009. PL is not reported in the Chart as it did not have a negative economic shock in this period. For NL the social investment score is based only on education and child day care expenditure as data for mostly active unemployment measures are not reliable in ESSPROS.

Chart 52: **Real growth of social expenditure for tertiary education, 2007–12**



Sources: COFOG.

Notes: 2011 for ES.

While total EU unemployment expenditure had been falling prior to the recession as labour market conditions improved, developments since have been affected by divergent forces — increases in the average level of unemployment expenditure per unemployed person, on the one hand, off-set by reductions in the number of short and, especially, long-term unemployed.

In the first phase of the crisis — from 2008 to 2009 — unemployment expenditure across the EU increased, mostly due to the increased number of unemployed (European Commission, 2013a), although it actually fell in Germany as the number of unemployed decreased, but also in Poland — but in the latter case due to a reduction in the average unemployment expenditure per unemployed person (European Commission, 2013a).

During the crisis, however, most Member States reduced real unemployment spending per unemployed person on measures that were primarily active, this being notably the case of Lithuania, Romania and Cyprus, where such spending was already low, and in Hungary. This declining trend is particularly problematic in countries such as Cyprus, Hungary and Bulgaria where the activation component within the standard unemployment benefits system was already very limited (80).

In most other Member States, unemployment benefit payments increased proportionally more than spending on active measures as unemployment rose and labour demand fell, although expenditure on mostly active unemployment measures did increase in some Member States which had previously invested comparatively less in these types of measures (Estonia and particularly Malta) as well as in Sweden, Germany, Austria, Slovakia and Latvia.

Some countries are evolving towards a social investment model, while others are departing from it

Some of the Member States with relatively high levels of social investment appear to have maintained the resilience of their systems during the recession, as measured in terms of levels of LTU and GDP — this being particularly noticeable in the case in Germany, which managed to decrease LTU. However Chart 51 suggests that, while social investment may improve resilience, it is also subject to decreasing returns with, for example, the high level of social investment in Denmark seen to be doing more to ensure initial low levels of LTU than to contain the effects of economic shocks on LTU.

Table 2 summarises the development in real terms of social investment in specific areas (education, unemployment, family) across Member States since the recession. This assessment of the evolution towards a social investment model takes into account the orientation of welfare systems before the recession, with Member States divided into three groups (low/medium/high), based on the level of investment in child day care per relevant child population, mostly active unemployment expenditure per unemployed and education expenditure per relevant young population in 2007. The overall score of social investment is measured by assigning equal weights to the three areas and the growth over 2007–2011 corresponds to the average growth in the three areas.

Member States that started with low levels of social investment and whose investments were subsequently reduced further (Low/Decreased in the Table 2) represent a particular concern. Member States starting from low levels, but where social investments increased, are promising as it seems that they can expect the highest returns. In some Member States, social investment increased in some areas, while not in others. For instance, in Poland investment in education increased, while it decreased in child day care and active unemployment measures in real terms.

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(80) Based on Venn (2012) scoring of job-search, monitoring and job sanctions.

Table 2: Summary developments in social investment (real terms, 2007–11)

Investments in 2007 in …		Between 2007 and 2011: Decreased	Stable	Increased
Education	High	PT, SI, IT		**DK, FI, SE**
	Medium	IE, HU, LV, UK, EE, ES	LT, CZ	BE, MT, NL, AT, PL, CY, FR
	Low	**BG, EL, RO**	SK	DE, LU
Active unemployment	High	DK, HU, UK		**SE**
	Medium	EL, IE, FR, FI, ES, IT		DE, AT, SK, LV
	Low	**RO, CY, LT, CZ, PT, PL, LU, BE, SI, BG**		MT, EE
Family	High		DK	**SE, FI**
	Medium	RO, PT	SI	ES, FR UK, DE, AT, NL, LU
	Low	**EL, CY**	EE, IE, PL, SK	IT, HU, BE, MT, LV, LT, BG
Overall	High	DK	FI	**SE**
	Medium	EL, ES, HU, IT, PT, RO, SI, UK		AT, BE, DE, FR, LU, LV, NL
	Low	**BG, CZ, LT, PL, IE, CY**	EE	MT, SK

Notes: In the rows Member States are grouped according to expenditure in child day care per relevant child population, education expenditure per relevant young population and mostly active unemployment expenditure per unemployed in 2007. In the columns Member States are grouped according to the real evolution of expenditure between 2007 and 2011. Stable real growth is defined for changes between 1.5 % and –1.5 % for education expenditure, –4 % and +4 % for mostly active unemployment and family expenditure. The level of overall expenditure in 2007 is based on the social investment score, which assign an equal weight to the three areas. Member States can be in the 'high' group only if they do not have 'low' expenditure in any of the three areas. The overall trend is based on the average growth in the three areas. For NL the social investment score is based only on education and child day care expenditure as data for mostly active unemployment measures are not reliable in ESSPROS.

During the recession social investments were concentrated more on children than on young people and adults, and also on addressing life-cycle risks (such as parenthood) than on income groups risks (such as unemployment). Continuing previous trends, investments in children and families have increased in most Member States, with the exception of Cyprus, Romania, Greece and Portugal.

The majority of Member States with previously medium and low levels of expenditure for childcare converged towards the EU average, especially Malta (where an ambitious reform was initiated) and Austria, Luxembourg and the Netherlands. In these Member States, which continue to invest in childcare from low to moderate levels, the employment of mothers increased significantly, while previous progress in Cyprus and Portugal in this respect has been reversing.

Likewise, investment in the education of young people has been reducing, in contrast to previous trends, with particularly serious cuts in Greece, Romania and Italy where starting levels were already relatively low. Such cuts in education expenditure come on top of the effects of the recession itself on young people. Cuts in tertiary education were also severe in some Member States (Chart 52). The combined effect of decreasing expenditure on education and increased number of students entering education — notably apparent in Spain, Portugal, Ireland, Estonia — is also liable to adversely affect the quality of education they are likely to receive (81).

Over the course of the crisis, the balance of unemployment measures shifted from active towards passive. This might possibly be justified on the grounds that total spending on active measures such as training may not necessarily need to increase proportionally as the number of newly unemployed people increase. On the other hand, it could equally be the case that governments felt that, as they needed to cut spending in order to meet budgetary targets, this was the easier or more politically acceptable option.

Table 2 summarises the change in the selected dimensions of social investment (82) (education, active unemployment measures, childcare) in its final row. It demonstrates that a number of Member States are progressing towards a social investment model, while others are clearly departing from it. In the first group there are a few countries starting from already relatively high levels of social investment (SE) and a few from relatively low levels (in particular Malta), but most were coming from medium levels of social investment.

The second group consists of Member States that already had relatively low levels of social investment (especially Czech Republic, Romania and Cyprus), but also by Member States which had previously medium to high levels of social investment. As shown in Chart 51, increasing social investment in Member States starting from low levels yields the highest returns in terms of resilience.

4.4. The development of social protection as an automatic stabiliser

Member States with well-functioning welfare systems were more resilient during the recession

Social protection expenditure had been increasing by 2 % a year on average in the period 2001–2005 but, following the impact of the crisis it increased considerably in 2009 (by 6 %), driven particularly by increased unemployment benefits expenditure, but also by sickness and disability and old age and survivor expenditure. This cyclical growth in social protection spending continued until 2011, but then declined in the face of the persistent weakness in the economy.

The decline in social protection by 2012 can thus be seen as the result of both cyclical and structural factors, with part of the decline being explained by the

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(81) This conclusion needs to be refined as we are talking about a share of young people, not an absolute number.

(82) The inclusion of investments in education in the assessment of the level of social investment (low, medium, high) often change the ranking of Member States with respect to the case in which this expenditure is excluded. In EL, IE, IT, LU, RO and, especially, in AT, DE, ES and NL the inclusion of education worsen the ranking in terms of social investment. In CY, EE, HU, LV, UK and, in particular, PT the inclusion of education improves their ranking in terms of social investment.

Table 3: Family benefits, indexation mechanism changes 2007–13

		2013			
		No indexation	Automatic indexation (lag)	Automatic indexation (more timely)	Discretionary indexation
2007	No indexation	AT, EE, LV, LU, PL, ES			
	Automatic indexation (lag)	IE	BE, CY*, CZ, DK, FI, HU, IT, LT*, NL	SI	
	Automatic indexation (more timely)			FR	
	Discretionary indexation	EL			BG, DE, MT, PT, SK, SE, UK

Source: MISSOC.

Notes: * adjusted in CPI increase more than 1.1.

long-term unemployed losing their entitlement to benefits, but also by the phasing-out of stimulus measures initially put in place to counter the crisis, and by expenditure consolidation measures.

The impact of budget consolidation on social protection spending can be seen by comparing what happened in this recession with what had gone before. In previous recessions, social expenditure was still counter-cyclical after 3 years, while in 2012 it continued adjusting downward as the output gap deteriorated (European Commission, 2013a). Such a pro-cyclical adjustment of social protection clearly limits its stabilisation contribution, raising concerns about its contribution in case of future recessions.

A more detailed prior analysis (European Commission, 2013a) shows that, while the increase in unemployment expenditure in 2009 was driven by the increase in the number of unemployed, the increase in family and, to a lesser extent, pension expenditure was driven by an increase in average expenditure per (potential) beneficiary. This reflects the workings of the indexation mechanism of benefits which tend to be based on the previous year's rate of inflation, such that the rise in family and pension benefits in 2009 can probably be explained by the high inflation in 2008, even though the rate of inflation in 2009 was low.

Table 3 shows that most Member States did not adjust their indexation mechanism for family benefits. Only Slovenia went in this direction by replacing the annual indexation with a semester indexation, while Ireland and Greece lost their indexation mechanism altogether. In most Member States with no indexation or a discretionary mechanism, family expenditure was more stable in 2009 compared to other countries (European Commission, 2013a). However, the outcome for countries with a discretionary indexation mechanism depended on the discretionary measure adopted. In Bulgaria, for instance, family expenditure increased.

However, systems were not designed for a prolonged crisis…

The crisis showed that Member States with a better coverage and more adequate unemployment benefits achieved better automatic stabilisation. However, while these systems proved adequate in the first phase of the crisis in sustaining household income, they were not designed for a prolonged crisis. In some Member States unemployment benefits had a low coverage, while in most they lacked automatic triggers to adapt to a prolonged crisis although discretionary decision can also be made in order to make unemployment benefits more anti-cyclical (European Commission, 2013a). In particular, the duration and the strictness of the eligibility criteria of unemployment benefits can be extended and relaxed, respectively, in order to accommodate the more difficult labour market conditions of recessions. Section 5.4.1 illustrates the discretionary measures taken by Member States over the crisis.

… but they did not improve automatic triggers in case of future recessions

In general, more relaxed eligibility conditions, higher replacement rate, a longer duration of unemployment benefits, and last resort support such as social assistance, seem to have worked better to improve the coverage of long-term unemployed (see Section 5.4.1) and stabilise incomes in times of crisis. However, this was only a first step and, fiscal constraints apart, it seems clear that unemployment benefits need to be better designed and better synchronised with the economic cycle in order to make them more counter-cyclical, while improving the use of last resort schemes, and avoid possible unemployment traps when the economy recovers.

While changes can be made through either discretionary decisions or automatic triggers (European Commission, 2012a), Member States relied more on discretionary measures in the first time of the recession with, for instance, France and Portugal extending out of work benefits at the onset of the recession. However, some of the countries most affected by the crisis, especially the Southern Member States with already weak safety nets, did not significantly strengthen income support through discretionary measures (OECD, 2014c).

Automatic triggers for unemployment benefits — in particular for partial unemployment benefits — were already in place in some Member States (in Luxembourg, Italy, Portugal (83)). In others (e.g. Denmark) active unemployment measures were adjusted to labour market conditions (OECD, 2014c). However, recent changes have not, in general, introduced automatic triggers which would help enhancing the counter-cyclicality of unemployment benefits and improve their stabilisation function, while containing expenditure in times of expansion and avoiding possible traps. It is also clear that, while discretionary measures can be effective, their timing is not always optimal, underlining the case for a greater use of automatic triggers.

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(83) Based on MISSOC.

4.5. The development in the financing of social protection: risks and opportunities

The share of social security contributions in the financing of social protection has decreased for both cyclical and structural reasons

Tax-benefit systems work as automatic stabilisers, which meant that they had a positive effect in terms of maintaining gross household disposable income in all Member States in the first phase of the crisis. However, this also represented a further challenge to government financing as tax revenues declined in line with falling GDP, while expenditure levels did not, although the overall impact of these different adjustments on government budgets varied greatly between Member States (Mourre et al., 2013).

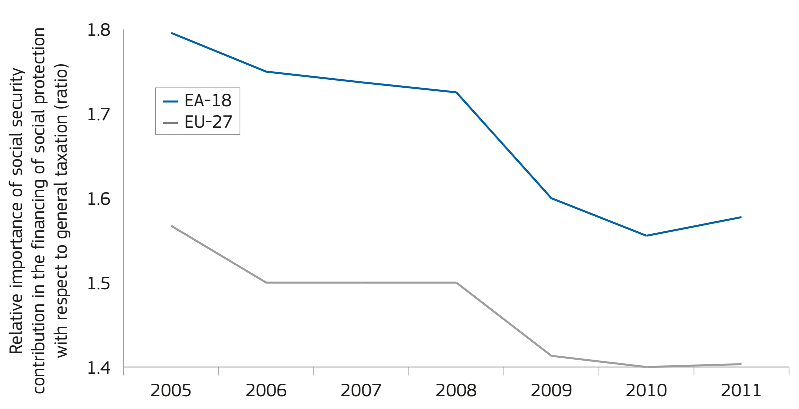
Social transfers played an important role throughout Europe (Dolls, 2012) and, during the first phase of the crisis, the contribution of social transfers to Gross Household Disposable Income was three times greater than taxes, while taxes did not play an effective stabilising role in all Member States (European Commission, 2013a[84]). Social security contributions are estimated to be less sensitive to the cycle than indirect taxes, while personal and corporate income taxes are the most sensitive (Mourre et al., 2013).

The crisis accelerated the declining importance of social security contributions in the financing of social protection, although the trend changed in 2011 in the EA-18 Member States (Chart 53). Those Member States with the option of earmarking taxes have used it to balance the effects of the reduced financing of social protection from social security contributions, but currently only six Member States have this facility[85]. The sharp decline in the financing of social protection from social security contributions in 2009 was mostly due to cyclical factors but structural factors also contributed.

Indeed, changes in social protection financing did not affect all benefits equally, nor all tax sources with the decreasing importance of social security contributions in total receipts being mostly caused by a declining share of social security contributions being funded by levies on employers (Social Protection Committee, 2014). The shift in financing between 2007 and 2011 was concentrated on pensions and, to a lesser extent, health, while no clear trends are observed in the financing of family and unemployment benefits (Social Protection Committee, 2014).

In the context of increased pressure on the level of deficits, Member States were recommended to shift taxation away from labour, and in particular social security contribution, towards less growth-hampering tax bases such as consumption and property (European Commission, 2013g; European Commission, 2013h). In 2014, Belgium, Germany, France, Italy, Latvia, Austria, Czech Republic, Spain and, implicitly, France and Germany received a Country Specific Recommendation on shifting the tax burden away from labour, while Hungary and Romania have been recommended to lower the tax burden on labour and NL to reduce tax disincentives on labour. Since the beginning of the crisis, Bulgaria, Czech Republic, Denmark, Germany, France, Latvia, the Netherlands, Slovenia, Finland, Sweden and the United Kingdom have reduced the tax wedge on low wage earners[86].

Chart 53: **Trends in financing of social protection**



Source: ESSPROS.

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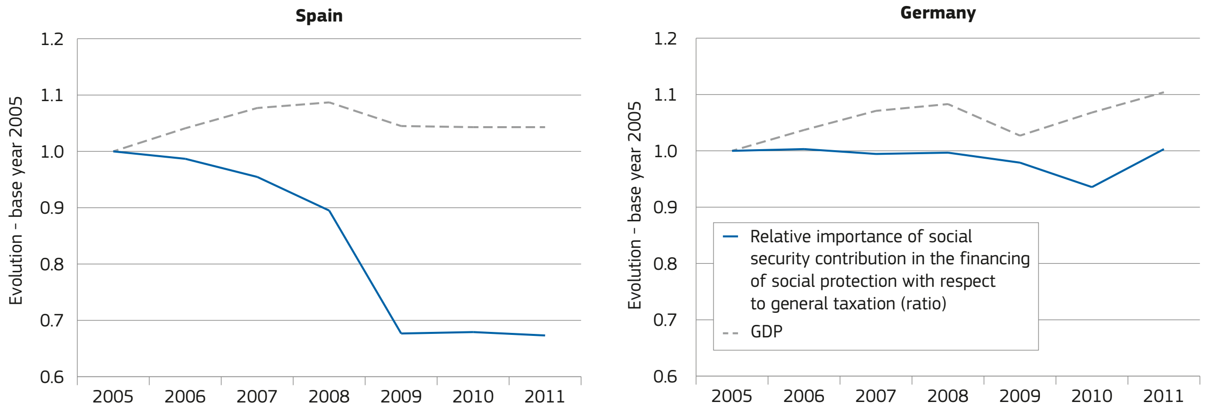
Chart 54: **Trend in the financing of social protection in Spain and Germany**



Source: ESSPROS and National Accounts.

Note: Index year is 2005.

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[84] See Chapter 6 of European Commission, 2013a.

[85] In Germany the shift from social security contributions to VAT was only politically earmarked.

[86] The source of this data is the ECFIN Tax and benefits indicators database based on the change between 2008 and 2013/2012 in the tax wedge for a single person without children, with earnings at 67% of a full-time production worker.

A key choice is often between cutting employee or employer social security contributions depending on whether the aim is to stimulate labour demand or labour supply. In some countries, cuts in employee social security contributions have been targeted to specific groups such as the unemployed or younger people, while employment incentives, often provided through a discount in social security contributions paid by the employer, were increasingly used in Belgium, Czech Republic, Spain, Malta and, in particular, in Slovakia and Luxembourg.

While cyclical factors seems to better explain the acceleration in the declining weight of social security contributions since the crisis, differences between Member States in the evolution of the financing of social protection suggest that structural changes may play a role. For example, tax reforms may explain why the increasing weight of general taxation in the financing of social protection continued in 2011 in Spain, alongside the stabilization of the economy, while it reverted in Germany (Chart 54).

Is a shift away from insurance-based systems an opportunity for better inclusion?

The shift away from social security contributions as a source of government funding has implications for the financing of social protection, and simply changing the structure of the financing of social protection without modifying the rules determining benefit entitlements may not be sustainable in the long-run.

On the one hand, a shift away from social security contributions as a financing source could pave the way for more universal and egalitarian social benefit systems (87) given that insurance-based contributory systems, as notably developed for pensions in recent decades, are likely to have magnified labour market inequalities and reduced the potential of social expenditure for promoting inclusion (88).

On the other hand, a shift away from social security contributions to indirect taxes could limit the scope for indirect taxes to act as automatic stabilisers across the economic cycle. Moreover, any weakening of the link between contributions and benefits could be problematic in countries with high levels of tax evasion and undeclared work, although better returns from State's spending are associated with lower levels of undeclared work (European Commission, 2013a).

5. THE IMPACT OF THE RECESSION ON LABOUR MARKET INSTITUTIONS

5.1. A healthy labour market: balancing employment protection legislation, activation and support

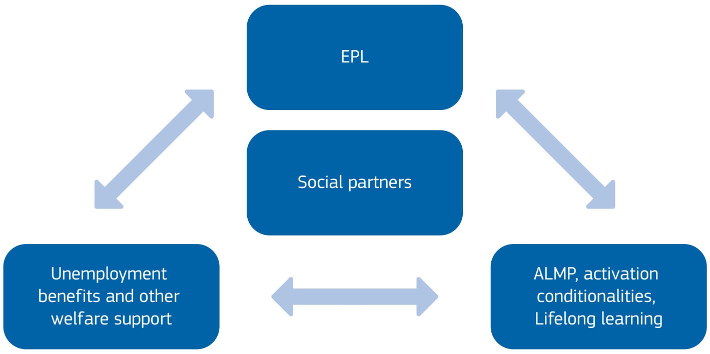
Three policy dimensions are relevant in terms of maintaining well-functioning labour markets able to resist economic shocks: employment protection legislation; activation measures; and support measures. The social partners, through bipartite dialogue or tripartite consultations with public authorities, often are central actors in these policies. However, their role differs widely between Member States and domains, in accordance with the particular national industrial relations systems and traditions.

- Employment protection legislation (EPL), which needs to be flexible enough to encourage employers to hire people, but also firm enough, with respect to temporary and permanent contracts, to avoid any abuse and prevent their use resulting in a segmented, two-tier, labour market.
- Activation measures, such as training and employment subsidies, which need to ensure that people who become unemployed can remain in the labour market by improving their employability.
- Support measures, such as unemployment benefits and other welfare support, which provide income replacement and stabilise aggregate demand while also ensuring that the people affected are not pushed into poverty and social exclusion.
- Labour market institutions' activities, such as collective bargaining by social partners, and minimum wages, can contribute to the resilience of labour markets to macroeconomic shocks. With regard to competitiveness of firms, wages (and non-wage labour costs) represent a large part of production costs and need to remain in line with productivity changes. Wages directly impact aggregate demand (and thus also labour demand) as a major component of disposable household income. Indirectly, they have an impact as a source of financing for social automatic stabilisers, combating inequality and poverty.

Within this general framework, specific combinations can be effective, for example, short-time working arrangements complemented by partial unemployment benefits have been found to be successful in preventing workers from becoming unemployed by supporting them during a period when their employers face financial difficulties (Section 5.4.2).

Before the crisis, most EU Member States were undertaking policy reforms designed

Illustration 1: **The institutional balance for a healthy and dynamic labour market**


EPL
Social partners
Unemployment benefits and other welfare support
ALMP, activation conditionalities, Lifelong learning

Source: DG EMPL.

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(87) Nonetheless, the redistributive impact of such shift depends also on the type of taxes increased to compensate for the reduction in social security contributions.

(88) Hills (2003) lists fives reasons for the stuck up of contributory benefits: the reality of the labour market, the complexity of the system, the insufficient accumulation of contributions for adequate benefits, weak link between work records and actual contributions, weak link between contributions and benefits.

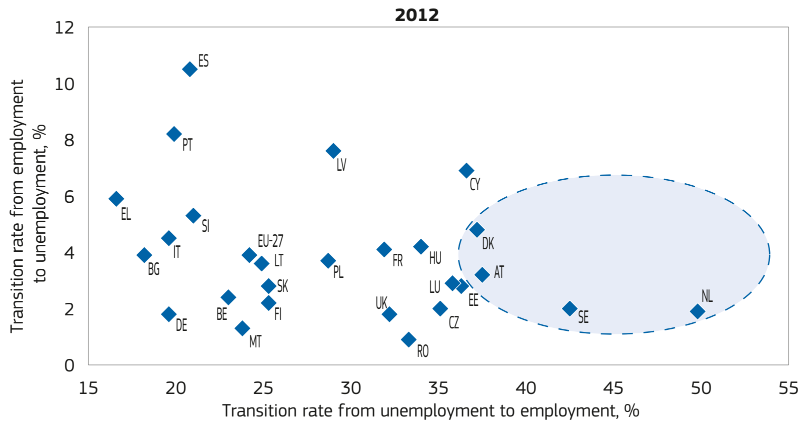
to make their labour markets more flexible and, to some extent, more inclusive. In this respect, activation and the flexicurity model (89) were seen as the guiding principles at both EU and national levels (European Commission, 2007), while reforms of pensions and actions to encourage older workers to remain active longer were also part of the agenda.

As the crisis developed, however, active labour market policy (ALMP) expenditure (90) did not always increase in response to the rising unemployment trend due to fiscal consolidation in many countries in 2010 and 2011 (Section 5.3.1).

An effective welfare support system can also play an important role in enabling people who lose their jobs to seek and obtain new employment. Data from 2012 shows that the Member States with the highest transition rates out of unemployment and lowest transitions rates into unemployment (namely the Netherlands, Sweden, Austria and Denmark; Chart 55) had all invested heavily in support and activation measures (see Section 5.4). Likewise, countries such as the Netherlands, Sweden and Czech Republic all had adequate unemployment benefits with a strong activation component (European Commission, 2012a).

We examine what happened to labour market institutions during the crisis and whether their configuration prior to and during the crisis appeared to have a (positive) impact on labour market outcomes.

Chart 55: **Transition rates: from unemployment to employment and vice versa, 2012**



Source: DG EMPL calculations based on Eurostat, EU-SILC; transition rates, between 2011 and 2012, ages 15–74. *Note:* 2011 values used for RO, SE and SK.

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5.2. Employment protection legislation: reductions with results still pending

5.2.1. Employment protection legislation (EPL) has been loosened further in some Member States and the gap between EPL for permanent and temporary contracts has been narrowing

Employment protection legislation (EPL) can be seen as a set of rules governing the hiring and firing (91) of employees with the aim of providing workers with certain levels of protection and security in terms of their jobs by specifying the requirements that employers need to respect if they need to make workers redundant.

Chart 56 groups 18 Member States (92) according to the rigour of their employment protection legislation (EPL) in terms of permanent contracts (individual and collective dismissals) prior to, and during, the recession. It shows that in most Member States there has been a downward trend in the strictness of EPL since 2000 but with considerable variations between countries (93). Several Member States saw their previous trends of EPL halt during the crisis, whether it had previously increased (Belgium and Germany) or decreased (Austria, Finland, Poland and Sweden). Only Ireland saw the upward trend between 2000 and 2008 continue after 2008.

While EPL has been an important component of recent labour market reforms (94), it is difficult to measure the impact of any such policy changes given the very low level of labour demand in many countries, although there is some evidence indicating that selected EPL reforms have been followed by lower shares of temporary contracts and increased job-finding rates after a certain period (95). More generally, the OECD (2013b) notes that 'the evidence also suggests that reforms involving the relaxation of overly strict regulatory provisions on individual and collective dismissals are likely to increase the number of dismissed workers' (96) while the ILO (ILO, 2014b) (97) argues that there are signs that more flexible labour markets (i.e. lower levels of EPL strictness) do not necessarily lead to reductions of unemployment.

In terms of the strictness of EPL, the gap between permanent contracts compared with temporary or fixed-term contracts continued to narrow during the recession (2008-11) in five Member States and widened in another

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[89] Flexicurity is an integrated strategy for enhancing, at the same time, flexibility and security in the labour market. It attempts to reconcile employers' needs for a flexible workforce with workers' needs for security – confidence that they will not face long periods of unemployment. Its components include: (1) Flexible and reliable contractual arrangements; comprehensive lifelong learning (LLL) strategies; effective active labour market policies (ALMP); modern social security systems that provide adequate income support, encourage employment and facilitate labour market mobility including broad coverage of social protection provisions (unemployment benefits, pensions and healthcare) that help people combine work with private and family responsibilities such as childcare.

[90] *Source:* The LMP database includes expenditures on demand side measures and a richer level of details of policies. Investment into support measures for the unemployed is likely to produce good resilience to increases in unemployment levels, ensuring that the short-term unemployed and vulnerable groups do not stay unemployed for too long and mostly active and mostly passive unemployment measures are key in ensuring this.

[91] The hiring rules are the conditions for the use of standard and non-standard labour contracts. The firing rules are the rules on individual and collective dismissals of workers on standard permanent contracts.

[92] Those Member States for which data is available for the 2000–13 period.

[93] OECD EPL indicators Version 1 used here in order to be able to have access to values prior to 2008. EPL V3 is used elsewhere in the chapter.

[94] EMCO Labour market report 2014.

[95] LABREF report (2012).

[96] OECD Employment Outlook 2013b, p. 107

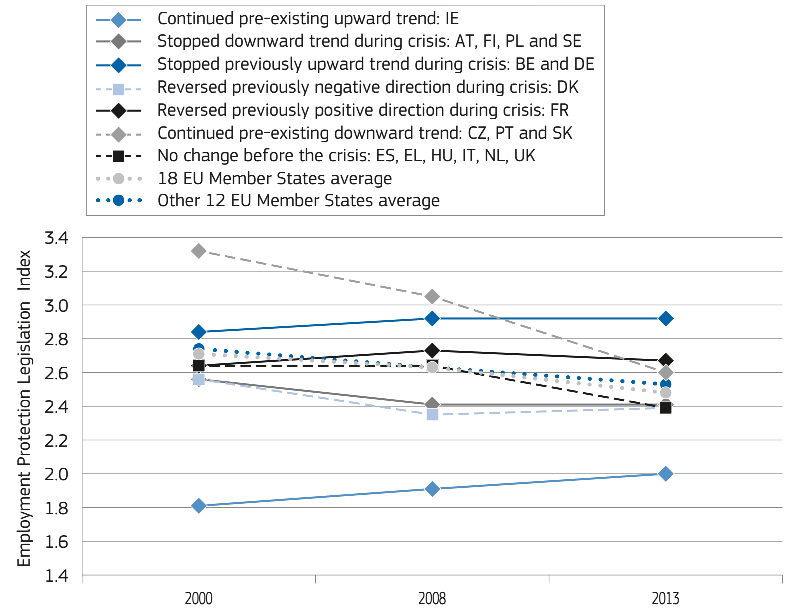
[97] Aleksynska, M., *Deregulating labour markets: how robust is the analysis of recent IMF working papers*, International Labour Office, Conditions of Work and Employment Branch, ILO, Geneva, 2014.

six Member States (Chart 57). The main changes in countries like Spain, which saw a narrowing of the gap, was a reduction in EPL for both temporary and permanent contracts, with the reduction in the EPL rules applied to permanent contracts being greater than that of temporary contracts. Portugal and Greece chose to reduce their gap by reducing the strictness of EPL afforded to permanent contracts but also by increasing that afforded to temporary contracts.

5.2.2. Developments in EPL do not seem to have had an impact on transitions out of unemployment or reductions in labour market segmentation in the short- to medium-term

Neither reductions in EPL (Table 4) for permanent contracts during the recession (as in Estonia, Spain, Greece and Portugal) nor for temporary contracts (as in Spain) appear to be clearly correlated with improvements in

Chart 56: Employment protection legislation (EPL) indexes for permanent contracts, 18 Member States, 2000, 2008 and 2013



Source: OECD EPL database.

Note: Arithmetic average of EPL indexes across Member States. BG, CY, EE, HR, LT, LU, LV, MT, RO and SI not included. Employment protection legislation (EPL) Index refers to permanent contracts (individual and collective dismissals).

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Table 4: Changes in EPL index for permanent contracts (individual and collective dismissals) and temporary contracts, 2008–11

	DECREASE	STABLE (+/– 0.1)	INCREASE
	Permanent contracts (individual and collective dismissals)		
High EPL index (¹)	EL, PT	IT, DE, FR, NL, SI	BE
Medium EPL index	ES	SE, SK, SI, LU, CZ	
Low EPL index	EE	UK, IE, FI, DK, HU, PL, AT	
	Temporary contracts		
High EPL index	ES	EL, FR, SI, IT, LU	
Medium EPL index		AT, BE, EE, FI, PL, HU	CZ, PT, SK
Low EPL index		UK, IE, NL, DE, SE, DK	

Notes: Groups of Member States are defined for each EPL category.

(¹) For permanent contracts high EPL index = >2.8, medium = 2.5–2.8, low = <2.5. For temporary contracts high EPL index = >2.49, medium = 1.8–2.5, low = <1.8

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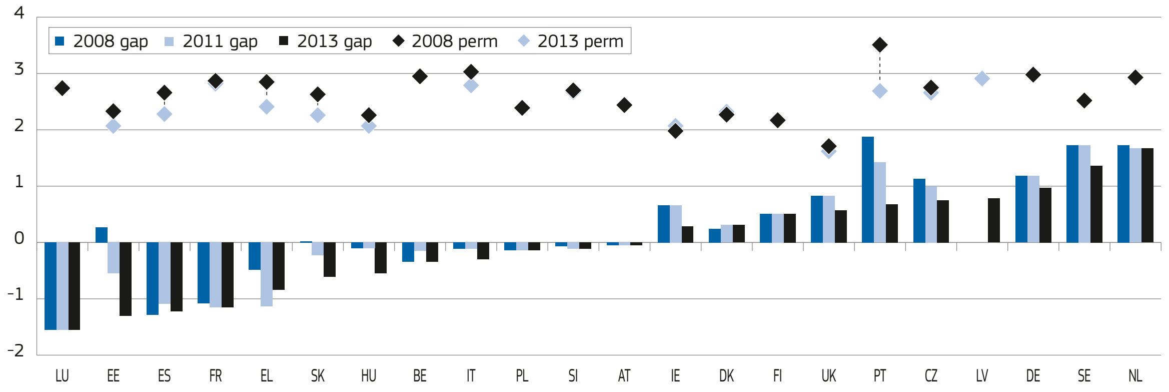
Chart 57: Gap between EPL indexes for permanent and temporary contracts (2004–13) and the EPL index just for permanent contracts (2008 and 2013)



Source: OECD EPL database.

Note: BG, CY, HR, LT, LU, LV, MT, RO and SI not included. EPL index for individual dismissals used for gap between permanent and temporary contracts (v3), but just the EPL index for permanent contracts (black and blue diamonds marker) includes individual and collective dismissals (also v3).

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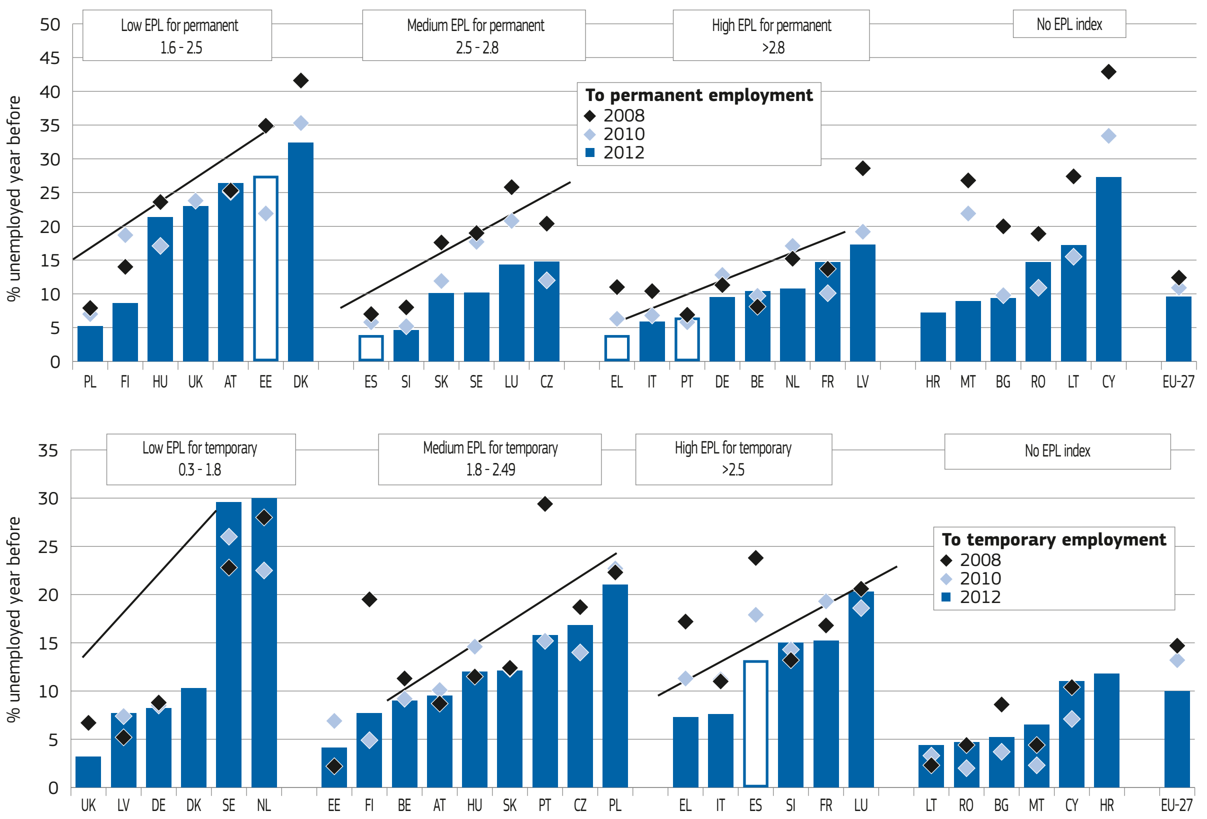
Chart 58: Transition rate from unemployment to permanent or temporary employment



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Source: Eurostat, EU-SILC.

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Note: The ranking according to EPL level was done using 2008 values, except for LV for which 2012 value was the earliest one available. 2011 value used instead of 2012 for PL, PT, HR, SK, SE, RO, HU and CY. No data available for IE. Reductions of EPL in 2008-11 period indicated by the white bars.

Box4: *Mind the Gap:* Employment Protection Legislation (EPL) Index for Permanent and Temporary contracts

The EPL index measures the strictness of the employment protection afforded to permanent or temporary contracts. However, the strictness that is measured by this index does not measure protection in the same way for the two forms of contract. For example, the EPL index for temporary contracts does not measure the ease of dismissing a worker, whereas the EPL index for permanent contracts focuses primarily on this aspect. On the other hand, the EPL index for temporary contracts focuses on matters such as: when fixed-term contracts are allowed to be used; how many are allowed to run consecutively; and rules concerning agency work — none of which are measured in the index for permanent contracts.

Given the methodological differences in their calculation, care needs to be taken when seeking to interpret or compare the two indices in terms of the protection they afford.

It is somewhat more justifiable to compare the two indexes as a measure of the strictness of the employment protection legislation relating to temporary and permanent contracts. In this case the gap between the two EPL indexes can be seen in terms of the difference in strictness or complexity that an employer must deal with when faced with these two types of contracts. Hence, examining the gap can serve a purpose in terms of seeing whether the reform of employment protection legislation across countries prevents labour segmentation, assuming that smaller gaps between the two indexes shows a reduced distinction between the two types of contracts.

the transition from unemployment to permanent or temporary contracts (Chart 58), again underlining the uncertain impact of EPL reforms during a period of weak labour demand and in the short- to medium-term (98). Others who increased their EPL for permanent contracts (e.g. Belgium) saw an increase in transitions out of unemployment and into permanent contracts. Nevertheless, there are signs that EPL levels prior to the recession had an impact on the level of the transition rates out of unemployment into permanent employment ($r= -0.53$, $r^2= 0.28$), with the average transition rates by country (when grouped by EPL levels as illustrated by the green lines in the graph) seem to be better for those with lower EPL.

Despite the narrowing of the EPL gap and the 2012 labour market reforms, there have been limited signs of an improvement in transition rate out of unemployment in Spain (Chart 5 in Section 2.1). Nevertheless, some post-reform improvements were seen in 2012 in terms of exit out of unemployment when a distinction is made according to length of unemployment (less than 6 months, 7–12 months, and more than 12 months), and between exits to temporary and permanent contracts (99).

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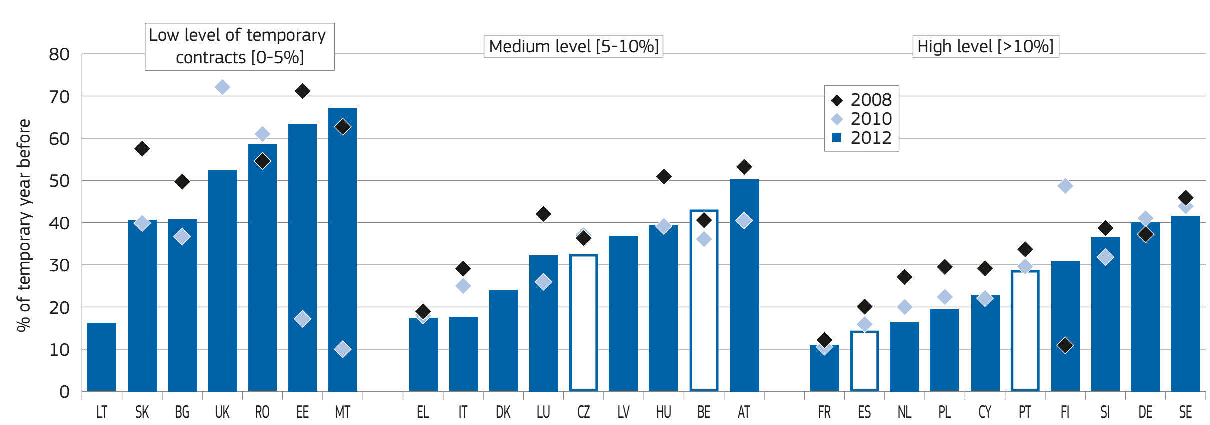
(98) Some mild signs of improvement exist when looking at the transitions to permanent employment in 2010-12 for Estonia and in 2010-11 for Portugal.

(99) OECD (2013b).

Chart 59: Transition rate from temporary to permanent contracts for selected Member States, 2008–12



Source: Eurostat, EU-SILC. Member States grouped by level of temporary contracts in total employment: low = 0–5 %, medium = 5–10 %, high = >10 %. For CY, PL, PT, LU, HU, SK, SE, LT, RO and MT 2011 values used instead of 2012. No data for UK in 2008. No data for IE and HR. No data for DK prior to 2012 and none reported for LT and LV due to break in series in 2012. Countries which reduced their EPL gap between 2008 and 2011 indicated by the white bars.

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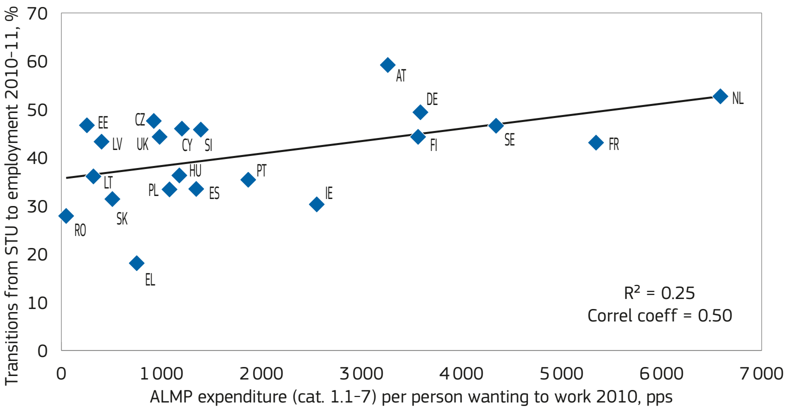
Large costs and rights differences between the use of permanent and non-standard work ([100]) contracts may encourage companies to opt for the latter. From an employee's point of view, however, these jobs may be much less effective as stepping-stones to permanent employment and they may increase the risk of being excluded from lifelong learning opportunities as well as social protection (including pension rights) and financial compensation in cases of termination without fault.

Despite the trend towards an overall reduction in EPL and a narrowing of the legislative gap between temporary and permanent contracts, the transition from one to the other has been steadily decreasing since the onset of the recession in 2008 (Chart 59), signalling a reduction of the 'stepping stone' potential of temporary contracts and potential increase in labour market segmentation.

Even in countries where the EPL gap reduced substantially during the recession (Czech Republic, Spain and Portugal, 2008–11) transition rates from temporary to permanent contracts did not increase. In contrast, countries with the greatest gaps (such as Sweden and Germany) saw some of the highest transition rates from temporary to permanent contracts, suggesting that EPL alone cannot be used to either explain or address labour market segmentation concerns, although the 2012 reform of the Spanish labour market seems to have produced some signs of improvement in transition rates from temporary to permanent contracts compared to the previous year.

Chart 60: ALMP expenditure per person wanting to work (2010) and exit rates out of short-term unemployment (2010–11)



Source: EU-LFS, EU-LMP database and DG EMPL calculations. For NL and PT transitions from STU to employment 2011-12 figures used due to availability of data.

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5.3. The development of activation during the recession: investment in human capital and activation yielded positive labour market outcomes

5.3.1. ALMP design and funding have been subject to many changes across the EU

Active labour market policies (ALMPs) that provide training and job search assistance to those out of work as well as incentives to firms to hire them, are seen to contribute positively to a well-functioning labour market, most notably by speeding their return to employment ([101]). This is reflected in the findings of a study by Kluve (2010) which examined the conclusions of 137 programme evaluations from 96 academic studies from 19 countries, and which found that most ALMP measures (with the exception of direct public employment programs and programs targeting young people) had a modest to high likelihood of producing a significant positive impact on employment rates ([102]). This is echoed by Chart 60. Empirical findings also note that active labour market policies are also associated with a higher matching efficiency (European Commission, 2014c).

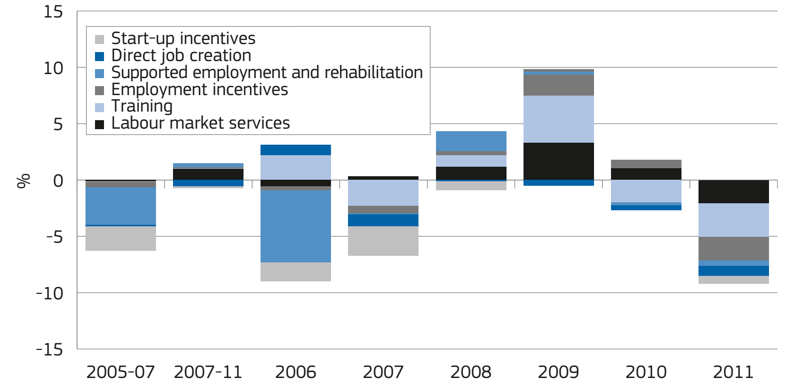
Across the EU as a whole, most of this expenditure goes on supply side policies, with some 59% being devoted to PES and training, with the proportion spent on training being on the increase. In terms of type of active labour market policies, a great deal of divergence exists between Member States.

([100]) Such as fixed-term contracts, temporary agency work, part-time work and independent contract work.

([101]) Section 4.2 above already touches on spending on active and passive unemployment measures in its analysis of social investment during the crisis. However, its assessment of mostly active measures does not include several measures such as supported employment and rehabilitation measures, direct job creation and start-up incentives, which are included in the ALMP calculations here.

([102]) Kluve, J., 'The effectiveness of European active labor market programs', *Labour Economics 01/2010*, Vol. 17, No 6, pp. 904–18.

Chart 61: Total ALMP expenditure in real terms, year on year growth by category, for EA15 (2005-11)



Source: Eurostat, LMP.

Note: EA-15 = EA-18 without FR, PT and ES due to substantial breaks in series. Two values for DK and EE erased as they appeared to be wrong and were disturbing the calculation. EL and UK 2010 values used also for 2011. Due to breaks in series no values used for PL, ES, HU, SK prior to 2008 so 2008–2011 average used instead of 2007–2011. Due to certain categories having missing values only totals reported for CY, DK, EE, EL, HU, IE, IT, LT, LV, NL, RO, SE, SI, UK. Due to missing values for 2005 CY and MT not reported in 2005–2007 average and due to break in series PT not included in 2007–11 average. Due to break in series FR average 2007–2010 used instead of 2007–2011.

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For example, in 2010 Germany spent almost 41 % of its ALMP expenditure on PES, compared with the United Kingdom that spent as much as 81 %, while Sweden devoted only around 23 %. In the same year Ireland and Latvia channelled the greatest share of its ALMP expenditure into training (45 % in both countries), while Estonia had a more even split between PES (38 %), training (26 %) and employment subsidies (26 %).

The contribution of different types of expenditure to the growth of ALMP expenditure in real terms (Chart 62) suggests that Member States with high levels of spending on ALMP prior to the recession (e.g. Germany, Belgium, Ireland, Austria, Finland, France, the Netherlands and Denmark) weathered it better than others.

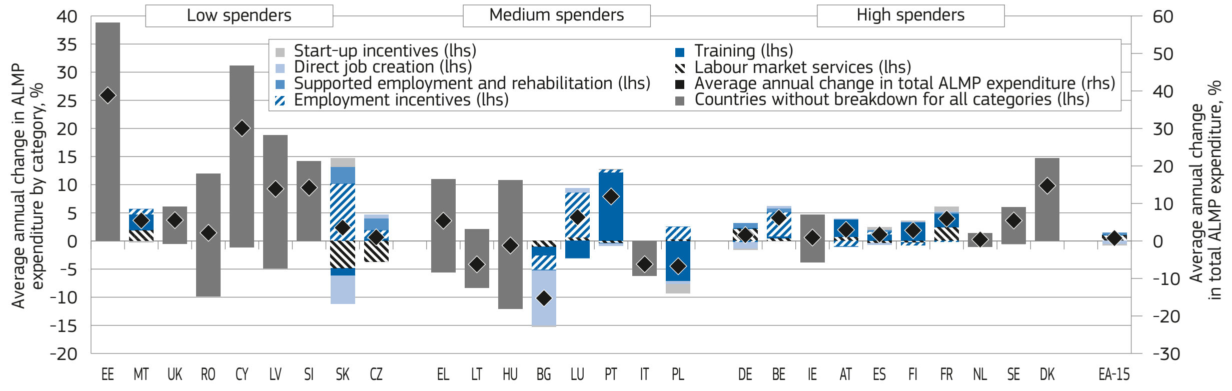
It also suggests that the evolution of ALMP expenditure during the recession did not move in line with trends in unemployment. Compared to the pre-crisis period, Member States with medium expenditure levels lowered their overall ALMP expenditure in 2011, namely Bulgaria (–12.1 %), Poland (–6.3 %), Lithuania (–5.7 %), Italy (–5.6 %) and Hungary (–1.2 %). Since none of these Member States saw their unemployment levels drop in 2011 compared to 2007, this decrease cannot be attributed to a decrease in the number of unemployed.

While real ALMP expenditure increases were not significantly related to increases in unemployment levels (103), it is possible that this could be partly due to Member States being able to accommodate additional participants at low marginal costs.

Member States with low levels of ALMP spending prior to the recession, but who increased or maintained their ALMP spending per person wanting to work (e.g. United Kingdom, Estonia, Latvia, Slovakia and Czech Republic), showed resilience in terms of containing levels of unemployment (Chart 63). The same holds true in terms of levels of spending per person wanting to work, with those with the highest levels (e.g. the Netherlands and Sweden) having some of the best labour market performances in terms of exits out of short-term unemployment, and transitions from permanent to temporary contracts.

While in 2011 this may have been due to their greater ability to finance support for their unemployed, it also reinforces previous findings indicating that countries who invested strongly in ALMP prior to the crisis (e.g. Sweden, the Netherlands, Finland) were better prepared to prevent many of the short-term unemployed becoming long-term unemployed (European Commission, 2012a) (104).

Chart 62: Annual real growth of total ALMP expenditure by type (2007-11), per Member State grouped according to level of spending (% of GDP in 2007) and average annual change in total ALMP expenditure



Source: Eurostat, LMP. DG EMPL calculations of EA-18 average value. ES, FR and PT not included in EA-18 average value due to substantial breaks in series.

Note: EL and UK 2010 values used for 2011. Due to breaks in series no values used for PL, ES, HU, SK prior to 2008 so 2008–2011 average used instead of 2007–2011. Due to certain categories having missing values all categories reported for CY, DK, EE, EL, HU, IE, IT, LT, LV, NL, RO, SE, SI and UK in grey. Due to missing values for 2005 CY and MT not reported in 2005–2007 average and due to break in series PT not included in 2007–11 average. Due to break in series FR average 2007–2010 used instead of 2007–2011.

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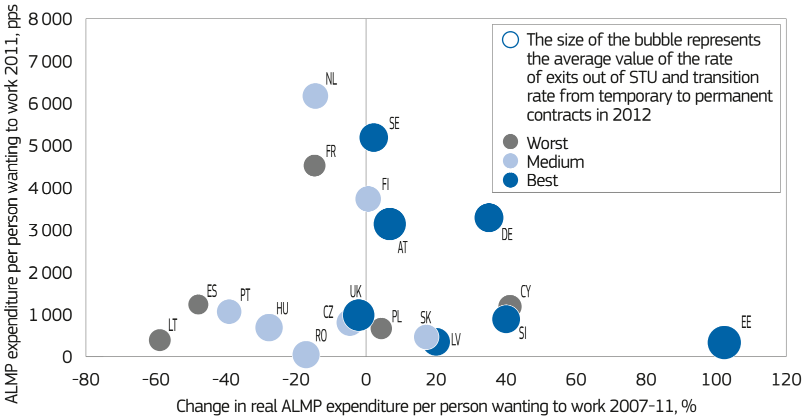
(103) The correlation between the change in the unemployment rate and the change in real ALMP expenditure is weak (R2=0.08) even after removing the Member States that increased ALMP spending despite a decrease in unemployment (e.g. Germany, Austria and Belgium) (R2=0.16).

(104) European Commission, (2012a) concludes that countries with successful labour market institutions such as UBs, SSS, ALMPs, EPL and in-work benefits (e.g. NL, SE, FI) managed to limit increase in LTU despite increases in STU, resulting in highest transition rates out of unemployment for both LTU and STU (p. 65).

Chart 63: **Average expenditure on active labour market policies (ALMP) including PES client services, per person wanting to work (in PPS) and growth of real ALMP expenditure per person wanting to work (2007–11)**



Source: Eurostat, LMP.

Note: No data for BG, DK, EL, HR, IT and MT for 2007 and 2011, and no data for EE in 2007. The 2010 value is used for UK in 2011. Insufficient data for BE, IE and LU.

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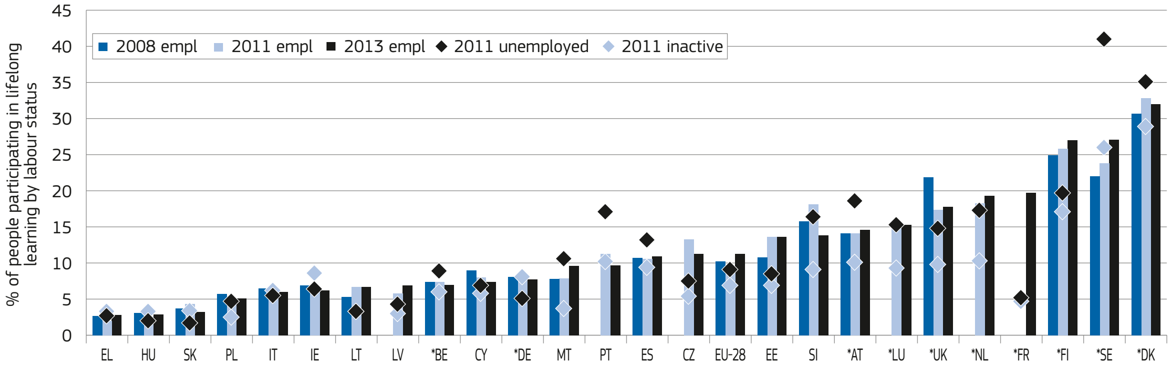
5.3.2. Lifelong learning in the EU fell slightly during the recession but has recently recovered with potentially positive implications for exit rates out of unemployment and competitiveness

Lifelong learning, measured in terms of participation in training and education in the previous four weeks, increased relative to periods before the recession, with higher rates in 2013 than in 2008, apart from a slight dip in 2011 (Chart 64). Countries with higher levels of participation in lifelong learning for both the employed and unemployed (e.g. Sweden, the Netherlands, United Kingdom, Austria, Denmark) also had better labour market performances in terms of higher transition rates out of unemployment and lower transition rates from employment into unemployment (Chart 55).

Chart 64: **Participation rate in education and training (lifelong learning) (last four weeks) of employed (2008, 2011 and 2013), unemployed (2011) and inactive persons (2011) aged 25–64 in selected countries**



Source: Lifelong learning data from Eurostat (trng_lfs_02); Member States indicated by * are among the top 25 most competitive countries in the world in 2013, according to the competitiveness ranking from Global Competitiveness Index 2013–14 from the World Economic Forum. Due to breaks in series no data reported for 2008 for CZ, LV, LU, NL and PT, and no data reported for 2008 and 2011 for FR.

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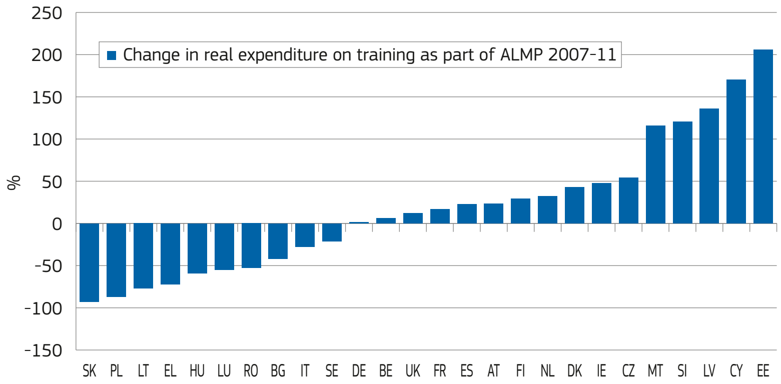
Chart 65: **Change in real ALMP expenditure on training (%) 2007–11**



Source: Eurostat, LMP database, DG EMPL calculations. No data for PT due to breaks in series. 2010 values used for UK and EL.

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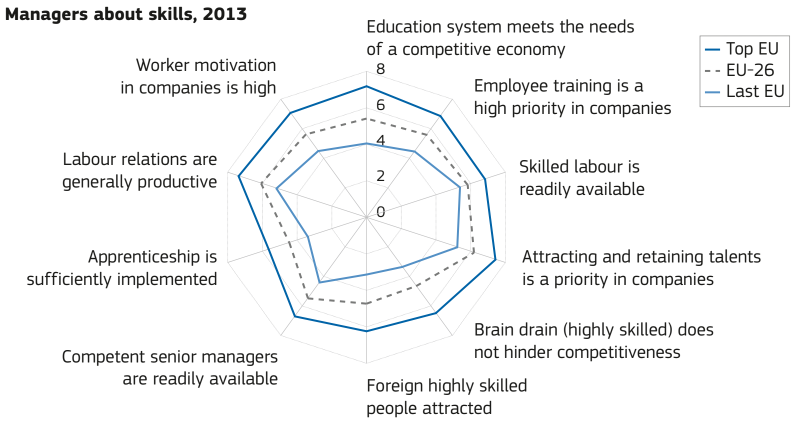
This range of evidence supports the view that there is a positive relationship between investing in lifelong learning and tackling unemployment. In this respect the countries that, between 2008 and 2013, had the largest increases in the proportion of their unemployed who undertook lifelong learning were Estonia and Sweden, which saw their unemployment rates fall in 2010–13 with some of the best transitions out of short-term unemployment (see Chart 5).

Chart 66: Opinions of managers regarding skills and competitiveness of Member States, 2013



Source: Data is from the IMD WCY executive survey and IMD World Competitiveness Yearbook 2013. Top EU countries include EU countries that were ranked among top 20 competitive countries (out of 60) in 2013 and the last EU countries include those ranking in places from 40–60.

Note: Top EU countries: SE, DE, DK, LU, NL, IE, UK, FI. Last EU countries: LV, IT, ES, PT, SK, HU, SI, EL, RO, BG, HR. EU-26: no data for MT and CY.

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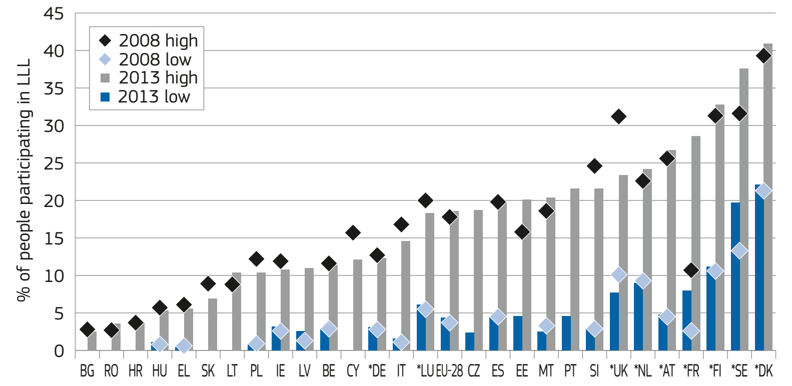
Chart 67: Participation rate in education and training (last four weeks, aged 25–64) by education level, 2008–13



Source: Lifelong learning data from Eurostat (trng_lfs_03); Member States indicated by * are among the top 25 most competitive countries in the world in 2013, according to the 'IMD World Competitiveness Yearbook 2013', International Institute for Management Development.

Note: ISCED97 classification used: low education level corresponds to pre-primary, primary and lower secondary education (levels 0–2); and high education level corresponds to first and second stage of tertiary education (levels 5 and 6). Due to breaks in series, instead of 2008 values, the 2009 value is used for LU and 2010 value for NL. Due to substantial breaks in series, there is no value for 2008 for CZ and PT, or for 2008 high for LV. No 'low' is shown for BG, RO, HR, SK, LT, CY and (2008 only) EE, due to low reliability.

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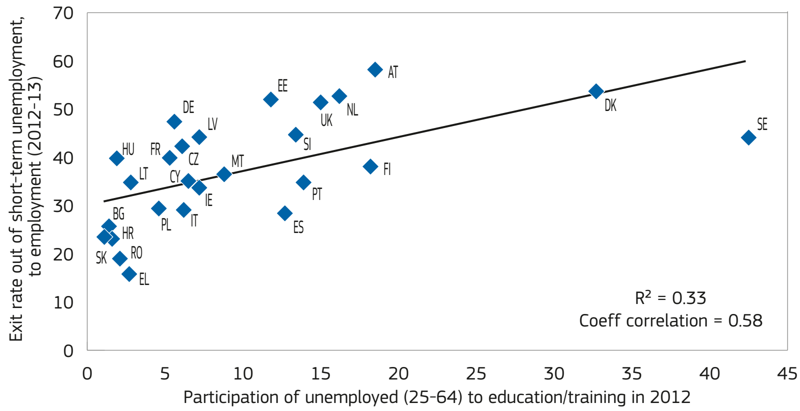
Chart 68: Exit rate out of short-term unemployment to employment (2012–13) and participation rate of unemployed in education/training (in 2012)



Source: Eurostat, EU-LFS, ad-hoc transition calculations based on longitudinal data. No data for transitions out of STU for BE and LU available.

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Even when taking account of differences in education levels[105], Member States with the highest levels of participation in lifelong learning of those in employment in 2013 (e.g. Denmark, Sweden, Finland, France, the Netherlands, United Kingdom and Austria) were also listed among the most competitive countries, according to the IMD World Competitiveness Yearbook (Chart 64). This is supported by data concerning the opinions of employers that indicates that Member States whose employers value human capital highly and approach its development in a holistic way achieve higher levels of competitiveness than those who do not (Chart 66).

Both low and highly educated people increased their participation in lifelong learning initiatives during the recession across the EU as a whole (Chart 67), but to a lesser extent in countries where initial participation was lowest. In general those with a high level of education were over four times more likely to take part in lifelong learning than those with a low level of education in 2013[106]. During the recession this gap narrowed, but only slightly, and not in countries where participation was lowest.

These findings imply that investments in lifelong learning can play a crucial role in both supporting a recovery and ensuring long-run competitiveness. Chart 68 highlights the strong correlation between investment in lifelong learning and training and prevention of long-term unemployment.

5.3.3. Employment incentives were used in many Member States during the crisis and proved to be an effective way of getting target groups back into employment

The recession initially saw an increase in the use of employment incentives as a way of boosting demand for labour. However, it reached its peak in 2009 and experienced a sharp decline in 2011 as Member States either began to see the beginnings of an economic recovery and no longer saw a need for them, or found they could no long afford them given the pressures to consolidate their public debt

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(105) See Chart 67 — Participation rate in education and training (last four weeks) by education level, 2008–13.

(106) The exact difference between the lifelong learning participation of those with lower education levels compared to those with higher education levels is 18.6 % vs. 4.4 % in EU-28 in 2013.

levels (Section 5.3.1). Nonetheless, their use relative to other ALMP remained at much the same level as they had been before the recession.

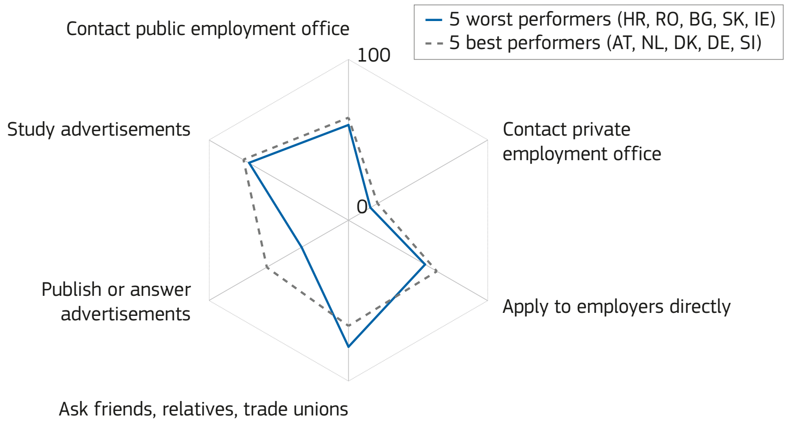
In general, employment incentives in the form of recruitment subsidies are seen to be expensive with their effectiveness depending significantly on their design. In a recent review of studies of a range of ALMPs by the European Employment Observatory (EEO) in 2014, wage subsidies appeared to be one of the most successful techniques in terms of improving the chances of recipients progressing into jobs (107). However, Martin and Grubb (2001) had earlier reported that, when evaluations take into account the reaction of firms to the employment subsidies (e.g. deadweight loss, displacement, substitution and creaming effects), most programmes only yield small employment gains. Nonetheless, these programmes could have other important functions, such as rotating jobs amongst jobseekers, and ensuring that hard-to-place jobseekers have occasional access to jobs, thereby reducing social exclusion.

The EEO (2014) Review and ECORYS IZA (2012) have both highlighted the critical importance of policy design in determining successful outcomes, while Kluve (2010) found in his large-scale analysis that wage subsidies to private firms and start-up grants were very likely to result in a significantly positive impact on employment rates (108).

5.3.4. Job search: relying on public employment services or coping through personal networks

Evidence on the job search techniques used by job seekers tells us that they typically combine several methods; that the search intensity increases with the skill level of the job seekers; and that search intensity decreases with age and the longer people are unemployed. More generally it highlights large national differences in the type of formal or informal methods used (109) In terms of intensity, higher coverage of unemployment benefits, minimum wages and low levels of inequality are associated with greater intensities of job search (Bachman and Baumgarten, 2012).

Chart 69: Methods used for seeking work and performance in exits from short-term unemployment, % of people who declared having used a given method



Source: EU-LFS, 2013.

Note: The performance is captured by ranking Member States across transition from short-term unemployment to employment out of 25 Member States for which the data is available. The 5 best performers are: Austria, the Netherlands, Denmark, Germany and Slovenia. The five worst performers are Croatia, Romania, Bulgaria, Slovakia and Ireland. Results for the transitions from long-term unemployment to employment are not shown but go in the same direction.

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Even though direct and informal channels can be very important, half of those who were unemployed in 2013 did contact their public employment services as part of their job-search activity, with this share being somewhat higher among best performers in terms of making the transition from unemployment to employment (Chart 69).

However, people do not only rely on public employment services and often use their own social networks to find a job. Nearly three-quarters of the unemployed ask friends or relatives when looking for a job, with the share being highest in countries such as Greece, Hungary, Ireland — which are countries with relatively low exit rates out of short-term unemployment. This evidence is also supported and illustrated by the qualitative analysis (see Annex 3, Extract 7).

At least 18 Member States undertook reforms to their public employment services during the period 2011 to 2013 (EMCO 2014) with the main aims being to improve targeting (better local delivery, more individualised support, better matching), to extend the reach of the service (e.g. to better reach the long-term unemployed and marginalised youth), and to improve performance through better monitoring.

The evidence shows that in Member States with very low levels of expenditure dedicated to labour market services (and ALMP in general), the proportion of the unemployed who say that they rely on friends and social networks is highest (see Chart 70). Similarly, in countries that were more impacted by the crisis, including Spain, Italy, Greece and Ireland, searches through informal channels outweigh the use of public employment services.

Comparing the exit rates out of short-term unemployment (Chart 69) and the level of investment in and use of PES (Chart 70), the pattern that emerges is similar to that of ALMP in general, namely that the best performing countries are those which invest the most (e.g. Austria, the Netherlands, Denmark and Germany) and that a high level of contact with public employment services is of limited use unless they have the resources to meet their customer's needs (e.g. Croatia, Romania, Bulgaria, Slovakia and Ireland).

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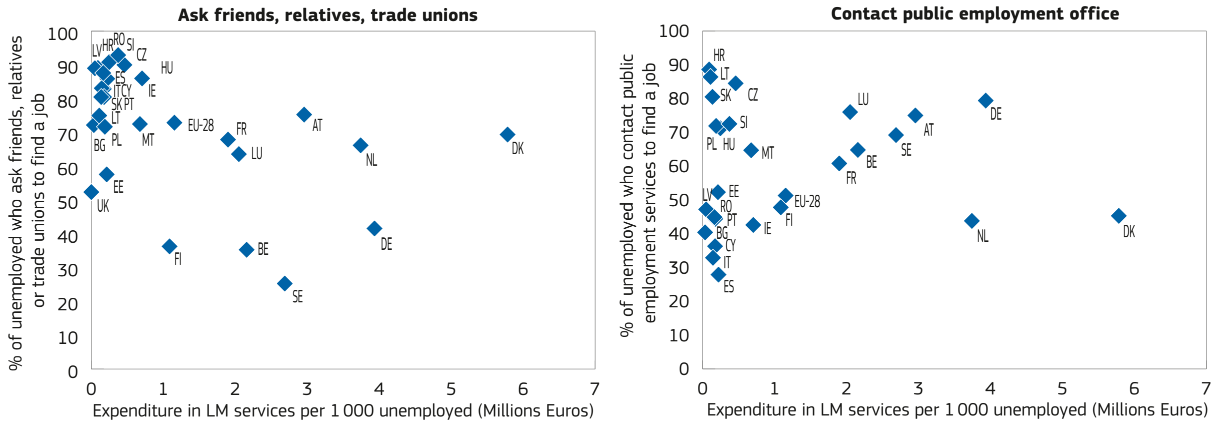
(107) *Stimulating job demand: the design of effective recruitment incentives in Europe*, European Employment Observatory Review (EEO Review), 2014

(108) Kluve, J., 'The effectiveness of European active labor market programs', *Labour Economics 01/2010*, Vol. 17, No 6, pp. 904–18.

(109) In most Mediterranean countries, with the exception of Portugal, direct applications and searches conducted via personal networks are clearly more important than enquiries through public employment offices. The same is also true for Central and Eastern European countries where, apart from Slovakia, the use of direct methods is above the EU average, which may reflect the importance of family ties.

Chart 70: PES expenditure per unemployed and methods to find a job



Source: LMP, LFS. 2011 expenditure values used for CY, ES, FR, IE, LT, LU, MT, PL, SK. No data available for EL and UK.

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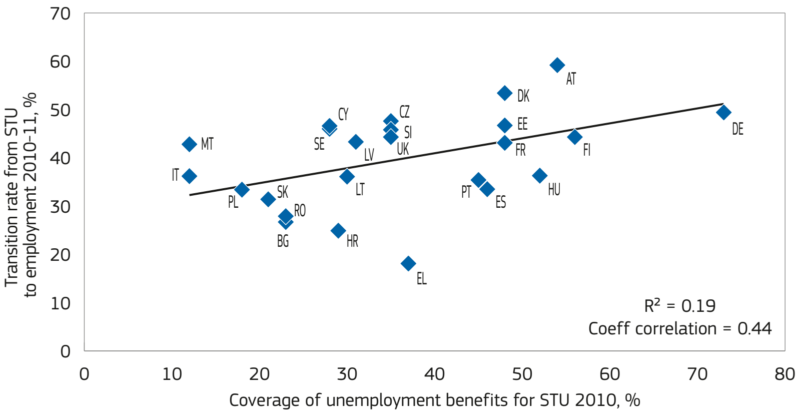
5.4. The development of unemployment benefits and short-time working arrangements

5.4.1. Reforms of unemployment benefit systems have included both positive and negative changes

Unemployment benefits serve a dual purpose: they provide direct support for those who suffer a loss of income during a period of unemployment (which also serves as an automatic financial stabiliser for the economy as a whole), and they help maintain the individual's continuing employability thus supporting their re-employment efforts. Nevertheless, the type, effective coverage and amount of income support received by the unemployed vary across Member States, and it does not generally enable them to maintain similar living standards to those they had when they were in work.

When people lose their jobs the first level of protection is unemployment benefits, which are contributory (insurance-based) schemes in most EU Member States. However, variations in eligibility criteria and average time spent in employment, combined with differences in take-up, result in very different levels of receipt of unemployment benefits for the short-term unemployed across Member States, ranging from less than 20% in Italy, Poland, Slovakia, Bulgaria and Malta to more than 50% in Belgium, Finland and Germany (Chart 73). In general the receipt of unemployment benefits has a positive relationship with the exit rates out of short-term unemployment.

Chart 71: Coverage rates of unemployment benefits (2010) and exits out of short-term unemployment (2010–11 average)



Source: EU LFS, DG EMPL calculations. 2012 value used for coverage of UK in 2010. 2011-12 value used for transitions of DE and PT. No data available for BG, IE, LU and NL.

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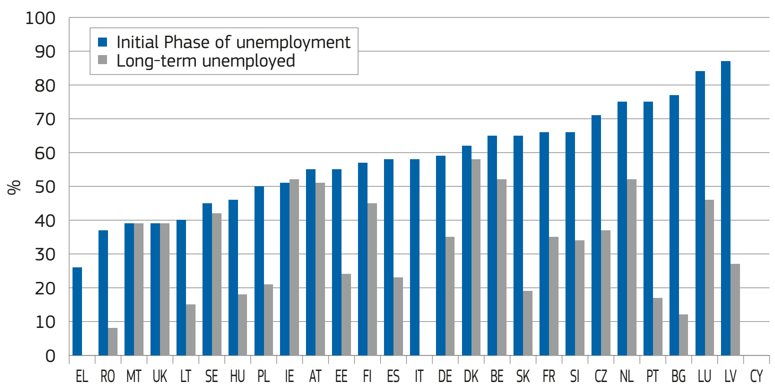
Chart 72: Net replacement rate of unemployment and additional benefits for an unemployed, single person without children, during the early stage of unemployment and long-term unemployment, year 2012



Source: OECD, tax-benefit model.

Note: After tax and including unemployment benefits, social assistance, family and housing benefits in the 60th month of benefit receipt. No data available for CY.

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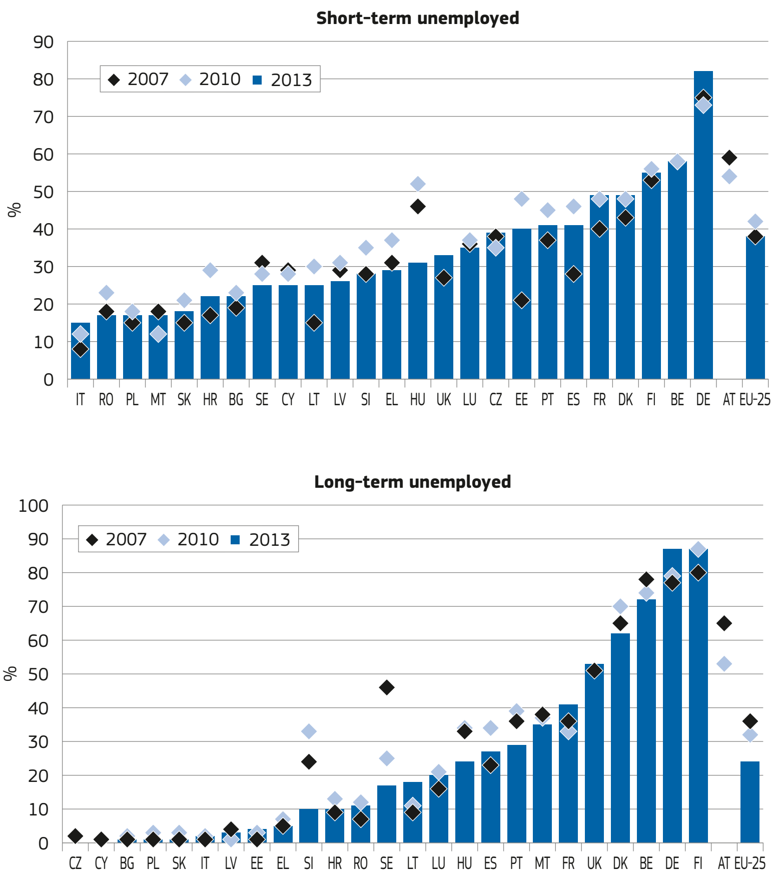
Chart 73: **Unemployment benefit coverage of short-term and long-term unemployed**



Source: Eurostat, EU-LFS, DG EMPL calculations.

Note: IE, HR and NL: not covered. No data for UK in 2010. STU stands for short-term unemployed (less than 12 months) and LTU stands for long-term unemployed (unemployed 12 months or more). EU-25 =EU-28 minus NL, IE, UK (and AT in 2013). 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).

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Chart 72 illustrates the amount of benefits received by a single person during the early stages of unemployment, and after they have been unemployed for more than 12 months, which shows how replacement rates vary with the duration of unemployment. Such variations between countries are even greater for very long spells of unemployment with many Member States providing only limited support while others maintain high levels of income replacement. Likewise, entitlement rules vary greatly across Member States, whatever the level of benefits, and the share of the unemployed who actually receive unemployment benefits, as reported through the EU-LFS, illustrates this diversity.

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. Between 2011 and 2013 almost a third of Member States (including Belgium, Spain, Italy, Croatia, Slovenia and United Kingdom) modified their unemployment benefit arrangements primarily by: tightening eligibility requirements, reducing the amount of benefits received, introducing means testing, making them conditional on undertaking active job searches and linking the level of benefits to the duration of unemployment (EMCO 2014).

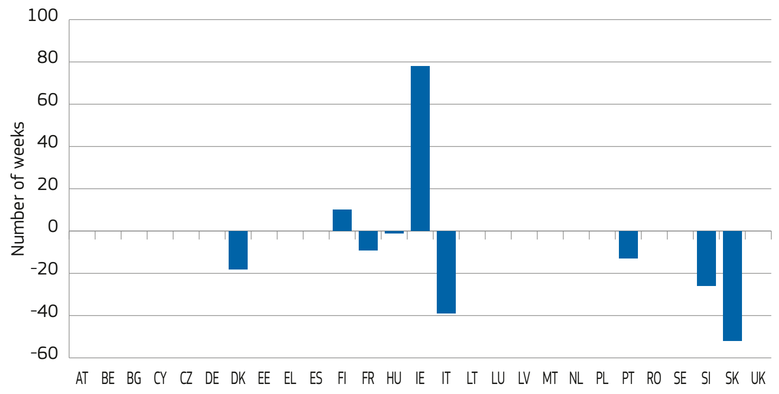
These changes impacted more on the long-term unemployed than on the short-term unemployed (Chart 73) with coverage rates in 2013 for the long-term unemployment across the EU as a whole being some 11 pps below pre-crisis levels, although this average outcome resulted from reductions in 12 Member States against increases in 13 Member States. This compared with no overall change for the short-term unemployed in the EU as a whole but, again, these results reflect reductions in 8 Member States and increases in 17 others. 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 coverage for the long-term unemployed as they became aware of the possibilities and the need to utilise them due to their prolonged unemployment duration.

Low coverage rates, and low benefit rates, not only reflect a lack of effectiveness of the unemployment benefits scheme in protecting people against income shocks, but also imply a limited stabilisation impact on the economy. Likewise, the level of income support will also impact on the effectiveness of activation schemes.

Expansionary measures that increased the opportunity to claim unemployment benefits have included a reduction in the required period of contribution in order to be eligible (e.g. Latvia) and the extension of unemployment benefits to new categories such as non-regular workers (e.g. Germany), the self-employed (e.g. Austria), or those who would otherwise have exhausted their rights (e.g. Latvia, Spain; ILO, 2014a). Some Member States increased the levels of benefits or provided one-off benefits to some groups (e.g. France, United Kingdom). Partial unemployment benefits in order to maintain people in their existing jobs were also introduced (e.g. France, Germany, the Netherlands and Poland), often following collective bargaining negotiations. Given that these countries are among those whose labour markets proved relatively more resilient to the recession, they highlight the contribution of well-designed unemployment benefit arrangements. In particular, the introduction of partial unemployment benefits is seen to have been an important policy innovation that helped many Member States weather the recession (ILO 2014a; more detail in Section 5.4.2).

On the other hand, **contraction measures** taken during the recession included: tightening entitlement conditions for unemployment benefits (e.g. Ireland, United Kingdom); an increase in the number of contributions needed in order to qualify (e.g. Ireland); reductions in the maximum length of period for receiving unemployment benefits (e.g. Czech Republic, Portugal); and reduction in their levels (e.g. Romania) (ILO 2014a).

Chart 74: Change in the qualifying conditions for unemployment benefits, 2007–14



Sources: MISSOC.

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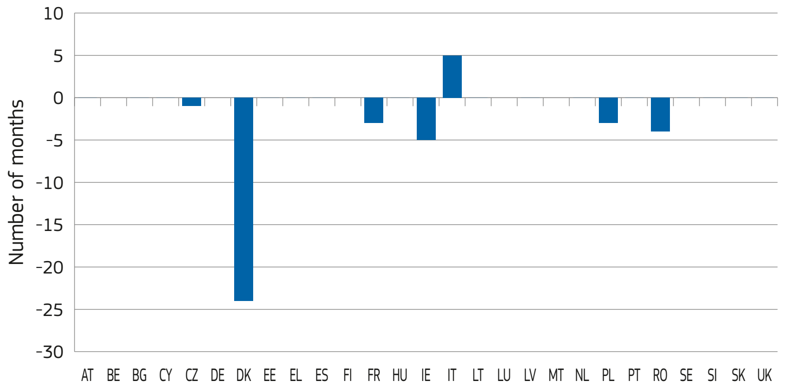
Chart 75: Change in the duration of unemployment benefits for persons with the lowest entitlement, 2007–14



Source: MISSOC. *Note that in the case of Slovenia the minimum duration has changed due to a new category being introduced, so the coverage of the least entitled actually increased.

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Some Member States also decided to link the payment of unemployment benefits more closely to **activation** through ALMP in order to help and encourage those affected to return to employment quickly. The changes included introducing job seeking obligations (e.g. Spain, United Kingdom), compulsory participation in training and other ALMP for certain categories (e.g. Spain, United Kingdom), and stricter sanctions for those who refused offers (e.g. Ireland) (ILO 2014a).

The eligibility criteria and the minimum and maximum duration periods are among the important design features affecting outcomes. These criteria can be tailored to address different objectives. In the United Kingdom, for example, changes went in different directions for different aspects — increasing one-off benefits for some categories, and tightening eligibility and strengthening conditionality for others.

A key aspect determining the coverage, stabilisation, protection and investment functions of unemployment benefits concerns eligibility criteria. In some Member States eligibility requirements for obtaining unemployment benefits were relatively relaxed before the recession (especially in Finland, Greece and Sweden), while in others these had been quite strict (in particular in Lithuania, Portugal and Slovakia). A majority of Member States did not change the criteria during the crisis, but in Denmark, France, Hungary, Italy, Portugal, Slovakia, Slovenia the criteria were somewhat relaxed, while they were tightened in Ireland and Finland.

Across the EU as a whole the proportion of the long-term unemployed receiving unemployment benefits fell slightly during the recession, although this overall result was mainly due to substantial reductions in coverage rates in Sweden, Slovenia and Hungary. The overall proportion of short-term unemployed persons receiving benefits remained more or less the same during the crisis, but with substantial reductions in Hungary (–15pps) and Sweden (–7pps) against considerable increases in Estonia (+20pps), Spain (+12pps) and Lithuania (+10pps).

In most Member States the duration of unemployment benefits for the people with the lowest entitlement (either because of periods of contribution, type of contract or age) has not changed since the onset of the recession. Nevertheless, in a number of countries the minimum duration for the most vulnerable and those with the lowest entitlement was further reduced (Chart 75). Only in Italy was the minimum duration of unemployment benefits extended for the most vulnerable unemployed categories.

The increased coverage of the unemployed with unemployment benefits in Italy in the 2010–13 period (Chart 73) was most likely a result of the relaxing of eligibility requirements and of an increase in the minimum duration of benefits during the crisis. Others who also relaxed their eligibility requirements but reduced the duration of their unemployment benefits experienced a reduction in coverage (e.g. Portugal and Slovakia) (110).

The longer people stay out of employment, the more entitlements they lose. In nearly all Member States additional schemes of social assistance are available, in the form of means-tested benefits, to help them sustain living standards, albeit minimal in some Member States. However, social assistance schemes are increasingly associated with activation schemes (job-search support, access to training, individualised support) to encourage and support a return to employment wherever possible.

Unfortunately, in some Member States, a significant share of people in need of income support (working-age people in jobless households that are also poor) do not receive standard benefits (unemployment benefits, social assistance) and are at greater risk of long-term exclusion (Chart 77). Despite the fact that all countries have now introduced links to activation in national legislation, the coverage of social assistance remains very low in some countries, which is likely to undermine efforts supporting the return of the most excluded to work.

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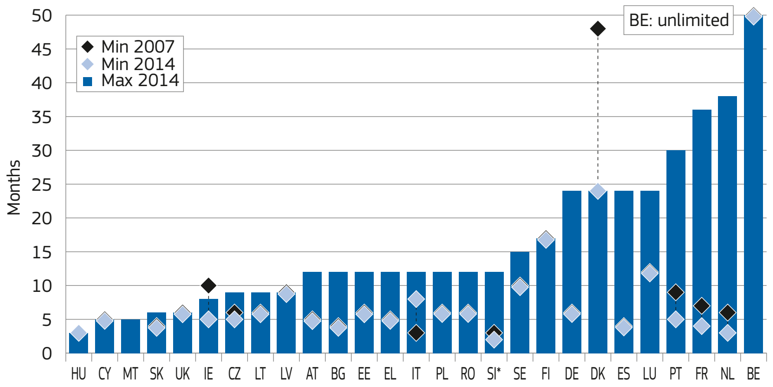
(110) No conclusion available for Ireland and the Netherlands due to no data on coverage of unemployment benefits. Denmark managed to increase its coverage whilst also reducing the very long length of its unemployment benefits.

Chart 76: Maximum duration for the least and most entitled groups of unemployed, 2007 (min) and 2014 (min and max)



Source: MISSOC.

Note: 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 the coverage of the least entitled actually increased.

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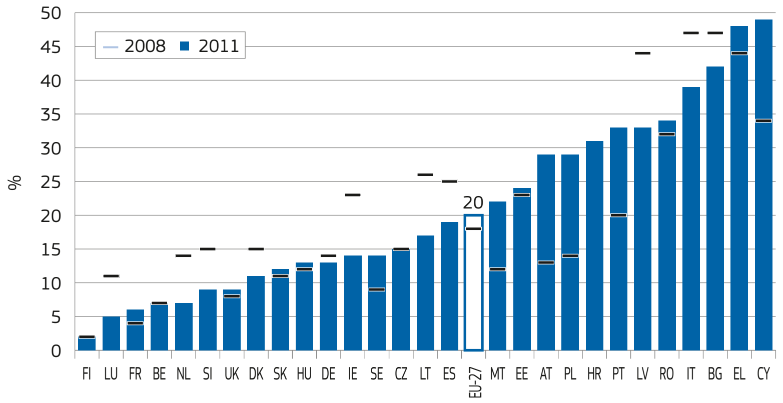
Chart 77: Non-coverage of social benefits: share of working-age people that are poor, living in a jobless household and not receiving benefits (< 10% of total household income) (2010)



Source: EU-SILC, DG EMPL calculations.

Note: Family/child benefits not included. For IE and BE 2011 value used instead of 2012.

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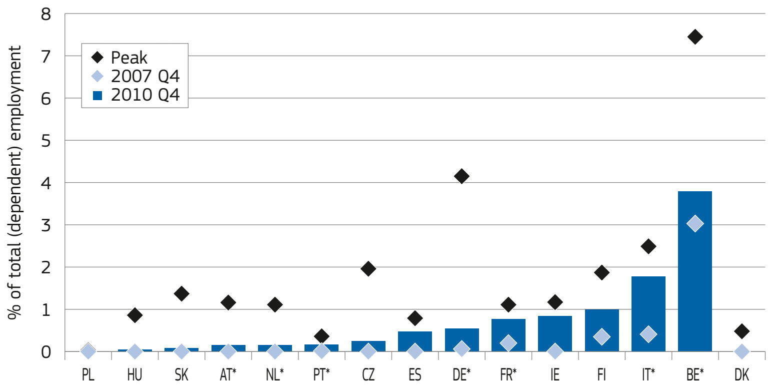
Chart 78: Take-up rate of short-time working (STW) schemes



Source: Chart made using data from Hijzen & Martin (2013). Data on STW accompanied by partial unemployment benefits from ESSPROS. No data available for LV, LT, RO and SI. *STW accompanied by partial unemployment benefits.

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5.4.2. Short-time working arrangements and partial unemployment benefits helped

Short-time working schemes (STW) are publicly funded schemes intended to allow firms facing reduced demand to temporarily reduce the working hours of their workers and organise a form of work-sharing, while providing income-support to the workers affected. The aim of STW schemes is to prevent the excessive loss of jobs that are viable in the long-term during an economic downturn (Hijzen and Martin, 2013).

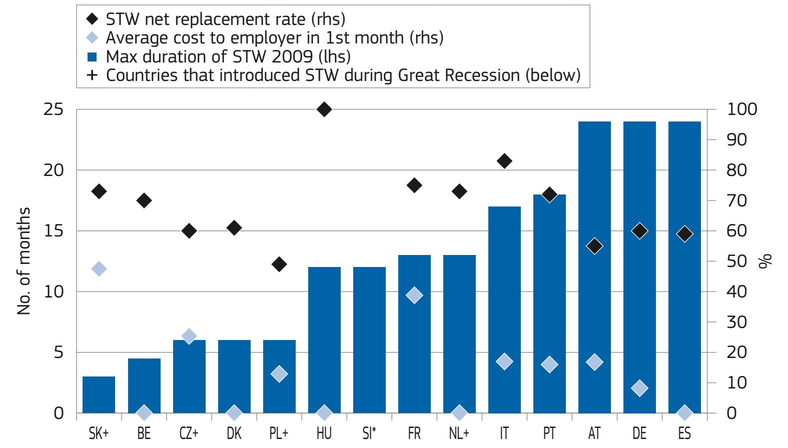
Such schemes were quite extensively used in some Member States during the recession and were seen as successful in helping maintain employment and contain unemployment (Hijzen and Venn, 2010; Eurofound, 2010; Boeri and Bruecker, 2011; Cahuc and Carcillo, 2011; Hijzen and Martin, 2013) especially when combined with partial unemployment benefits (Arpaia et al, 2010), thereby reducing the hysteresis effect of the downturn. There is also some evidence that the requirement to participate in training as part of such schemes also improved the employability of those concerned (Eurofound, 2010).

Short-time working arrangements went from being largely absent or almost unused by the employed in most Member States in 2007 (with the exception of Belgium) to being more intensively employed during the recession (Chart 78). Several Member States introduced STW schemes for the first time during the recession including the Czech Republic, Slovakia, the Netherlands and Poland (Boeri and Bruecker, 2011). At their peak, take-up rates ranged from 7.5% of dependent employment in Belgium, 4% in Germany to around 1–2% in Austria, Czech Republic, France, Ireland, Italy, the Netherlands and Slovakia.

The design of STW schemes varied across Member States with their maximum duration ranging from 3 to 24 months (unlimited duration in Finland), with the cost to the employer for each worker taking part ranging from 0% to 47.5%, and with the level of benefit received by the workers concerned (compared to their previous last wage) going from 49% to 100% (Chart 79).

STW schemes covered a range of different workers but in several Member States those in training (e.g. apprentices and trainees) or in management positions were not allowed to take part (Eurofound, 2010), and most countries did not allow workers

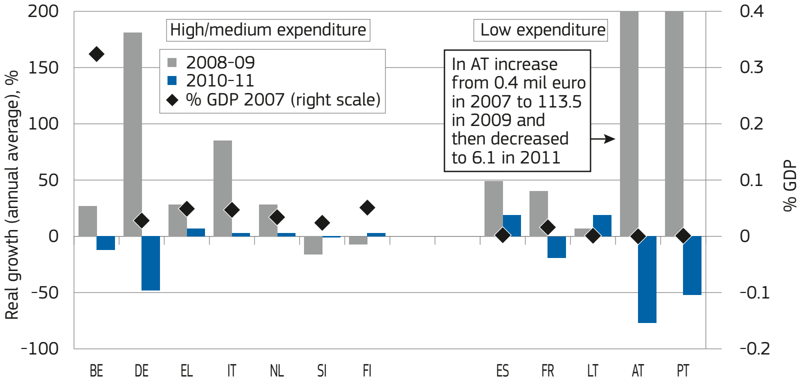
Chart 79: **Short-time working (STW) scheme design characteristics across the EU**



Source: Chart made using data from Boeri and Bruecker (2011).

Note: Cost to employer = percentage of normal total labour cost for a single worker without children who usually earns the average wage; STW net replacement rate = benefit from STW schemes as percentage of last wage; Maximum duration = maximum duration of STW schemes in months. The information refers to the year 2009. No data available for LV, LT, RO and SI.

Chart 80: **Real growth partial unemployment benefits in Member States where they exist, annual average in 2007–09 and 2009–11**



Source: ESSPROS.

Notes: Diamond markers corresponds to partial unemployment expenditure in % of GDP in 2007. Bars represent real average annual changes in partial unemployment expenditure between 2007–2009 and 2009–2011. The left axis is cut at 200 % for AT.

on temporary contracts to participate; even when they did, their numbers were very small (OECD, 2010).

Some schemes required the STW to be supported by a collective agreement. In some cases worker councils initiated the scheme (e.g. Germany) and in others only workers eligible for unemployment insurance were allowed to take part (Boeri and Bruecker, 2011). In general the participation of the social partners in the design and introduction of the STW schemes was seen to be an essential success factor for ensuring a fast and timely implementation (Eurofound, 2010; European Commission, 2011c).

Firms taking part in STW schemes were usually required to prove that their need for public funding was a result of reduced demand. Several Member States also required the employer to provide training (e.g. Czech Republic, Hungary, the Netherlands and Portugal), to have a restructuring plan (e.g. Belgium, Italy, Luxembourg, Poland and Spain), or not to make dismissals during the period that the scheme was in operation (e.g. Austria, France, Hungary, the Netherlands and Poland) (Boeri and Bruecker, 2011).

As might be expected, the higher the costs for employers and the stricter the eligibility conditions, the lower the take-up rates were, while higher levels of STW net replacement rates served to encourage workers to take part (Boeri and Bruecker, 2011). Nevertheless, many Member States reduced the strictness of their requirements and/or extended the maximum duration and net replacement rate of their STW schemes during the recession including Austria, France, Germany and Latvia (Boeri and Bruecker, 2011).

It is clear that STW schemes needed to be carefully designed in order to ensure sufficient uptake while avoiding deadweight costs in the sense that the jobs would have been saved even without the scheme, or that they prevented a necessary relocation of workers (Boeri and Bruecker, 2011) or inefficient low average hours worked (Arpaia et al, 2010). As such, these schemes were seen to be essentially temporary in their nature (Arpaia et al, 2010).

Nevertheless, when they are used, it appears that they are most likely to be effective when accompanied by adequate levels of support, as was often the case with increased spending on partial unemployment benefits during the recession (see below). However, care should be taken since some countries did not use partial unemployment benefits as part of the arrangement, opting instead to combine STW schemes with public works participation (e.g. Lithuania; Boeri and Bruecker, 2011).

Less than half of the Member States use partial unemployment benefits and their usage only increased in those Member States that had used them before 2008 (Chart 80). In the first phase of the recession, expenditure for partial unemployment benefits increased in most Member States with this type of benefit in place (111), particularly in Austria, Portugal and Germany. While their overall cost and contribution was small relative to other support expenditures (accounting for 8 % of all unemployment support at its peak use in 2009) (112), partial unemployment benefits were seen not only as an effective tool for strengthening the resilience of the labour market and economy, but also as a commitment by governments and social partners to tackle the economic and social aspects of the crisis together.

While the STW schemes were recognised as having been successful in maintaining employment and containing unemployment during the downturn, the issue of the treatment of workers on temporary contracts, who were generally excluded, also highlighted concerns about labour market segmentation.

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(111) Before 2008, expenditure for partial unemployment benefits was particularly high in BE and, to a lesser extent in DE, EL, IT, NL, FI. Partial unemployment benefits were also in place, with a low level of expenditure, in ES, FR, LT, AT and PT.

(112) Eurostat LMP database.

5.4.3. The stabilisation role of short-time working arrangements and automatic triggers for benefits

Some institutional arrangements have proved relatively effective in limiting the impact of economic shocks. Automatic stabilisers, in particular unemployment benefit systems, played an important role in supporting incomes in the first phase of the crisis in most Member States. Discretionary measures to temporarily increase the coverage and adequacy of benefits also proved successful, although Member States with lower coverage and lower levels of benefits were not generally among those introducing such measures.

Short-time working arrangements, supported by partial unemployment benefits, also proved successful in absorbing economic shocks in their initial stage, although they were not available in all countries (ECFIN, 2013)(113). However, not all governments and social partners opted for short time working arrangements during the recession, just as many also resisted pressures to reduce the level of employment protection on permanent contracts on the grounds that such actions were more likely to lead to job losses than job creation. Another explanation could also be that the extensive use of temporary contracts enabled firms to unilaterally reduce their workforce without recourse to negotiations.

Evidence suggests that, in case of recessions, especially if protracted, automatic triggers of benefits and more flexible working arrangements within more stable contractual arrangements could improve the resilience of systems. The indexation of benefits could also be smoothed over a longer time period in order to better distribute economic resources where most needed.

5.5. The role of social partners: industrial relations and minimum wages

5.5.1. Main developments in industrial relations

The recession had a significant impact on industrial relations in Europe. There is considerable diversity in the social dialogue practices of different Member States, including different institutional frameworks with different roles and capacities of the main actors (workers' and employers' representatives, as well as the state). Nonetheless, a number of broad developments can be identified, corresponding to the different phases of the recession.

The initial impact of the crisis affected the private sector in particular. In response, social partners — often with the help of governments — cooperated effectively to limit employment losses through internal flexibility measures and short-time working schemes, as discussed. At this stage, social dialogue was generally recognised as a factor of resilience and adaptation (European Commission, 2011c).

As the crisis deepened and widened, however, social dialogue came under increasing strain. Diverging views emerged between employers and their representative organisations and trade unions regarding the most effective exit strategy. Fiscal consolidation measures gave rise to further tensions, particularly in the public sector (European Commission, 2013b).

While European industrial relations were in flux even before the crisis, the crisis appears to have increased the pace of certain developments. The decentralisation of collective wage bargaining — a secular trend since the 1980s — has accelerated since 2007. In 12 Member States, the main bargaining levels are seen to have shifted downwards, with the company level gaining importance vis-à-vis negotiations at industry or cross-industry level. The recentralisation of bargaining in Belgium and Finland is a notable exception.

Recent years have also seen important changes in linkages between bargaining levels, notably increased use of opening and opt-out clauses from collective agreements. At the same time, fewer agreements were (legally) extended to cover all workers and employers of a given level. There is also evidence of reduced horizontal coordination between bargaining units (a trend which did not necessarily pre-exist).

Industrial relations are systems, whose settings are interrelated. In this regard, it is notable that countries under financial assistance have experienced more changes than others, in a larger number of parameters of their systems (Eurofound, 2014b).

Since 2008, the share of European workers covered by collective bargaining decreased (from 66% in 2007 to 60% in 2012). The largest drops occurred in Portugal, Greece and Spain. Several Central and Eastern European countries experienced decreases from initially low levels. In continental North West Europe, coverage remained high and fairly stable. While national systems appeared to converge slightly prior to the crisis, this trend was reversed.

Countries where social dialogue is well-established and industrial relations systems are strong have proven most resilient during the recent downturn. We can expect social dialogue to play an important part in the durable recovery of the European economy, promoting win-win solutions and the ownership of labour market reforms.

Watt (2009) also found, for example, that there was a higher likelihood of equity and social concerns being included in the design of fiscal reforms packages in Member States when trade unions were involved in the process. In particular, as already noted, the participation of social partners in the design and introduction of the STW schemes has been seen as a crucial factor in ensuring their fast and effective implementation (Eurofound, 2010b).

5.5.2. Minimum wage and wage-setting mechanism developments

Minimum wages are designed to prevent wage competition in low-paid occupations such that wages are too low to prevent poverty and social exclusion. From an economic perspective, minimum wages can increase labour costs and thereby reduce levels of employment. Nevertheless, they can also be seen as part of a broader dynamic process that encourages firms to invest in skill formation and on-the- job-training with a view to raising labour productivity — and strengthening profits.

While some economists consider that minimum wages have adverse effects on employment, as do price rises in any competitive market, empirical evidence is mixed. A recent review of empirical minimum wage studies by Holmlund (2013) concluded that minimum wages have 'negligible employment effects despite having substantial effects on wages'(114). Nevertheless, the possibility that a relatively high minimum wage involves the risk of 'pricing out'

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(113) European Commission, 2013. *Labour Market Developments in Europe*, European Economy 6, 2013.

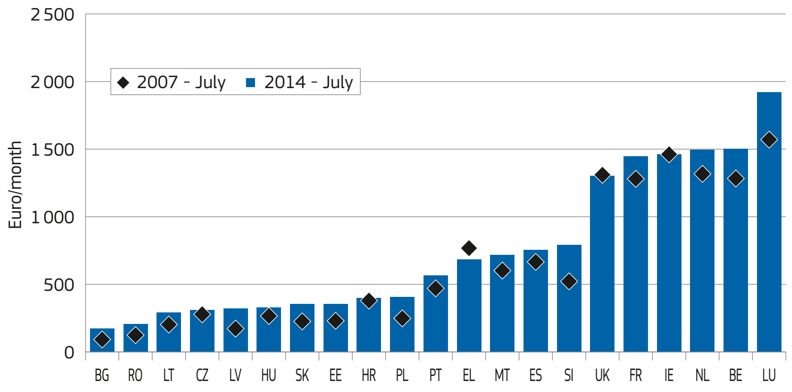
(114) Holmlund, Bertil, 2013. What do labor market institutions do? (available at https://ideas.repec.org/p/hhs/uunewp/2013_023.html). Working Paper Series (available at https://ideas.repec.org/s/hhs/uunewp.html) 2013:23, Uppsala University, Department of Economics.

low-productivity workers from the labour market should not be excluded.

In 2014, 21 Member States now have a statutory national minimum wage. Cyprus has one covering just six occupations, while there are none in Austria, Denmark, Finland, Germany, Italy or Sweden. In these countries social partners define sector-specific minimum wages through collective bargaining agreements (which can be extended by the government to all companies and workers in specific sectors) or de facto minimum wages due to extremely high collective bargaining coverage, as in Austria. However, Germany decided to gradually introduce a statutory minimum wage of 8.5 euro per hour from the beginning of 2015 through to the end of 2016 in order to allow existing collective bargaining agreements to expire.

During the recession, statutory national minimum wages increased in nominal terms in almost all Member States (Chart 81) with only Greece lowering its national statutory wage. However, despite these nominal increases, in many Member States the minimum wages did not keep up with average wage levels (Chart 82).

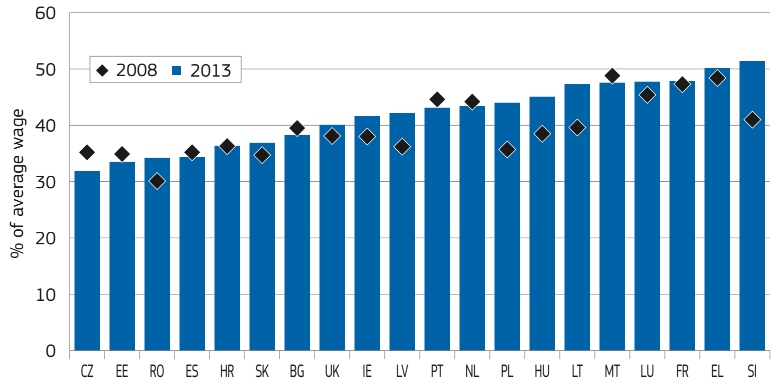
Chart 81: Minimum wage levels (EUR/month), 2014 and 2007



Source: Eurostat (earn_mw_cur).

Note: for HR 2008S2 (July) instead of 2007S2 (July). Also note that changing to PPS as unit of measurement does not significantly alter the ranking of the EU Member States.

Chart 82: Minimum wage — % of average wage — 2013 and 2008



Source: Eurostat (earn_mw_avgr2). Instead of 2013 value, 2012 value used for EE, RO, NL and FR, and 2011 value for EL. Instead of 2008 value, 2009 value used for NL.

5.6. The institutional balance to recover and benefit from growth: flexibility, activation and support to prevent and tackle long-term unemployment

Resilience can be measured in terms of the capacity to resist and recover from the impact of a shock. This is, however, a particularly challenging policy given that an effective triangular relationship between employment protection measures, labour market activation measures, and systems of social support is difficult to achieve at the best of times.

Charts 83 and 84 use an index that is a sum of the characteristics of each Member State in terms of EPL, activation measures (ALMPs and activation conditionalities), support measures (unemployment benefits) and lifelong learning. Its purpose is to provide us with an aggregate of the performance of each Member State in terms of all of their labour market institutions.

The two charts illustrate that in terms of transitions out of short-term unemployment and transitions from temporary to permanent contracts, the countries with the highest investment in activation and support measures were those that faired the crisis better. Moreover, the countries with the highest ALMP and unemployment benefit expenditure, which have strong job-search requirements as part of their unemployment benefits, with high coverage and relatively low eligibility criteria, as well as high levels of participation in lifelong learning, also have the best labour market performance(115). The conclusions and results hold even when taking 2009–13 averages for the transitions. Taking the average of the transitions from the 2005–08 period and comparing it with the labour market institutions index for 2007 there is also a clear positive link between better transitions and better labour market institutions.

During the crisis, countries with the lowest performance, significantly reduced the strictness of their EPL, but did not improve on the other dimensions that appear to have a higher relevance (Chart 83). ALMP spending declined a little in bottom performers over the crisis, while it increased in top performers.

Countries which combined a less strict EPL with higher levels of activation measures and support managed to limit the impact of the recession on their labour market. There are also signs that countries which chose to improve the balance between labour market institutions during the recession are beginning to feel the benefits on their labour market performance.

On the other hand, we find support for previous findings noting that the idea of flexicurity was not always followed (European Commission, 2012f). For example, in several Member States where EPL decreased, the adequacy of unemployment benefits and ALMP expenditure per person wanting to work did not proportionately increase during the crisis.

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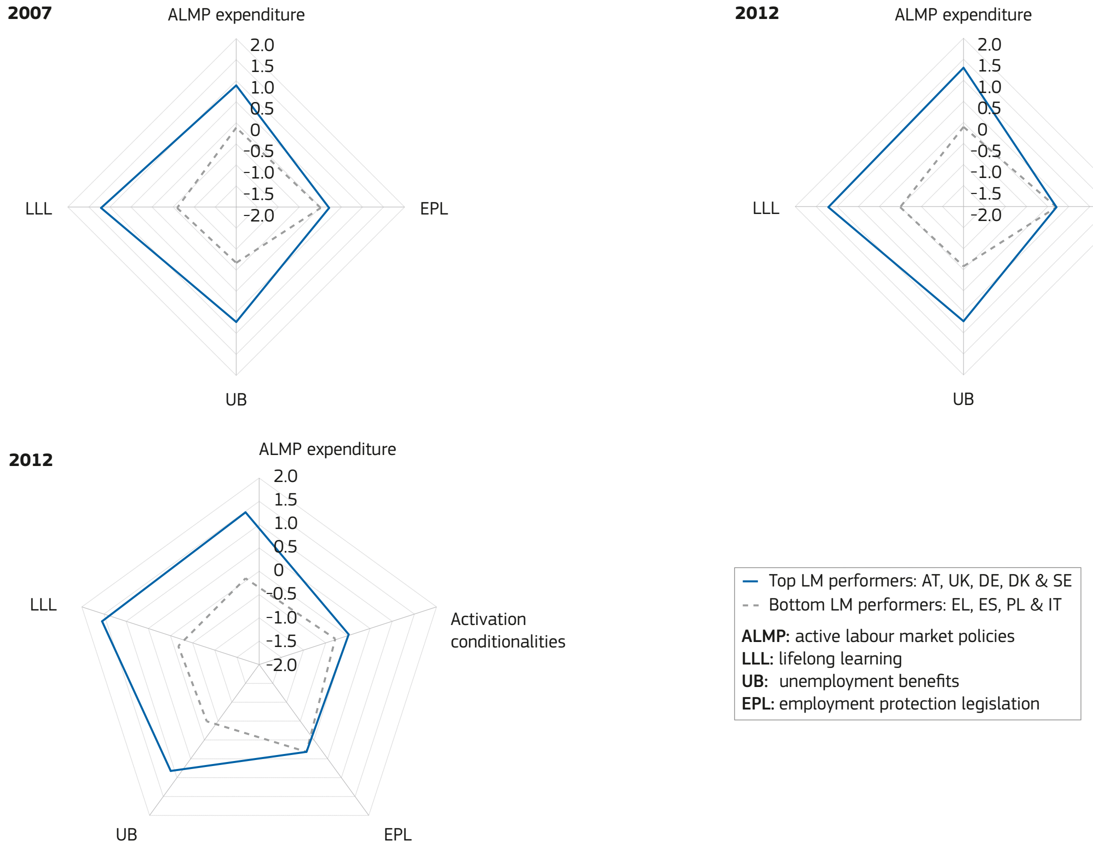
(115) *Note:* Estonia is not included in the average of the top-performing countries despite its positive labour market performance because only larger Member States were taken into account in order to try and balance with the size of the bottom performers. Nevertheless, its inclusion does not substantially alter the shape of the curve or relative relationship between the curve of the top and bottom performers.

Chart 83: Labour market institutions index (LMII), average for the top and bottom labour market performers, 2012 and 2007



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 IMD WCY executive survey and IMD World Competitiveness Yearbook 2012, eligibility requirements and job-search conditionalities for unemployment benefits are from Venn (2012) and EPL index is from the OECD database.

Notes: The top and bottom LM performers are ranked according to their transitions from temporary to permanent contracts and exits from STU to employment with only large countries used in both groups. 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/job search conditionalities), lifelong learning (participation rates of total population 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, expect 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.

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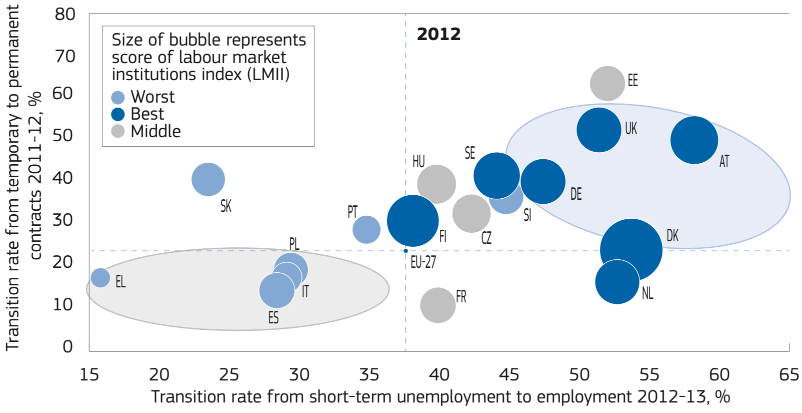
The social partners, through bipartite dialogue or tripartite relations with public authorities, often are central actors in the design, acceptance and successful implementation of these policies. However, their role differs widely between Member States and domains, in accordance with the particular national industrial relations systems and traditions.

Finally, the analysis of the impact of changes in welfare systems on the labour market during the crisis and their interplay with many labour market institutions (Section 4) highlights the need for a more integrated policy approach in order to address new challenges and work towards the goals of a job-rich and inclusive growth. Establishing the right balance between the different functions of the welfare systems, and between benefit systems and labour market institutions, is crucial.

Chart 84: Transitions from temporary to permanent contracts (2011–12) and from short-term unemployment to employment (2012–13)



Source: Transition rate from temporary to permanent contracts from Eurostat, EU-SILC.; transition rate from short-term unemployment to employment from Eurostat, EU-LFS, ad-hoc transition calculations based on longitudinal data.

Note: Blue dotted line marks the EU average. 2010–11 values used for CY, HR, HU, MT, PL, PT, RO, SE and SK for transitions from temporary to permanent contracts and 2010–11 value used for NL short-term unemployment to employment transition. EU-27 average for transitions from temporary to permanent from EU-SILC and for exits out of STU calculated arithmetic average.

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6. Conclusions

This chapter has taken stock of the impact of the recession on people and institutions, analysed the role of social protection systems and labour market institutions in explaining the various levels of resilience to the crisis, and assessed how well policy changes since 2008 are likely to help the EU to promote a job-rich and inclusive growth as well as being better prepared in the future.

We find that Member States have shown different levels of resilience to the economic shock experienced across the EU. While employment levels have declined and unemployment increased in most countries, some have managed to limit the worst effects, because of their initial position and/or the policies implemented in reaction to the crisis.

The design of different labour market institutions contributed to mitigate or exacerbate the impact of economic shocks on employment. The effectiveness of automatic stabilisers in sustaining incomes of those directly affected and in stabilising the economy depends on the extent to which they provide longer term support in the case of a prolonged period of weak labour demand, while not creating disincentives to work. At the same time, using the opportunity of the recession to invest in skills and ensure that they are properly used can be crucial in helping maintain an adaptable and productive workforce and speeding recovery.

In terms of the short- and long-term impacts of the recession, the following points stand out:

- The recession generated large increases in the number of unemployed, especially among some specific groups (youth, low-skilled) and long-term unemployment rose in nearly all countries, and doubled overall. The recession also impacted negatively on job quality, notably due to increasing involuntary part-time and temporary employment.

- The large variation across countries in the ability to prevent long-term unemployment (as measured by exit rates out of short-term unemployment) reflects differences both in the severity of economic conditions and in the policies implemented. Supporting the unemployed through activation, (re)training services, quality of the public employment services, and well-designed income support contributed to a faster recovery.

- Activity rates continued to increase during the recession, with fewer people leaving the labour market than might have been expected on past experience of periods of high unemployment. This contrasts quite significantly with experiences in previous recessions. It is seen to be driven by the structural rise in participation of women and older workers, supported by policy measures that have not been reversed during the recession.

- Employment rates of young people entering the labour market are currently below pre-recession levels in most countries. This is of particular concern given the known negative consequences of facing unemployment early in a career, although highly educated young people are relatively well protected against such scarring effects.

- Many young people entered or stayed in education, especially in Member States where participation had previously been low and where youth unemployment is currently high. However, the extent to which this will improve their future employment and earnings opportunities will depend on the quality of education, which may be undermined by recent cuts in expenditure.

- Future employment growth will need to be widely shared if it is to contribute to reducing inequalities and preventing long-term exclusion. In the face of declining job opportunities, people have developed multiple strategies for finding work, going beyond the use of public employment services, such as mobilising family ties and social networks, as well as adjusting their quantity of work (part-time, on call, informal work, etc.).

- Unemployment and economic hardship has led many households to drastically adjust their expenditure and draw on savings, with many moving into debt. The weakening of social ties or the increased reliance on informal support may undermine integration in society and the labour market. Moreover, the rise of social exclusion has a very negative impact on public trust in institutions and governments, contributing to the political uncertainty that already undermines the effectiveness of policy action.

In relating the pre-crisis situation of labour market institutions and patterns of social expenditure to the post-crisis outcomes, as well as to the policy changes by Member States since 2008, the following lessons can be drawn:

- The development of social expenditure has proved to be an important factor in explaining the resilience of some Member States during the recession. Social protection expenditure increased in the first phase of the crisis, absorbing part of the shock in most Member States, thanks to 'automatic' stabilisation and to ad-hoc discretionary measures. However, as the recession has persisted, social expenditure has started to be cut back.

- The design and operational characteristics of welfare systems and labour market institutions help explain differing degrees of resilience to economic shocks across Member States. The transmission of economic shocks to employment and income was smaller in those with a lower share of temporary contracts, a greater availability and use of short-time working arrangements, a stronger investment in labour market activation measures and lifelong learning, as well as widely available unemployment benefits linked to activation, and responsive to the economic cycle.

- The relationship between employment protection legislation (EPL), labour market activation policies and income support changed somewhat during the recession. The loosening of EPL has not been so far a strong predictor of transitions out of unemployment or of general labour market performance, signalling that the effects of EPL reforms during periods of low labour demand may have limited impacts and that they may require longer than the short- and medium-term to have an effect.

- The analysis highlighted that EPL alone cannot explain labour market outcomes but is just one of several labour market institutions whose reform may need to be utilised to combat unemployment and a dual labour market. Countries displaying the best returns to employment from short-term unemployment and transitions from temporary to permanent contracts in 2012 were those that had the most developed and balance set of labour market institutions. The best performers combined significantly higher spending in ALMP, stronger activation conditionality, higher participation in lifelong learning and higher coverage and adequacy of unemployment benefits than the countries with the lowest labour market performance. During the crisis, countries with the lowest performance reduced the strictness of their employment protection legislation, but they did not improve the other labour market institutions.

- Short-time working schemes accompanied by partial unemployment benefits were extensively used during the early phase of the recession and were successful in maintaining employment and containing unemployment.

- Investments in lifelong learning can play a crucial role in both supporting a recovery and ensuring long-run competitiveness. There is a strong positive relationship between the participation rates of the unemployed in education and training, and their chances to go back to work. Even when controlling for differences in education levels, Member States with the highest levels of participation in lifelong learning and whose employers value and invest in human capital achieve higher levels of competitiveness than those who do not.

- Faced with a prolonged recession and the increase in long-term unemployment most countries did not, or could not, strengthen the automatic stabilisation dimension of their welfare systems, thus undermining the effectiveness of social protection. This argues for increasing the responsiveness of unemployment benefits to the economic cycle, by allowing a temporary increase in the duration of benefits and a relaxation of the eligibility criteria during recessions. Other measures, such as minimum income schemes linked to activation and a more responsive indexation of family benefits and pensions may also support these efforts. In times of growth, the eligibility and duration of unemployment benefits can be readjusted, just as the pressures to increase labour market flexibility may decrease, in order to limit possible employment disincentives and support the financial sustainability of social expenditure.

- The sustainability of social expenditure is influenced by the structure of its financing arrangements. The apparent move away from financing through social security contribution to financing from general taxation may open the way for a more inclusive system, but the design of benefit systems also need to be appropriately adjusted.

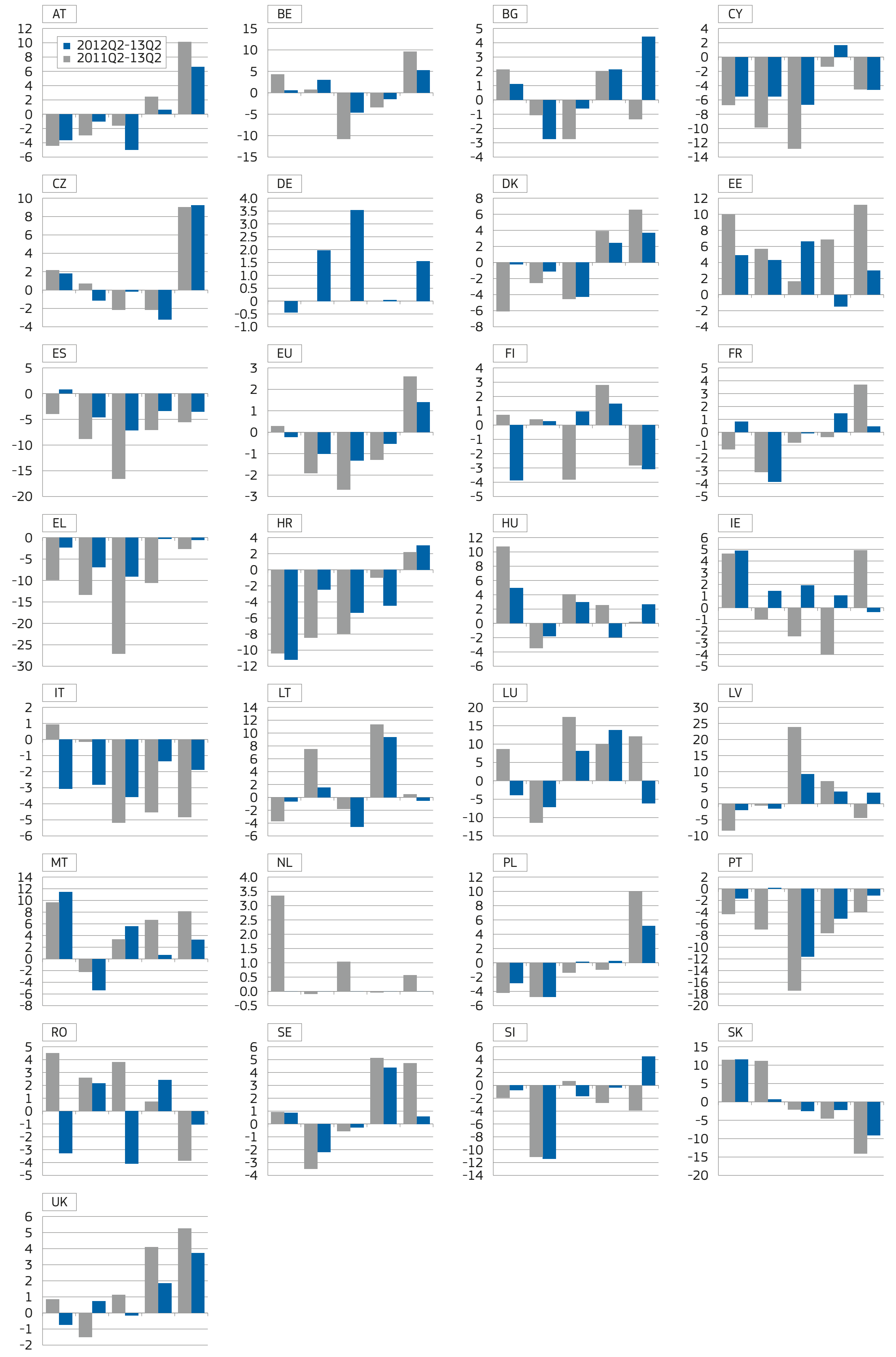
- A number of Member States are progressively moving towards a social investment model that supports all those who wish to participate in the labour market by helping them achieve their full employment potential throughout their lifetime. In this respect, for example, expenditure on childcare is supporting the active participation of women in the labour market, with countries starting from low levels benefiting the most.

- The evidence from the complex, and mixed, experience of the Member States during the recession has underlined the importance of ensuring balanced and purposeful reforms of both labour market institutions and welfare systems. It showed that, in contrast to experiences in previous recessions, recent policy reforms in areas such as pensions and childcare have helped prevent a massive withdrawal of older workers and women from the labour markets. It showed the successful complementarity of short-time working arrangements and partial unemployment benefits during the crisis. It also highlighted the important role that social partners can play in the successful design and implementation of such schemes.

Adequate levels of social investment, investment in lifelong learning, a greater responsiveness of social expenditure to the economic cycle, and integrated welfare reforms supported by well-functioning labour markets can contribute to better prepare people and societies to face any future crises, as well as provide the necessary foundations for more productive economies and societies. In this respect, recent efforts to stimulate labour demand, such as the reduction of the tax wedge and incentives to entrepreneurship, can also serve to strengthen the impact of reforms in pursuit of job-rich and inclusive growth.

Annex 1: Employment change by job-wage quintile

Chart: **Employment change (%) by job-wage wage quintile in EU-28 Member States, 2011 Q2–2013 Q2 and 2012 Q2–2013 Q2**



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Source: Eurostat, EU-LFS, Eurofound's calculations (Eurofound 2014).

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Notes: Data missing for Germany for 2011 Q2–2012 Q2 due to classification change. Data for the Netherlands refer to 2011 Q2–2012 Q2. EU aggregate data incorporates data adjustments for Germany and the Netherlands to reflect changed occupational classifications in 2012–2013 and 2011–2012 respectively.

ANNEX 2: REVIEW OF LITERATURE ON SCARRING EFFECTS

Impact on future employment outcomes

According to the review of literature in Eurofound (2012) 'there is widespread agreement that early labour market experiences can have a long-term scarring effect on labour market performance both in terms of labour force participation and future earnings'. Table 5 includes a few studies illustrating impacts of early-career unemployment spells on future employment opportunities of young people.

Impact on future earnings

According to Scarpetta et al (2010), most studies find that early youth unemployment has stronger negative effects on incomes than on future risk of unemployment. Many scholars attempted to estimate the so-called 'wage penalty' on future earnings (see Table 6).

Moreover, for Sweden, Edin and Gustavsson (2008) found strong evidence of a negative relationship between work interruptions and skills levels: a full year of non-employment was associated with a decline in their relative skill position within their age group. There is a link with the recent OECD survey on adult competencies (PIAAC) as this found that people accumulate skills relatively quickly during the early years of their careers (see Chapter 2) and that the level of skills of individuals is strongly correlated to the accumulation of experience and the use of skills (i.e. practice effects independent of education levels).

Other impacts

Beyond the direct impact on the risk of future unemployment or the wage effects, several papers document the impact that early-career unemployment spells can have on other dimensions of well-being.

Finally, there are other societal consequences to unemployment (and inactivity) such as the risk that if independent housing is not affordable for young people, they are likely to remain living with their family and delay founding their own family, thereby worsening demographic trends and prospects (see also Section 3.2 on this point).

Table 5: Example of studies on scarring effects on future employment outcomes

Paper	Country/target group	Main results
Skans (2011)	Teenagers' first labour market experience and subsequent labour market performance of Swedish youths graduating in the recession years of 1991–94	Significant scarring effects of unemployment spells resulting in higher risks of unemployment up to 5 years later.
Gregg (2001)	Youth in the United Kingdom	An extra three months unemployment before age 23 led to another extra two months out of work (inactive or unemployed) between ages 28 and 33.
Cockx and Picchio (2011)	Trajectories of young Belgians after they had remained unemployed for nine months after leaving school	If they remain a further year in unemployment, their probability of finding a job in the following two years falls substantially (from 60 % to 16 % for men and from 47 % to 13 % for women)but the duration of the unemployment spell hardly affects the quality of subsequent employment.
Gregg and Tominey (2005)	United Kingdom	It is unemployment spells experienced early in the career that matter, as unemployment experienced after the age of 33 has much less explanatory power for future unemployment probability.

Table 6: Example of studies on scarring effects on future earnings

Paper	Country/target group	Main results
Gregg (1998)	United Kingdom	Workers who fall unemployed tend to work at a lower rate of pay and often suffer a permanent pay reduction. This may stem from the fact that young people who experience unemployment accumulate less work experience which is one the determinant of wages.
Arulampalam (2001)	British men (aged 16–58)	Unemployment carries a wage penalty of about 6 % on re-entry into a job and of about 14 % after three years.
Gregg and Tominey (2005)	United Kingdom	There is a wage penalty but that can be reduced if repeated spells of unemployment are avoided — in other words, there can be a strong catch-up effects.

Table 7: Example of studies on scarring effects on other outcomes

Paper	Main results
Bell and Blanchflower (2011)	Young people's health status, well-being and job satisfaction are impacted negatively through spells of unemployment, although the effects are less serious for 'older young people', i.e. those aged 23 or more.
Cutler et al (2014)	Review of literature documenting that cohorts graduating in bad times have lower wages and poorer health for many years after graduation, compared to those graduating in good times.
Brenner (2013)	Drawing on the 2000–10 period in EU countries, the paper examines the relationship between the unemployment rate and Ischemic Heart Disease (IHD) mortality rates and concludes that the unemployment rate has been an important risk factor for IHD mortality since the start of the great recession in the EU.
Giuliano and Spilimbergo (2009)	Macroeconomic conditions (through witnessing increased unemployment) have an effect on the young generation: young people who are aged between 17 and 25 during a recession have less confidence in public institutions and believe that success depends more on luck than on effort.

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Causes of scarring effects: signalling effects play a role and call for more efforts to provide youths with a first employment experience quickly

The two main channels of scarring effects of early-career unemployment spells are associated with human capital (i.e. deterioration of skills or foregone work experience) on the one hand, and signalling effects (i.e. spells of unemployment give a signal of low productivity to potential employers) on the other. Other explanatory factors include psychological discouragement or habituation effects, theories of job matching where the unemployed accept poorer quality jobs and social work norms that influence individuals' preferences for work, see Nilsen and Reiso (2011). In the case of young people, the signalling effect for potential future employers seems to be given a rising explanatory power in the literature. For instance, the substantial effects of early-career unemployment identified by Cockx and Picchio (2011) are caused by 'the negative signal that prolonged unemployment conveys to potential recruiters' rather than 'depreciation of human capital'. The authors conclude that "offering employment experience as quickly as possible is more effective" than supply of training.

Doiron and Gørgens (2008), in the case of young Australians with no post-secondary education, point to the fact that the mere fact of being employed matters (and conversely the mere fact of being unemployed has a negative impact). Ignoring these effects can lead to underestimating the impact of labour market policies.

While over-education may also at some point act as a strong negative signal to employers, Baert and Verhaest (2014) provide evidence (based on a field experiment in Belgium with fictitious job applications to real vacancies) of a large stigma effect of unemployment than over-education and argue in favour of fast activation of unemployed youth.

Education protects from scarring effects

In their review of existing studies in European countries, Scarpetta et al (2010) point out that 'the lower the level of initial qualification, the longer the scarring effects are likely to last'. This finding is confirmed by Mosthaf (2014) for Germany and by Dolado el al. (2013) for Spain. This is due to changing labour demand but also to the fact that during the recession different educational groups compete for the same jobs and many jobs requiring low skill levels are taken up by tertiary graduates (Bell and Blanchflower (2011)).

For the United Kingdom, Gregg (2001) looked at cumulated experience of unemployment, highlighting how it is concentrated on a minority of the workforce over extended periods. It concludes that "low educational attainment, ability not captured by education, financial deprivation and behavioural problems in childhood raise a person's susceptibility to unemployment".

As the context of unemployment spells may differ greatly, scarring effects vary across (education) groups both in magnitude and by the underlying mechanism. Signalling effects (to potential future employers) may play a greater role for young people without qualifications — while depreciation of human capital as well as foregone work experience could be relatively stronger for tertiary graduates (116).

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(116) For instance, Brunner and Kuhn (2009) reports that the labour market conditions at entry have smaller and less persistent effects on the earnings of blue-collar workers than on those of white-collar workers. This differential effect may be explained by the wider wage distribution that can be found among white-collar workers.

ANNEX 3: COPING STRATEGIES DURING THE RECESSION — QUALITATIVE ANALYSIS

This project ([117]), which was launched in July 2013 in DG EMPL, investigates the coping strategies of individuals and households hit by the crisis, and that as a result of this, either lost their job, and therefore their main source of income, or did not manage to find a regular job in the first place. Specifically, it seeks to understand what happens to family and social ties in the course of a job loss; what individuals do to remain active; and, whether individuals' trust towards institutions stays intact.

The project is novel in its approach, as it goes beyond the use of traditional, quantitative methods, which help to describe the economic and social situation of individuals but oftentimes lack the ability to provide insights into the behaviour response of individuals experiencing hardship. Therefore, in order to uncover the coping mechanisms for the impact of the crisis, the project uses qualitative research methods in addition to quantitative research methods.

The main part of this qualitative research forms a study, which consists of over 100 face-to-face interviews, conducted with the help of national experts and the coordination efforts of a high-level expert using a sociological approach in seven EU Member States (Germany, Greece, Spain, France, Ireland, Portugal and Romania). As such, in addition to the novelty lying in the use of a mixed methods approach, the project is also unique to its kind because of its broader coverage, enabling international comparison in times of crisis. The main qualitative research component is then complemented by a focus group study conducted by TNS to enable a deeper insight into coping mechanisms through group discussion, a specific quantitative research component using EU-SILC data to analyse the deprivation profile of households facing a severe economic shock, and a range of EU-wide surveys (Eurobarometer, EQLS, LFS and SHARE) to illustrate trends in different socioeconomic indicators.

Extracts below illustrate different aspects of the trends reported in the core of the chapter:

Extract 1: **Informal work**

Interviews with people having experienced long-term unemployment show that working in the informal economy is a matter of surviving:

'Yeah, that's right, if you have no choice, you have no choice… I wasn't even receiving the RSA [earned income supplement], due to an incomprehensible administrative hold-up, I had zero income, I mean zero, … I was doing computer repairs out of my house, undeclared, and I was doing undeclared odd jobs, like mowing lawns, hanging wallpaper, parqueting floors.' No 52. FR, M, 45 years

Also show that informal economy puts people into fragile situations. A women living in Athens explains how she was working in the informal sector and was injured:

'I'm working without insurance and they're always late in paying me.' No 21. EL, F, 43 years

'Last month I had an accident at work….. After 25 days, I'd reached the point where the doctor told me I could walk again, so I returned to work, …They said, "You better come back to work soon or else we'll find someone else."' No 21. EL, F, 43 years

Extract 2: **Running into debt**

Interviews with people having experienced long-term unemployment illustrate that people hit by economic hardship face difficulties in accessing credit and find low support from banks.

Family and friends are a frequent source of loans. Respondents prefer these informal routes to formalised loan agreements, although such loans are not always emotionally stress free. However, such solutions remain limited as sometimes friends and family members also experience financial difficulties.

'Sometimes I have needed to ask a pal for €20 if my money hasn't lasted over the last few days of the month. That's normal, that's okay, even though it's not great.' (DE)

Loans were taken out for two main reasons: A one-off expense, either unexpected (such as a medical expense) or more predictable (such as a loan to pay one's taxes); and to help cover daily expenses such as paying utility bills or paying for food.

'I borrow €50 from a friend of mine at the beginning of each month. I use the money to pay the supermarket. I give back the money at the end of the month only to borrow it again at the beginning of the next month. I do not seem able to break from this pattern no matter what.' (EL, Group 3)

Respondents were generally reluctant to approach banks for loans. Some respondents also mentioned struggling with loans that they had incurred before the crisis. There was some, but limited mention of using overdraft facilities. Banks are also not looked upon favourably as they are seen as part of the cause of the financial crisis.

'I went to the bank to see whether I could delay payments on my mortgage and they told me I couldn't, I would have to find a way to take out a loan, they didn't make it easy for me.' (ES, Group 3)

Such situations are often reported to generate stress.

'When someone lends you money your first reaction is relief, but later it's just one more problem.' (FR, Group 3)

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[117] Facing the crisis - The coping strategies of unemployed people in Europe (2014), available at : http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=7729&type=2&furtherPubs=yes

Extract 3: Adjusting consumption

Interviews with people having experienced long-term unemployment show that people hit by economic hardship first cut expenditure related to holidays and leisure activities, and this is the case whatever the country.

'We've had no holidays in three or four years, maybe four or five.'

However, in countries most strongly hit by the crisis, restrictions are going much further. Restrictions in food and clothes expenditure are reported. While in France or Germany, food deprivation is not considered an issue, this is not the case in other Member States, where some cases of food restriction were reported in other Member States.

'Well, it was quite tough. I mean myself and my wife might not eat for a day or two just to make sure the kids have food, that kind of thing. […] We've just cut everything back as much as we could. We don't put the lights on until necessary and the same with the heating and all that kind of stuff.' No 73. IE, M, 47 years

Energy bills are also a leverage to limit expenditures, and many individuals reported restrictions in this areas.

'I get, when it's really cold, I turn the heat up a little and I immediately turn it off and I wear, woollen jumpers, I wear warm clothes, blankets, and I watch TV. So, I have no problem.' No 38. ES, F, 53 years

Lastly, keeping a car means a lot to keep employability and efforts are generally being made to keep a car in the household, but its use is also strongly limited.

'It is a change in a way because they were never things we had to worry about, there were never things like, you know, putting €10 or €5 of petrol in the car. This was something I never did, I just filled it up, you know what I mean. […] you're conscious of what journey you're going to make. My daughter lives in Bray which is the other side of Dublin, so you're sort of thinking, you decide to go over to see her you've got to pay two tolls and petrol.' No 68. IE, M 51 years

Extract 4: Pooling resources — family solidarities

The coping strategies during the great recession project illustrates that, despite the cultural differences in perceiving the role of intra-family financial support, people have sometimes no other choice than relying on family solidarity. Among the seven Member States investigated during the project, support from family was not perceived to a comparable extend in France or Germany compared to southern Europe Member States. The norm of autonomy varies. Nevertheless, even in Member States where cultural norms would tend to strengthen family solidarity, adults relying on their parents report that they do so because they have no other income support. They also clearly say that they are living with their parents because they have no financial means to live independently.

'I'm only 62 years old, […] I'm not entitled to anything: neither retirement nor unemployment benefit, not even the Social Integration Income. I am supposed to live off what?! […] Every morning I have to expect… my mother to give me a euro (that's the truth!) for a coffee. Then, when I'm out of cigarettes, I don't drink the coffee, and I say to my mother… "Mother, I need 2€ to buy something…"' No 89. PT, F, 62 years

'They're struggling now themselves because my mam only works three days a week, so she doesn't get much money at all, and my dad's pay got cut as well, recently, so they really have no money to be going out spare; they're struggling themselves…. So, they would really like, they are always at me to get a job but, look, I have been trying my hardest lately and there's nothing coming up for me.' No 65. IE, Woman, 22 years

Extract 5: Impact on health and access to healthcare

People hit by economic shock and unemployment often report deterioration in their health status.

In addition to increased medical needs related to economic adverse circumstances, many interviewees report difficulties in meeting health-related expenses.

'I am missing many teeth and I cannot make it. In fact, I have several broken teeth, (…) because doing root canals, that's worth a lot of money that I do not possess. And, for me, man, I understand that the mouth is essential for food and for all that but I still have a few teeth and with those I am still managing.' No 46. ES, M, 43 years

'I have cholesterol […] if I take pills… if I take the pill my wife and daughters end up not eating and no, I'd rather stay without it than… all I have is for them.' No 44. ES, M, 49 years

This adds up to greater difficulties in accessing healthcare, which might be itself reduced subsequently to cuts in expenditure.

'There is too much discrimination in the healthcare system. Forget it if you want to go to the dentist. You need a thousand euros for your teeth. If you need an emergency X-ray, you'll wait a month and a half. Even if you have very advanced cancer, without money, you can't get treatment.' No 17. EL, F, 51 years,

However, there are large national variations in reporting such difficulties. In France and Germany very few interviewees report difficulties in paying for health-related expenses, despite many of them mentioning greater needs linked to their economic distress. In other Member States such as Greece, Spain, Portugal or Romania, the situation is however much more frequent.

Extract 6: Losing trust in institutions

Qualitative analysis (see Box 1) highlights that, the distrust in institutions expressed by persons unemployed for at least one year ranges from a balanced criticism to an overall rejection.

'We are paying for things that have nothing to do with us.' No 75.

Generally speaking, unemployed interviewees are feeling ignored by their representatives. They also share the feeling that they pay disproportionately for economic recovery. Europe is especially seen as a major player in this feeling, together with banks and firms:

'I think an awful lot went wrong with this country when the government decided that they needed to look good in Europe rather than look good to their own population I suppose.' No 71

Nevertheless, public services continue to be seen as a tool towards better lives. Cuts in public expenditure severely affect their lives.

'We don't trust the politicians anymore, because they have been a total disappointment. We can't believe a thing they say anymore. [....] There is also this downgrading of education by the government and it forces us to dig our hands into our pockets to pay for extra classes, you know, but meanwhile we pay our taxes and are supposed to have an education system, but this current downgrading of education is very disappointing… The State has even become our predator.' No 34. EL, M., 55 years

In some countries strongly affected by the great recession, however, the feeling of distrust toward institutions is much more pronounced —sometimes even violent, and embeds all types of institutions.

'I've stopped watching the news. … I've stopped worrying about politics. It just tells me that it's every man for himself in life. Let everyone tend their own garden, that's how it is, and I've put on blinkers and just say keep on going forward because I have a child to raise.' No 21, F, EL

'My country simply died. My country, if it continues to be ruled by these people, by the idea of the people who are now governing, my country will die soon.' No 93, PT

Extract 7: Losing trust in the public employment services

Interviews with people having experienced long-term unemployment show that trust in public employment service is varying across Member States. There is a general feeling ranging from mistrust to defiance.

'*I get very down. There's days I'll just be sick of it.[…] I've sent out about 500 or 600 CVs […] I got a few interviews, but you go to the interviews and it's just like I've done interview techniques so it's not a case of I don't know what I'm doing when I'm in there, it's just the case that you go for the job […] and then they tell you and then OK and then it's the whole jumping through hoops that just gets you really down.*' No 72. IE, M, 38 years

Annex 4: RESCuE project — Patterns of Resilience during Socioeconomic Crises among Households in Europe

As a complement to the qualitative study above, the RESCuE project was launched by Directorate-General for Research and Innovation in April 2014 under the Seventh Framework Programme (FP7-SSH).

This project has set out to explore the coping strategies of those affected by the crisis at household level. Some parts of the vulnerable population, although experiencing the same living conditions as others, are developing resilience, which means that they demonstrate social, economic and cultural practices and habits which protect them from suffering and harm, and support sustainable patterns of coping and adaption.

This resilience can consist of identity patterns, knowledge, family or community relations, and cultural and social as well as economic practices, whether formal or informal. Welfare states, labour markets and economic policies form the 'environment' of those resilience patterns.

The RESCuE project's main questions are directed at understanding the patterns and dimensions of resilience at household level in different types and variations of European Member and neighbouring States. The project accounts for regional varieties, relevant internal and external conditions and resources as well as influences on these patterns by social, economic or labour market policy as well as legal regulations.

RESCuE has been producing national state-of-the-art reports and will deliver a synthesised, comparative international report in due course (WP 2). The period of extensive field work, consisting mainly of qualitative interviews with households exposed to the effects of the crisis in various states, is also coming to an end soon (WP3). A key mid-term deliverable will be a comparative typology of socio-economic resilience practices of households in Europe.

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Chapter 2

Investing in human capital and responding to long-term societal challenges (1)

1. INTRODUCTION

Five years after the recession hit the European Union (EU) the prospects for a robust labour market recovery are still uncertain. With unemployment persistently remaining above 10 %, and almost one out of four economically active young people without a job, the current situation not only presents a serious concern for labour market policy making, but also a long-term challenge to the social welfare of our society.

From today's perspective, long and persistent spells of unemployment prevent people from achieving a self-sustained living and participating fully in society — a situation which places strong pressure on current labour market policies to find solutions without further delay. However, the urgency of today's situation should not divert attention from the detrimental long-term impact of unemployment. The exclusion of people from the labour market today means a waste of human resources and undermines tomorrow's production capacity, just as human capital depreciation destroys a major part of previous social investment. In that sense, current labour market developments should also be seen as a difficult starting point into an era in which Europe faces strong, partly new, challenges. Those challenges require a shift in policy focus, with long-term human capital formation as the central component of social investment:

Globalisation has already led to fast structural changes in both factor and product markets. It bears many opportunities as it improves worldwide factor allocation and generates income to industries engaged in both export and import businesses. Companies exposed to global competition have a strong incentive to reduce inefficiencies, better exploit innovation potential and come to stronger productivity gains. However, as a result of such pressure, firms also exploit the potential of **technological progress** and automation to substitute low-profile jobs by capital (2). Apart from substitution, outsourcing of such activities to other parts of the world in search of competitive (cost) advantages will continue being a wider-spread phenomenon. These adjustments may happen at the expense of social peace, unless policies manage to implement reforms that combine alleviating the pressure on those most affected with a focus on adapting the skills supply to the changing needs of the economy. Globalisation should be seen as an opportunity for stronger EU exports of goods with high value added, and evidence shows that firms tend to focus their expansion of labour demand (3) on workers with higher skills.

Demographic ageing will reinforce the competitive pressure that the EU is already exposed to. Other parts of the world will mostly continue to benefit from a demographic dividend (4) since their working-age population will continue to expand over the next decades, while the EU will face a sizeable workforce decline (5). As the workforce shrinks, the EU economy can only continue to grow if future productivity growth becomes a multiple of what it was in the past. In fact, it is foreseeable that, even with ambitious employment rate targets, productivity growth will eventually become the only source of potential economic growth as employment growth turns negative. Hence, to the extent human capital investment helps maintain a productive workforce, including in times of a declining working-age population, this is the obvious policy response to this challenge unless Europe engages in a mere substitution of labour by capital. Given

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(1) By Paolo Pasimeni, Jörg Peschner and Monika Velikonja.

(2) Autor et al. (2003) argue that, in contrast to more complex tasks, manual tasks and those 'following explicit rules' face higher risk of getting substituted by 'computer capital' (p. 1279).

(3) Expansion means demand for workers where there is a net increase of employment (not just a substitution), see Cedefop (2012a), p. 7.

(4) As working-age population increases, this will help potential GDP to increase even in the absence of shifts in the employment rates. See Coomans (2012), p. 200.

(5) See, for example, the European Commission's 2012 Ageing Report (European Commission, 2012f), esp. p. 69.

technological change and rapid improvement in technology, investment in human capital is a crucial condition to securing sustainable levels of employment.

Both challenges lead to workforce shortages in many sectors, and the crisis has clearly shown that high unemployment can coincide with such shortages due to skill mismatches. Hence, it is a dangerous fallacy to rely on changing demographics to relieve Europe's labour market problems. In the absence of a demographic dividend for economic growth, ensuring decent prospects in standards of living and social welfare in Europe in the future will require better utilisation of existing labour capacity through better skills matching, allowing for more rapid productivity gains.

In view of the above, this chapter explores the role of human capital investment as a tool for creating the skills that changing globalised markets require. It also looks at the economic, social and employment implications of such investment, which differ depending on the groups that are targeted.

Given the EU's demographic ageing, qualified migration will be another important element in forming and maintaining EU human capital stock in the future. The complex issue of migration, which is extensively dealt with for instance in recent Commission-OECD research (6), however, goes beyond the scope of this chapter, which focuses on investing in the human capital of the existing EU population and labour force as the central issue.

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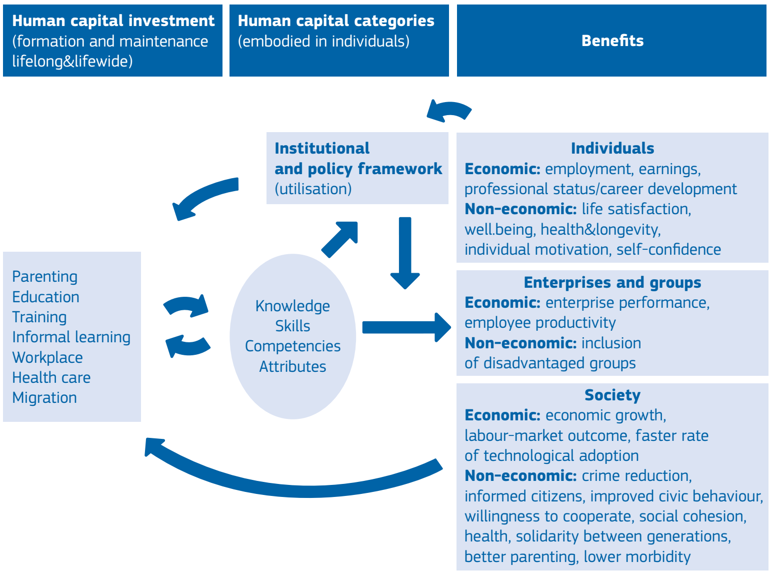
(6) The joint EU-OECD research project 'Matching economic migration with labour market needs' shed light on the following key questions: what policies and practices are needed to ensure that economic migration and free movement contribute to meeting the labour market shortages that are expected to arise over the short-to-medium term? How to ensure a better use of migrants' skills? What are the lessons learnt from non-European OECD countries, particularly in the management of labour migration? Its findings have been published in two reports, 'Free Movement and Workers and Labour Market Adjustment. Recent Experiences from OECD Countries and the European Union' in 2012 and 'Matching Economic Migration with Labour Market Needs', (http://dx.doi.org/10.1787/9789264216501-en).

Box 1: The concept of human capital

Human capital can be defined in overall terms as 'the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being' (7) (Chart 1) — an approach that is much broader than earlier definitions that focused essentially on the 'productive value' of human capital (8).

Chart 1: Human capital: the links between formation, composition and benefits


Human capital investment
(formation and maintenance lifelong&lifewide)
Human capital categories
(embodied in individuals)
Benefits
Institutional and policy framework
(utilisation)
Individuals
Economic: employment, earnings, professional status/career development
Non-economic: life satisfaction, well.being, health&longevity, individual motivation, self-confidence
Parenting
Education
Training
Informal learning
Workplace
Health care
Migration
Knowledge
Skills
Competencies
Attributes
Enterprises and groups
Economic: enterprise performance, employee productivity
Non-economic: inclusion of disadvantaged groups
Society
Economic: economic growth, labour-market outcome, faster rate of technological adoption
Non-economic: crime reduction, informed citizens, improved civic behaviour, willingness to cooperate, social cohesion, health, solidarity between generations, better parenting, lower morbidity

Sources: Developed based on CEDEFOP (2013), Boarini et al. (2012) and Heckman and Kautz (2013).

Human capital categories, except for attributes, can be described by the European Qualifications Framework (EQF) (9). Knowledge is the body of facts, principles, theories and practices related to a field of work or study and can be theoretical and/or factual. Skills mean the ability to apply knowledge and to use know-how to complete tasks and solve problems. In the EQF they are described as cognitive and practical (10).

Competence means the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development. Competence goes beyond cognitive elements and encompasses functional aspects, interpersonal attributes and ethical values (11).

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(7) OECD (2001).

(8) Human capital analysis has gained more interest in research since late 1950s although it appeared in the economic analysis already in the 18th century in Adam Smith's book *The Wealth of Nation*. The motive for its rebirth was the need to explain a huge residual in growth accounting and to better understand the variance in labour incomes that was one of the largest components of income inequality in the US according to Mincer (1997). The beginners of the human capital theory are researchers such as Becker, Schultz, Mincer or Ben-Porath.

(9) Broad EQF approach is used for two reasons. First, EQF defined key terms to support common understanding of key concepts and, second, key terms are shared by all the EU Member States, EEA and candidate countries participating in the EQF. Recommendation of the European Parliament and of the Council on the establishment of the European Qualifications Framework for lifelong learning (2008/C 111/01); European Qualifications Framework, Key Terms, http://ec.europa.eu/eqf/terms_en.htm and CEDEFOP (2014).

(10) Currently favoured typology of skills distinguishes between cognitive (e.g. reading, writing, problem solving, numeracy, IT etc.), interactive (all forms of communication and other activities for cooperative working and engagement with customers and suppliers, including emotional and aesthetic labour) and physical skills (strength and dexterity) according to Green (2013). Author also presents some other typologies, e.g. based on where or how the skills are used (skills according to domain of activity, generic or occupation-specific), who pays for them and who benefits from them (firm-specific or transferable), or based on the skills' complexity (basic skills).

(11) CEDEFOP (2014).

Attributes are implicitly included in the EQF via competences. They refer to an individual's innate abilities, such as genetics, motivation, personality or physical, emotional and mental health (12). 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 (13).

Human capital is formed and maintained, throughout one's lifetime, by different investments (ways) which must be of good quality and sufficient quantity. More usual forms of human capital investment are education and training that, at younger ages, tend to be formal, compulsory and initial, while more non-formal, voluntary and continuing in the later ages. This can be privately or publicly financed and provided by private or public market actors. Investments in education and training are complemented by the impact of families, informal learning, workplaces and investments in health (14). Finally, country level human capital can be formed and maintained by attracting qualified and skilled foreign workers.

As for forming human capital, there is a growing consensus about the crucial role of human capital investment at very early ages on a child's and later adult's capacity for skill development (15). Several long-term studies have highlighted that the impact of quality childcare on child performance can be felt many years after exposure, including during adulthood (16).

The workplace contribution to (investment in) human capital formation and maintenance goes beyond training provided by employers. It encompasses job content and work tasks, as well as the broader work environment determined by career prospects, working conditions (benefits), affiliation and the learning culture of the employment contract (17). A wider range of tasks and greater complexity offer more chances to acquire knowledge and skills. Motivation for personal and professional growth is higher if work offers promotion prospects, a sense of belonging to a company, and salary improvements linked to responsibility and jobs' skill requirements rather than seniority (18).

Measuring human capital stock and returns on investment is challenging. Existing approaches are based on indicators or monetary measures (19). The first uses a single proxy for human capital, such as educational attainment, years of schooling, school enrolment ratios or indicators based on assessing cognitive skills of students or adults (e.g. PISA (20), PIAAC) (21). Monetary measures, which have recently become more popular, translate various dimensions of human capital into a single unit (money) using indirect/residual, cost-based or income-based approaches. Indicators are simple to use, but are less able to capture various dimensions of human capital. Monetary measures facilitate the comparison of human capital with physical capital and across countries, but they might hide some information. Hence the best approach is generally seen to be to use both.

Investments in human capital generate various economic and non-economic benefits for individuals, companies and/or societies. The most widespread and developed are estimations of the benefits for investments in education and training (early childhood, initial and continuing, i.e. lifelong learning) (22). At the individual level, research shows a positive impact on wages (23), employment and career prospects, and health (24). For firms, investment in continuous vocational training and education improve performance (increased customer satisfaction, employees' performance or innovation) (25). At the society or macro levels, research shows the positive economic benefits of education and training (e.g. growth) (26). For non-economic benefits at society level, research shows a reduction in crime, development of civic competences and better functioning of democracies (27).

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(12) OECD (2001); Mincer (1997); Heckmann and Kautz (2013), Mumford et al. (2000).

(13) Heckmann and Kautz (2013) recently introduced the concept of 'character skill' that captures personality traits, goals, motivations, and preferences. See also explanation of 'interactive skills' in Green (2013).

(14) The Commission Staff Working Document on Investing in Health (European Commission 2013f) presents how smart investments in health can lead to better health outcomes, productivity, employability, social inclusion and the cost-efficient use of public resources.

(15) This is mainly due to 'self-productivity' and 'complementarity' of skills. 'Self-productivity' means that prior skills are augmented by skills learnt at later stages, while later investments are necessary to fully enable people's potential ('complementarity' of skills). See Cunha et al. (2006); Currie and Almond (2011); European Commission (2013a).

(16) See European Commission (2013a).

(17) European Commission (2013b); CEDEFOP (2011a); Autor and Handel (2009); Gathmann and Schönberg (2010); Green (2013); Tamilina (2012).

(18) See Chapters 3 'Workplace learning' and 4 'Management and training processes that generate innovation' in European Commission, 'Adult and continuing education in Europe, Using public policy to secure a growth in skills', Publications Office of the European Union, Luxembourg, 2013c. http://ec.europa.eu/research/social-sciences/pdf/policy_reviews/kina25943enc.pdf#view=fit&pagemode=none

(19) See Boarini et al. (2012) for a detailed review of methodologies, challenges in implementing them, possibilities for improving the quality of monetary measures and overview of national initiatives in measuring the stock of human capital. Authors suggest developing experimental satellite accounts for education to better understand how human capital is produced and the linkages between education and its non-monetary outcomes.

(20) The Programme for International Student Assessment (PISA) aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students in reading, mathematics and science. It is carried out every three years and involves more than 70 economies. The latest wave was carried out in 2012. http://www.oecd.org/pisa/

(21) The OECD's Programme for the International Assessment of Adult Competencies (PIAAC), also known as the Survey of Adult Skills, measures the key cognitive and various generic skills and competencies needed for individuals to participate in society and to contribute to economic prosperity. Skill proficiency in literacy, numeracy and problem solving in technology-rich environments has been tested with the Survey. The first wave of the Survey assessed the skills of about 166 000 adults aged 16–65 in 24 countries, of which 17 are EU Member States. http://www.oecd.org/site/piaac/

(22) Detailed presentation and discussion of the benefits by various types of education and training and related methodological problems (like causality, reverse causation, problem of omitted and/or unobservable variables, heterogeneity, the long-term nature of benefits) is beyond the scope of this section. We refer interested readers to several recent publications of CEDEFOP (CEDEFOP 2013, 2011b, 2011c, 2011d, 2011e, 2011f); Card (1999); Bassanini et al. (2005); EC-OECD seminar on Human Capital and Labour Market Performance, that was held in Brussels on 8 December 2004, available at ec.europa.eu/social/BlobServlet?docId=1946&langId=en, Hanushek et al. (2013).

(23) See overview in CEDEFOP (2013); Harmon and Walker (2001); Leuven (2006); Bassanini et al. (2005).

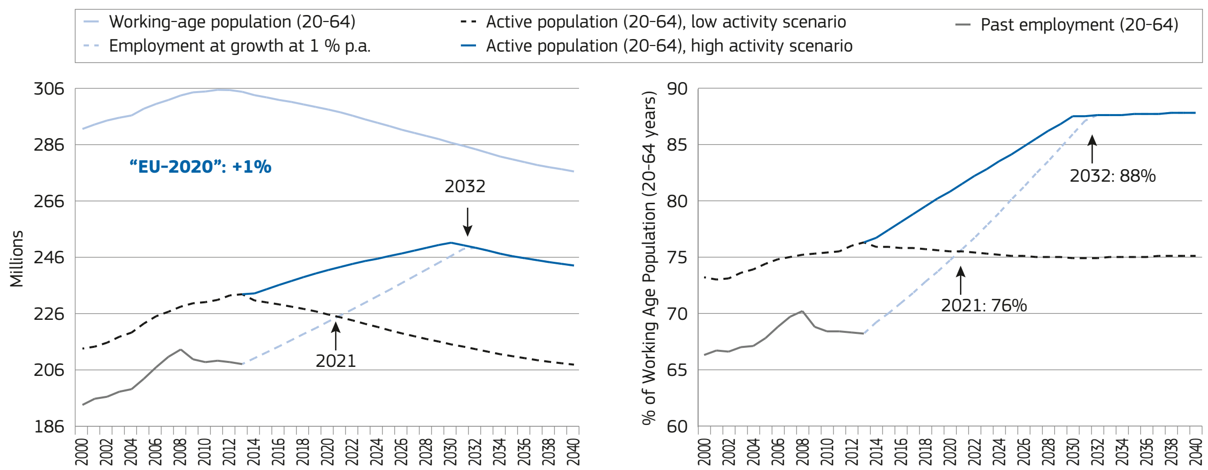
(24) See overview in CEDEFOP (2013).

(25) See overview in CEDEFOP (2013); CEDEFOP (2011c, 2011d). Investments in formal job training can yield comparable returns on investments in physical capital or schooling according to Almeida and Carneiro (2009).

(26) See overview in CEDEFOP (2013); Sianesi and Van Reenen (2000); Gennaioli et al. (2013). Woesman (2003) even argues that existing research severely underestimates the development effect of human capital. This is because indicators used are poor proxies of human capital (e.g. adult literacy rates, school enrolment ratios, and average years of schooling of the working-age population). The FP7 research project (LLLIGHT in EUROPE) is investigating how successful enterprises actively employ Lifelong Learning for their competitive advantage. The project uses Complex Problem Solving (CPS) skills as a measure of human capital. http://www.lllightineurope.com/

(27) See overview in CEDEFOP (2013).

Chart 2: **Potential employment path assuming different activity scenarios, EU-28**



Source: Update of Peschner and Fotakis (2013), p. 13–15.

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2. LONG-TERM CHALLENGES THREATENING JOB-RICH AND INCLUSIVE GROWTH

This section considers how workforce shrinkage and increased global competition increase the pressure to generate higher productivity gains over future decades. It provides evidence that there will be no alternative to human capital investment given Europe's need for stronger productivity gains to generate economic growth rates strong enough to maintain current welfare levels.

Ageing imposes a particular challenge to the EU. After decades in which a demographic dividend helped feed economic growth with an increase in the working age population, the situation from now on is liable to move into 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 obvious outcome is fiercer global competition for talents with human capital becoming a decisive factor in the success or otherwise of businesses in an increasingly globalised environment. Workforce decline could reduce employment growth, leaving productivity growth as the only leverage to sustain economic growth and to maintain current welfare levels.

Potential employment growth will depend on the success of EU policies in ensuring that larger shares of a shrinking working-age population enter the labour market. Chart 2 displays working age population projections together with two scenarios of how labour force participation could develop (low and high activity scenario) [28]. The low activity scenario (dashed dark curve) assumes no further progress in the age, gender and education-specific activity rates. By contrast, the high activity scenario (blue curve) suggests a quantum leap: no gender gap in the age-specific activity rates by 2030; a doubling of past success in terms of increasing older-worker activity rates (+20 % pts. by 2030) and a further gradual shift towards a more highly educated labour supply (activity increases with higher education) [29]. The result indicates the theoretical upper limit of what activation policies might achieve: starting from today's EU activity rate of around 76 %, the EU would approach activity rates of around 88 % by 2032 under the high activity scenario.

With no further progress in activation (low activity scenario), it is clear, from Chart 2, that the EU will see employment growth turn negative relatively soon — around 2021. However, even using very optimistic assumptions, EU employment growth will be unable to follow the 1 % sustainable growth path for more than ten years. At the latest, it would turn negative around 2032. In this purely theoretical 'best possible' scenario, the EU would have arrived by 2032 at an employment rate of 88 % with no unemployed reserve.

The difference between the low and high activity scenarios constitutes the theoretical maximum potential [30] of activation policies to encourage people into the labour market. The difference is some 35 million workers (13 % of working-age population in 2040). This difference shows the potential to defer the time when EU employment stops growing. Under the assumptions made, activating labour resources would extend the policy window by ten more years — time to implement further reforms aimed at safeguarding higher productivity gains. Those will be needed in the decades to come when employment growth, due to higher activation, would no longer contribute to potential economic expansion.

Obviously this would have implications for productivity growth in the future. Chart 3 shows that, before the crisis, the EU's economy grew by an average of around 2 % each year: the sum of 1 % employment growth and 1 % productivity growth on average. Were the economy to continue growing at this pace in times of negative employment growth, the EU would have to more than double the rate of annual productivity gains. Activation policies, no matter how successful, would not remove the challenge to productivity, although they could postpone the point in time when productivity becomes the only source of economic growth.

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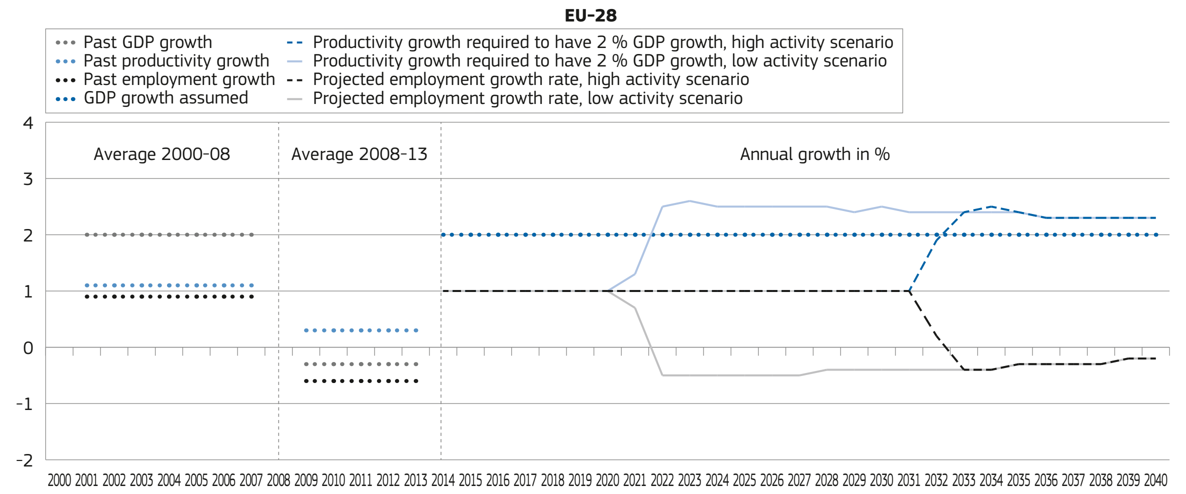
(28) Analysis assumes that an annual employment growth of 1 % is achieved from now on for as long as possible. Such a growth rate in employment is equivalent to the long-term trend prior to the crisis in 2008, and is also consistent with meeting the 'EU2020' employment objective for the EU by 2020. Starting with a 68 % employment rate for people aged between 20 and 64 years in 2013, the rate would be no less than 75 % in 2020.

(29) Peschner and Fotakis (2013), pp. 10–12.

(30) Breaking down this potential by educational attainment level, it is obvious that low-qualified people would contribute the most to this potential as their activity rate today is way below the average (2013: 64 % vs. 76 % in EU-28 for the age group 20–64 years). Source: Eurostat LFS (http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database, table lfsa_argaed).

Chart 3: **Employment and necessary productivity growth at 2 % GDP growth (% p.a.), EU-28**



Source: Update of Peschner and Fotakis (2013), p. 17.

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This implies that the EU has to obtain much faster productivity growth rates in the near future than it has in the past, if the current productivity gap relative to the EU's main competitors (31) is to be closed. This may become increasingly difficult to the extent the pressure to generate higher productivity growth rates results only in rationalisation and capital deepening, but without sufficient investment in the existing stock of human capital.

This underlines the argument for seeking to generate higher productivity gains by investing in skills and making physical capital investment complementary to, rather than a substitute for, human capital accumulation. In this respect, the evidence suggests that there is a strong complementarity between capital and skills in today's globalised production chains (32) and that investment, growth and productivity rates and levels correlate with the share of higher skills in the labour force.

Demand for skilled workers will continue to increase in the EU's strategy to ensure higher productivity gains. According to model projections by Cedefop, there will be more than 80 million additional job openings in the EU over the current decade, and 90 % of these job openings will be in medium- and high-skilled employment. Looking only at the expansion in demand (new, rather than replacement, jobs), Cedefop anticipates almost 20 million more high-skilled job openings, while in the low-skilled area, expansion demand will decline by almost 14 million (33). This increased demand for higher labour skills coincides with the continued 'general shift towards employment in services and the knowledge economy' (34) with the main drivers being 'demography, globalisation, international competition and cost pressures' (35).

To conclude in these respects, global competition and workforce shrinkage will increase the pressure to make rapid productivity gains in the EU a reality. Research in this chapter shows that such strong productivity gains must come from investment in human capital if it is to be socially sustainable. There is strong evidence that competitive businesses take this challenge very seriously and do relate human capital concerns directly to productivity performances (Box 2). At the same time, productivity gains from only substituting missing workers with capital would further reduce the national income share of workers relative to capital. Investing in human capital to meet increasing skill requirements is therefore seen as the socially sustainable option for generating higher productivity growth in line with greater investment in new innovative technologies. The following sections will discuss the different options of human capital investments, describing the policy framework and, based on model projections, showing its potential impact on the labour market and the economy.

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(31) Van Ark et al. (2013).

(32) Timmer et al. (2014); Krusell et al. (2000); DG EMPL's Labour Market Model incorporates the capital-skills-complementarity, see Berger et al. (2009), p. 3.

(33) CEDEFOP (2012a), p. 85 (table 12).

(34) Ibidem, p. 19.

(35) Ibidem, p. 35.

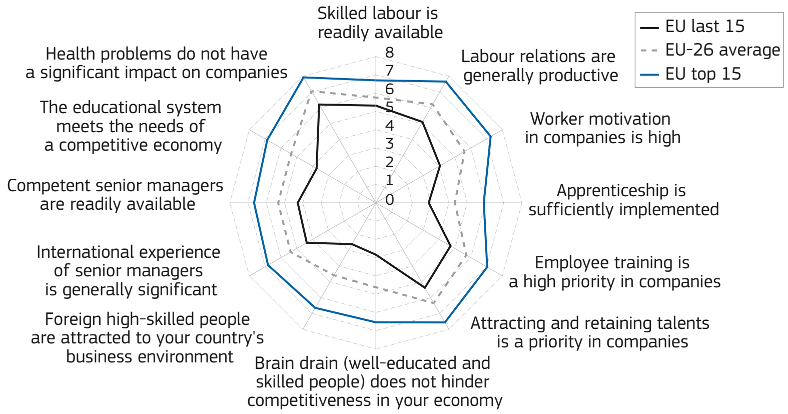
Box 2: Human capital, competitiveness and productivity

Business surveys show how the availability of skilled labour is an important, common feature among the most competitive EU countries (Chart 4). Results show that various strategies and investments in forming, maintaining and using human capital are complementary and not exclusive. Educational systems that meet the needs of a competitive economy are supplemented by companies that: actively provide training; prioritise the attraction and retention of talent; provide a quality job environment. This increases workers' motivation and offers good general labour market conditions with productive labour relations.

What matters is having a skilled workforce at all levels — i.e. including with enough, readily available, competent senior managers. If necessary, top competitive countries can use the pool of foreign workers for whom they represent an attractive destination. These countries also tend to better use their human capital and have high activity and employment rates.

Chart 4: Complementing various human capital strategies helps top EU competitive countries to have better skilled workforce at all levels

Index values (0-10 index points) for respective statements — unweighted averages, 2014



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Sources: IMD World Competitiveness Yearbook 2014, International Institute for Management Development.

Notes: *Top EU countries include EU countries that were in 2014, according to the overall competitiveness ranking, among the top 15 competitive countries (out of 60) and the last 15 EU countries includes those ranking in places from 46–60. **TOP_EU countries: SE, DE, DK, LU, NL, IE. *** LAST_EU countries: IT, HU, SI, EL, RO, BG, HR. ****EU-26 (no data for MT and CY). *****Overall ranking of the World Competitiveness Yearbook is based on four main factors: Economic Performance; Government Efficiency; Business Efficiency and Infrastructure.

The survey shows significant cross-country variance in how businesses assess the availability of human capital and the various qualitative aspects associated with it. The higher the score, the stronger the agreement with the respective statement on average in a given country. That is, the higher the score, the stronger the confidence amongst businesses concerning the issue raised in the statement. A factor analysis of the country differences across the twelve statements in the survey reveals two main strands of human capital strategy amongst businesses: from a productivity-related company perspective (factor 1: Firms' productivity), this mainly reflects the organisation's competitive position and how it is affected by human capital; while the workers' perspective focusses on the individual's endowment with skills and his/her health (factor 2: Workers' capital). Table 1 shows how the extracted factor correlates to the original twelve statements.

Table 1: Extracting a firm-related and a workers-related factor of human capital

Matrix of factor loadings (rotated)

	Factor	
	Firms' productivity	Workers' capital
Skilled labour is readily available	.060	.911
Labour relations are generally productive	.870	.195
Worker motivation in companies is high	.813	.484
Apprenticeship is sufficiently implemented	.753	.215
Employee training is a high priority in companie	.898	.125
Attracting and retaining talents is a priority in companies	.833	.229
Brain drain (well-educated and skilled people) does not hinder competitiveness in your economy	.559	.772
Foreign high-skilled people are attracted to your country's business environment	.760	.381
International experience of senior managers is generally significant	.774	.372
Competent senior managers are readily available	.517	.790
The educational system meets the needs of a competitive economy	.643	.631
Health problems do not have a significant impact on companies	.186	.742
Principal Component Analysis, factor loadings after varimax-rotation		

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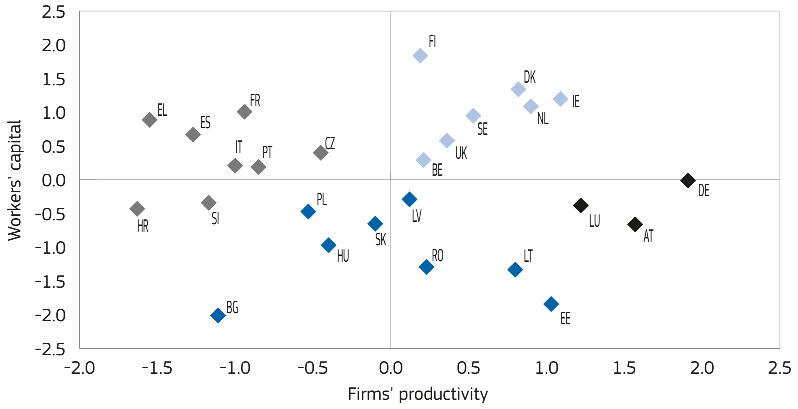
Source: DG EMPL calculations based on IMD World Competitiveness Yearbook 2014, International Institute for Management Development.

The two principal components of human capital identified above explain almost 80 % of the cross-country variability in the twelve original statements. Taking these as a basis, the subsequent cluster analysis depicts how businesses in Member States position themselves in the context of firm- and worker-related human capital concerns.

Member States are divided into four clusters with respect to their scores in the two principal components extracted. The result is shown in Chart 5. A score of zero in each of the components is equivalent to the non-weighted average of factor scores across Member States. The Southern/Mediterranean Member cluster combines Member States (Greece, Spain, France, Italy, Portugal, Croatia, but also the Czech Republic and Slovenia) in which firm-productivity-related confidence plays little role in businesses' regard for their own situation. On the other hand, worker-related confidence (good health, skill-equipment) is clearly under-represented in Eastern Europe (Bulgaria, Hungary, Poland, Slovakia, Latvia, Romania, Lithuania and Estonia).

In contrast, businesses in the Northern Cluster (Denmark, Finland, Sweden, the Netherlands, as well as the UK, Ireland and Belgium) place strong emphasis on both factors, whereas organisations in the Central Cluster (Germany, Austria and Luxembourg) seem to pay particular attention to the competitive environment (high importance of firm-related/productivity considerations).

Chart 5: Clustering Member States with relation to two Principal Components of Human Capital



Source: DG EMPL calculations based on IMD World Competitiveness Yearbook 2014, International Institute for Management Development.

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3. POLICY AND INSTITUTIONAL FRAMEWORK

The following analysis seeks to demonstrate the potential of the EU Member States to improve their economic and labour market outcomes, and at the same time to prepare for the long-term challenges with a better skilled, and more productive, workforce. In order to reap the benefits and realise that potential, however, the institutional and policy framework will need to be able to provide incentives or direct support for human capital formation, maintenance and use (36). This chapter sets out the institutional framework for **forming**, **maintaining** and **using human capital**. It presents evidence on how countries perform on indicators from, among others, recent PIAAC and PISA surveys. It tries to give evidence on the large extent to which the EU is currently wasting human resources and points to a variety of policy approaches to better activate them while investing in higher productivity.

3.1. Forming human capital

Education is one of the main channels for human capital formation, hence it figures among the headline targets of the Europe 2020 strategy. This section analyses in detail the different aspects of policies aimed at forming and enhancing people's capabilities. It also seeks to identify both barriers to progress and good practice examples.

This section cannot touch exhaustively upon all relevant issues (37). It limits itself to discussing investment in forming human capital from the existing population, while it does not touch upon acquiring human capital from outside the EU. As it can't cover all levels and aspects of education and training, it focuses mainly on inequality aspects and early childhood education and care (ECEC). The access to education and educational performance are often influenced by an individual's (child's) socio-demographic/economic background. Reducing inequalities in skills and education is important, not only for reducing income inequalities but also for broadening the pool of candidates for higher education and high-skilled jobs and, by implication, for improving long-term labour productivity. The focus on ECEC follows from its potential to overcome inequalities and its long-term importance for the future formation of human capital (38). For a more detailed analysis of educational and training systems, see the Education and Training Monitor 2014 (European Commission, 2014d).

3.1.1. Early childhood education and care: double dividend

The benefits of early childhood education and care (ECEC) are two-fold — it improves child development and facilitates labour activity, especially female involvement in the labour market (39).

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(36) See for example OECD (2012a).

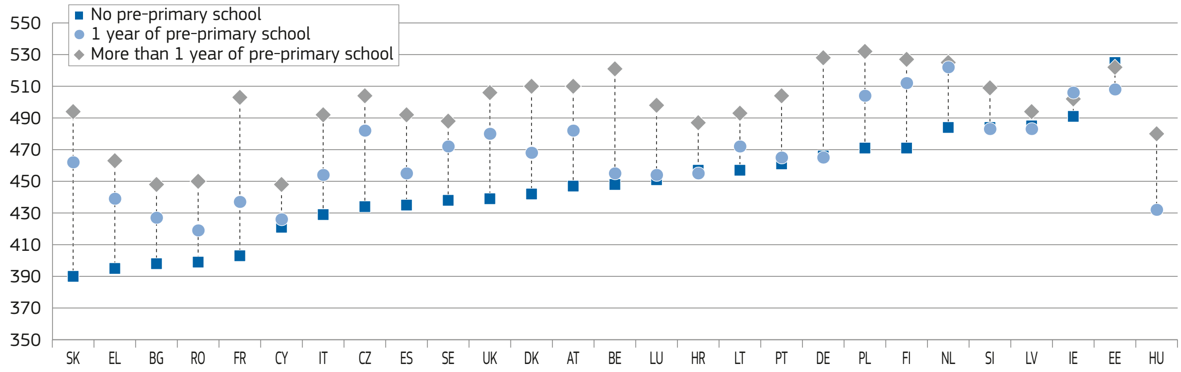
(37) See European Commission (2014d): Education and Training Monitor (2014).

(38) See for instance Box 1.

(39) For more on female activity, see section 3.3.3.

Chart 6: **Higher score in math 15 year-olds who participated in ECEC**

Achievement in maths by participation in pre-primary school (PISA score points, 2012)



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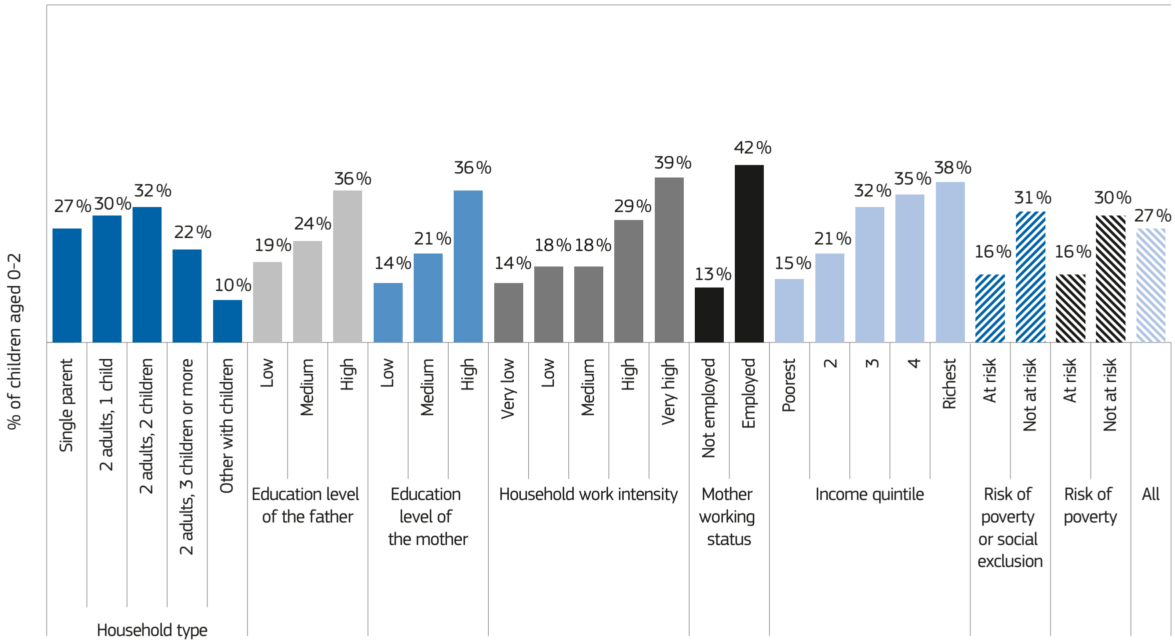
Source: European Commission (2013c).

Note: Data are not corrected for parental/socioeconomic background.

Chart 7: **Uptake of ECEC is low among disadvantaged children in the EU**

Use of formal childcare for children aged 0–2 across several breakdowns



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Source: Eurostat, EU-SILC 2012.

Research shows that high quality ECEC can improve a child's development, particularly for the most disadvantaged: it prevents early school leaving; improves academic achievement and increases educational attainment (40). This reduces risky behaviour later in life and supports participation in lifelong learning and social inclusion (41) (Chart 6). Therefore, accessible and affordable, good quality ECEC can significantly contribute towards helping mitigate inequalities.

In practice, however, children from disadvantaged backgrounds (42), defined in terms of the education level of their parents, income quintiles or risk of poverty, are far less likely to use such services (Chart 7).

Inequalities in childcare among social groups (described as social gradients) vary between Member States. For example, in Scandinavian countries, such as Denmark or Sweden, the use of childcare is high, and the differences between the disadvantaged and better-off are low (see Chart 8). In France, Belgium and the Netherlands, there is evidence of a stronger social gradient combined with high levels of use of childcare services. In other Member States, such as Ireland, a significant social gradient is combined with limited levels of childcare.

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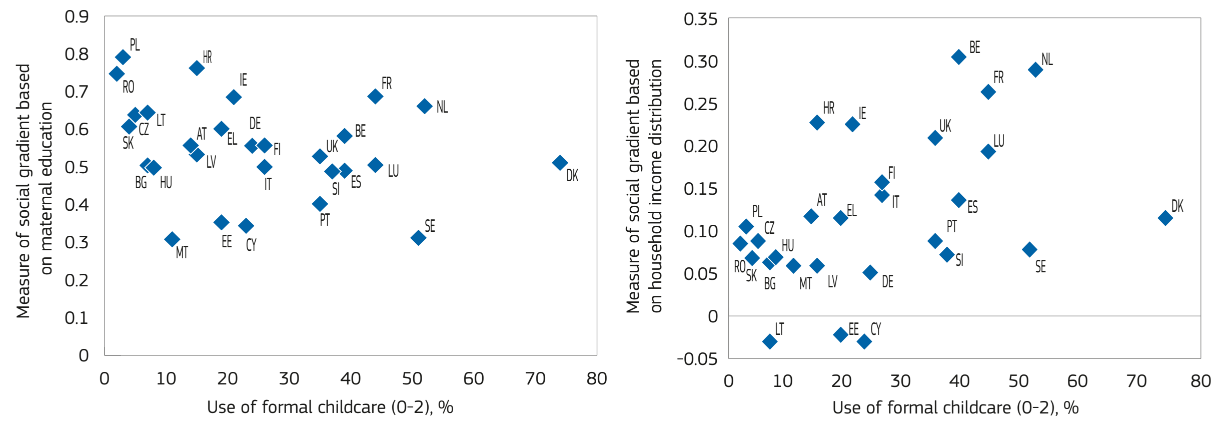
(40) The FP7 research project 'CARE' addresses issues related to the quality, inclusiveness, and individual, social and economic benefits of early childhood education and care in Europe. The central goal of CARE is to develop an evidence-based and culture-sensitive European framework of developmental goals, quality assessment, curriculum approaches and policy measures for improving the quality and effectiveness of early childhood education and care. http://ecec-care.org/

(41) See Box 1 for literature review. The term 'early childhood education and care' includes formal services for children between birth and compulsory school age focused on providing early — or pre-school — education and childcare for working parents (Moss, 2009 in European Commission (2013a)).

(42) Migrant background is one important dimension of disadvantaged people. The analysis of this specific group goes beyond the scope of this chapter. Specific work on social gradients will deal with this.

Chart 8: Disadvantaged children have more access to childcare in the northern EU Member States

Use of childcare and social gradients in access to childcare across Member States (2011)



Source: Social Situation Monitor for DG EMPL, work in progress.

Note: The social gradient based on education is a modified concentration index based on maternal education levels and the social gradient based on income is a rank correlation based on income position.

The main reasons for low use of childcare across the Member States vary over a long duration of parental leave (43); excessive cost of childcare; a disincentive tax-benefit system (44) (for lone parents or second earners); and the quality, accessibility (e.g. proximity, opening hours) and availability (waiting list, lack of services) of childcare (Table 2) (45).

Improving the use of childcare at the national level requires greater awareness of the different obstacles, which might differ across Member States. In some of the countries currently below the Barcelona target (46), such as Slovakia, Poland, Croatia or Estonia, the duration of maternity leave is among the highest in Europe. In Croatia, Romania, Latvia, Greece and the United Kingdom, a large share of those persons with care responsibility is inactive or involuntarily works part-time because of a lack of support services. In other Member States, such as Ireland, Slovakia or Malta, the high cost of childcare associated with inactivity traps for low earners are a major obstacle.

Difficulties in accessing quality childcare are reported in Greece, Romania, Slovakia, Poland, Slovenia, Italy and Spain — problems linked to a lack of physical access, distance, inadequate opening hours or eligibility criteria. The Eurofound Quality of Life Survey reports access problems due to distance or opening hours in Greece, France, Romania, Poland and the Czech Republic. Availability, because of waiting lists or lack of services, can also restrict the use of childcare. However, the extent of such difficulties also depends on national circumstances with the Netherlands and Hungary both reporting similar levels of difficulty in accessing childcare services, even though usage of childcare differs considerably between these countries.

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(43) Long parental leave can also be a compensatory measure due to lack of adequate infrastructure.

(44) Removing or reducing distortionary income taxes and social security contributions also stimulates the labour market participation of low-qualified individuals and boosts incentives to invest in education and training for them (see, for instance, Booth and Coles 2007).

(45) European Commission (2013a).

(46) With Barcelona targets, the EU wanted to provide childcare by 2010 to at least 90 % of children between 3 years of age and the mandatory school age, and to at least 33 % of children under 3 years of age. They were set in 2002 at the Barcelona European Council. Reaching those targets should remove disincentives to female labour force participation. Presidency Conclusions, Barcelona European Council, 15&16 March 2002, http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/71025.pdf.

Table 2: Use of childcare related to context indicators

		Use of formal childcare (at least 1 hour a week) 0-2	Length of maternity leave (months)	Out-of-pocket childcare costs (lone parent, full-time care net cost, % of family net income)	Participation tax rate of taking up employment for a second earner - Moving into full-time employment with earnings = 50% of average earnings (AW)	Involuntary fixed-term or part-time % of women employed	Inactivity and part-time work due to lack of care services for children and other dependents % of persons 15-64 with care responsibilities	Availability (waiting list, lack of services)	Cost	Access (distance, opening hours)	Quality
	EU-28	**28**			**35.2**	**13.4**	**42.9**	**58**	**59**	**41**	**27**
Below the Barcelona target	CZ	3	43	17.8		10	18	61	45	51	28
	SK	5	44	25.1	23.7	7	14	61	71	47	38
	PL	6	49	8.7		18	38	61	66	51	38
	BG	8	14	7.7	21.6	4	21	49	55	33	20
	LT	8	41	9.0	36.1	5	45	53	55	29	26
	HU	8	42	5.9		9	37	45	63	39	36
	HR	12	20			7	81				
	AT	14	28	4.3	45.9	5	16	45	43	39	21
	RO	15	29			1	89	62	74	57	47
	MT	17	16	21.3	28.9	7	3	64	78	35	29
	EE	18	41	7.6	24.8	4	15	62	71	45	24
	EL	20		6.5	5.3	15	72	73	78	57	63
	IE	21	18	40.4	49.5	14	49	47	76	36	23
	IT	21	16			25	17	58	63	37	32
	LV	23	41	13.5	35.6	6	79	59	60	45	27
	DE	24	40	15.3		8	47	61	50	39	25
	CY	26	8			24	52	36	47	33	19
	UK	27	19	13.0	51.5	7	72	54	78	39	25
	FI	29	12	21.7		16	6	46	33	34	12
Above the Barcelona target	PT	35	13	4.0	15.7	22	47	53	63	42	36
	ES	36	40	9.0		31	63	53	67	44	30
	SI	38	15	12.3	30.1	10	55	70	74	46	35
	FR	40	40	7.5	25.9	16	22	72	60	50	25
	NL	46	16	5.7	36.6	10	7	46	65	19	14
	BE	48	12	8.2	43.1	10	71	60	42	35	18
	LU	48	16	10.7		9	14	60	37	35	17
	SE	52	37	5.0	23.7	18	9	28	11	26	18
	DK	67	16	7.8	89.1	11	11	37	43	32	20

Sources: Eurostat, EU-SILC 2012 (IE 2011); Fondazione Brodolini, 2013 (maternity and parental leave); Eurostat, EU-LFS 2012 (involuntary part-time and inactivity); OECD tax-benefit model (cost of childcare); Eurofound European Quality of life survey (self-declared obstacles).

Note: All data are for 2012, except for length of maternity leave, which is for 2013.

3.1.2. Formal education

Completion of upper secondary education is considered to be the minimum skills requirement for actively participating in social and economic life (47). In 2013, 5.5 million people left school without finishing upper secondary education in the EU-28 with the share of early leavers being over 15% in Romania and Italy (Chart 9) (48). The share exceeded 20% in Malta and Spain, although this has decreased over the last three years (49). The reduction in the number of early school leavers over the last few years can be partially explained by counter-cyclical education participation. Young people may prefer to stay in education given the limited job possibilities in recession or slow-growing economies.

In tertiary education, Italy, Romania, Croatia, Malta, Czech Republic and Slovakia remain far below the headline target, although all are improving (Chart 10) (50).

Educational mobility has, on average, improved across the EU, but having low qualified parents still has a negative impact on the educational opportunities of their children (Chart 11). The share of tertiary educated young people from low educated families is lowest in Austria, Italy, Poland and Slovakia, while it is the highest in Finland. Moreover, Slovakia

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(47) OECD (2012b).

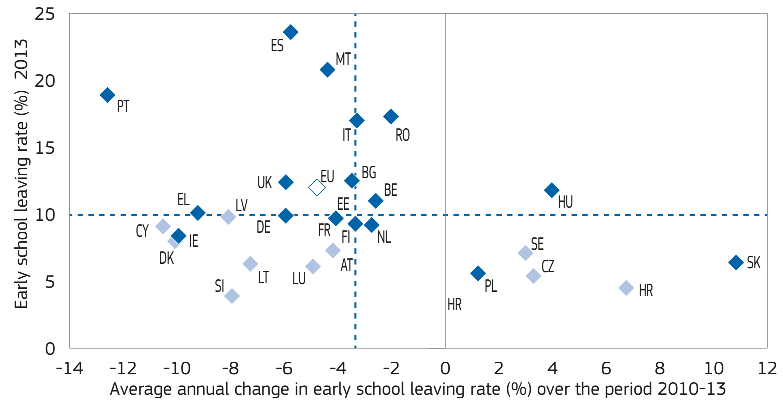
(48) Early school leaving is one of the Europe 2020 headline targets and it aims to reduce the share of early school leavers to less than 10%.

(49) The FP7 research project 'RESL.eu' (Reducing Early School Leaving in Europe) is collecting data on youngsters, families and schools in nine EU countries. It aims at identifying characteristics of youth at risk of ESL as well as protective factors (such as social support mechanisms, resiliency and agency of pupils, etc.) which may encourage potential ESL pupils to gain qualifications via alternative learning arenas. https://www.uantwerpen.be/en/projects/resl-eu/

(50) The Europe 2020 headline target is that the share of 30–34 year olds with tertiary education attainment or equivalent should be at least 40%.

Chart 9: Early school leaving: current performance and recent changes

Early school leavers is the share of people between 18–24 years of age not in education and who have not completed upper secondary education, EU, 2010, 2013



Source: European Commission (2014d).

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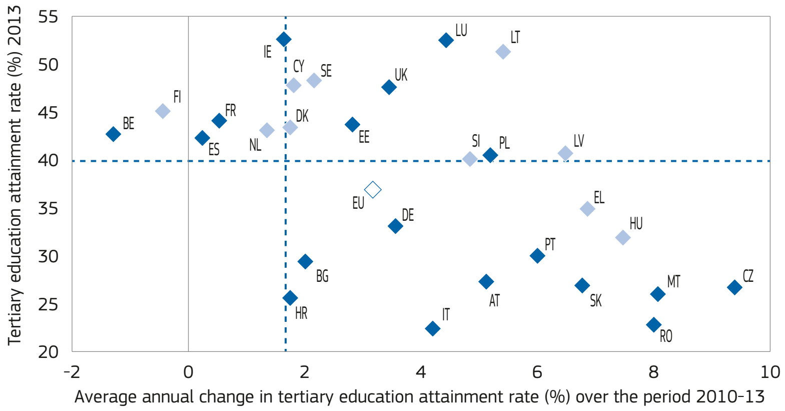
Chart 10: Tertiary education: current performance and recent changes

Share of people between 30–34 years old having tertiary education EU, 2010, 2013



Source: European Commission (2014d).

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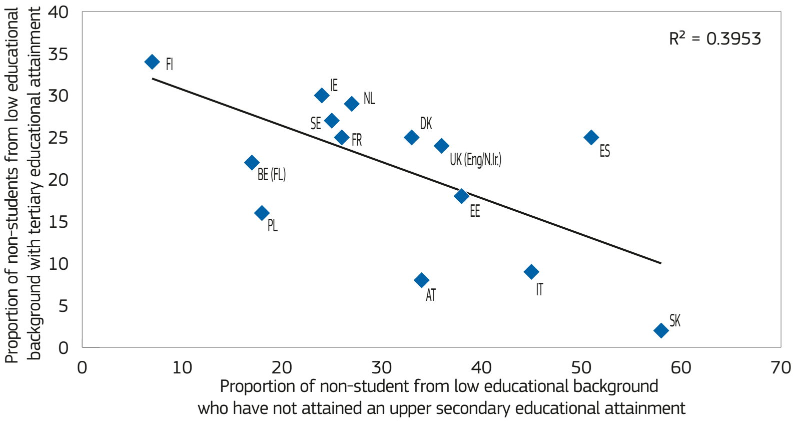
Chart 11: Limited chances for tertiary education attainment for young people with low-educated parents in several Member States

Educational achievement among 25–34 year-old non-students with parents who have below upper secondary educational attainment, 2012



Source of data: OECD (2014b).

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and Italy, together with Spain, also have high shares of young people without upper secondary education coming from disadvantaged families (51).

Completing upper secondary or tertiary education is no guarantee, however, that young people from disadvantaged backgrounds (52) will attain similar basic skills compared to their better-off counterparts, as demonstrated by the PISA survey (Chart 12) (53). One third of the variation in mathematics proficiency across the OECD in PISA is explained by differences in the percentage of students who attended pre-primary education for more than one year, after accounting for per capita GDP (54). Some countries, such as Estonia, Finland, Ireland and the Netherlands, have been able to combine high levels of student performance with an equitable distribution of learning opportunities as measured by PISA (55). Too often, and in too many countries, however, schools reproduce existing patterns of socioeconomic advantage.

Possession of basic (cognitive) skills is important in terms of labour market achievement with regard to maintaining employability and achieving successful transitions between jobs (56). At the same time, non-cognitive skills, such as: motivation; sociability; the ability to work with others; and job-specific or technical skills; are also important for successful labour market participation (57).

More general effort is needed in order to improve school outcomes and the literacy of pupils in the EU Member States as demonstrated by the PISA survey (Table A.1 in Annex). The EU as a whole is far behind its benchmark in maths, although the picture is more encouraging

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(51) For more details, see section on Tackling inequalities in the Commission Education and Training Monitor 2014 (European Commission 2014d).

(52) In the OECD's PISA study, a pupil's socioeconomic status is estimated by the index that is based on such indicators as parental education and occupation, and the number and type of home possessions related to education. These are considered proxies for wealth and the educational resources available at home.

(53) The OECD PISA survey compares the outcomes of high school students internationally in mathematics, reading and science, as well as so called cognitive skills, and provides valuable information on how well prepared upper secondary students are for the workplace, career training or higher education.

(54) OECD (2013b).

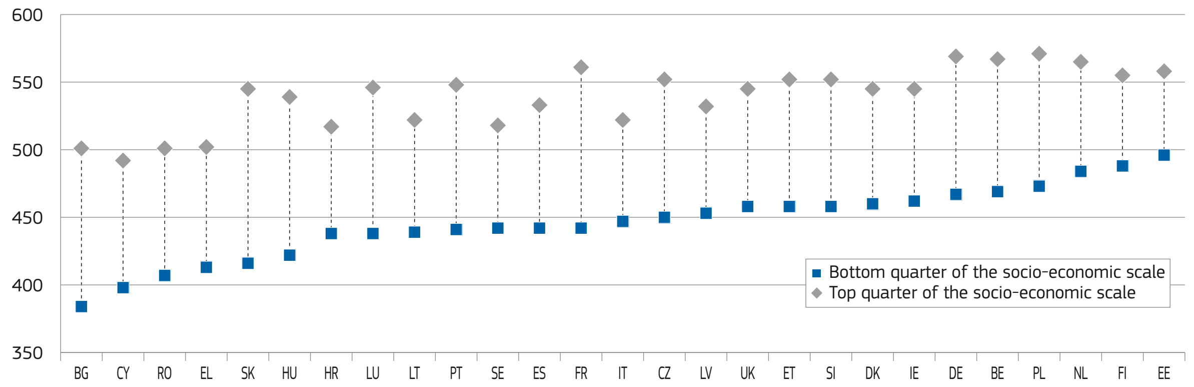
(55) Schleicher (2014).

(56) Berton et al. (2014).

(57) See Box 1.

Chart 12: Higher scores in skills proficiency for young people with higher socioeconomic status

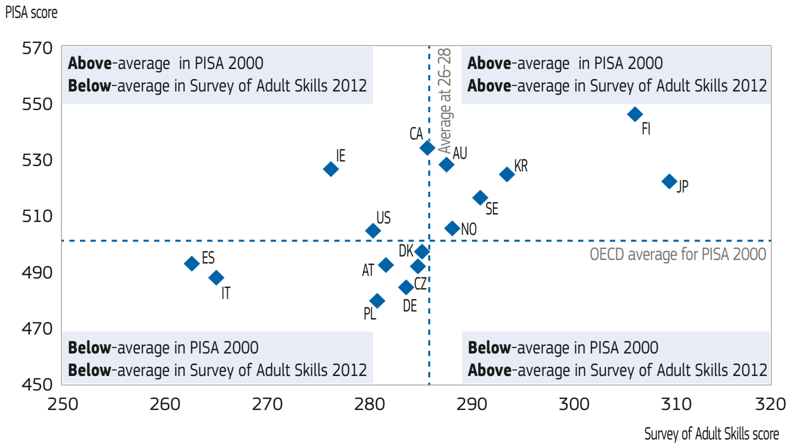
Achievement in maths by socioeconomic status (PISA score points, 2012)



Source: European Commission (2013c).

Chart 13: Vicious cycle of low performance

Mean literacy proficiency in PISA (2000) and in the Survey of Adult Skills (2012)



Source: OECD (2013a).

in science and reading. In comparative terms, overall EU performance is slightly better than the United States, but below that of Japan.

Despite good performance and a low share of early leavers (well below the EU average) (see Chart 9), there are a number of countries with an above EU average share of low achievers in all three fields (Croatia, Slovakia, Sweden) or at least in particular fields (Slovenia and Austria in reading, and Lithuania in reading and mathematics).

PISA 2012 results show that performance across all three areas of basic skills correlate with each other — Members States that show certain levels of basic skills in one area tend to perform similarly in other areas (58). Therefore, policies designed to tackle low achievement in one field often converge with policies in another.

In many countries, the proficiency achieved at a young age strongly correlates with the proficiency of the same cohort as adults, as demonstrated by PIAAC (Chart 13). Countries whose cohorts performed very well in PISA also had much better results in the Adult survey and vice versa.

Financial resources are important in improving the quality and equity of educational outcomes but, in high-income countries, their allocation is more important than their size (59). PISA results show that advantaged and disadvantaged schools tend to have similar physical infrastructure and educational resources to those in good performing countries, but those countries tend to prioritise higher salaries for teachers over other expenditure, such as supporting smaller classes (60). In low-income (61) countries, the scale of the resources is a more important determinant of students' performance.

OECD suggests that improving the quality and equity of educational outcomes requires a combination of measures (62). This includes promoting high-quality teaching, especially for disadvantaged schools and students, by encouraging diversity and improving the employment conditions of teachers (working conditions, career and financial incentives to attract and retain teachers in disadvantaged schools, educating the teacher educators). It also considers that measures need to be taken in order to prevent increases in school's autonomy undermining equity, by avoiding socio-economic segregation, and investment in pre-school care and childhood, as well as improving the quality of schools via student and school assessments. Finally, measures are needed to create effective learning environments: by limiting grade repetition; reducing early tracking by not placing students on separate tracks at a very early age; continuously supporting students; and by setting high expectations, especially for disadvantaged students.

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(58) European Commission (2013c).

(59) Oosterbeek et al. (2007), Schleicher (2014), OECD (2013b).

(60) OECD (2013b).

(61) Countries with cumulative expenditure per student below USD 50 000, like the Czech Republic, Hungary and the Slovak Republic. (Schleicher 2014).

(62) Schleicher (2014).

3.2. Maintaining human capital

The dynamic character of human capital accumulation implies that the skills acquired at one stage form the basis from which further steps can be made throughout the life-cycle (63), with the possibility for further accumulation or depreciation at every stage.

Higher participation rates in education can have a positive effect on human capital formation, but they do not ensure that skills obtained during education are maintained and used throughout the working life. Traditional measures of human capital, as used in macroeconomic analyses, focus essentially on length and level of formal education, but a comprehensive analysis of human capital needs to move beyond this. Lifelong learning and training, in particular, play critical roles in maintaining human capital once formal education has been completed. (64)

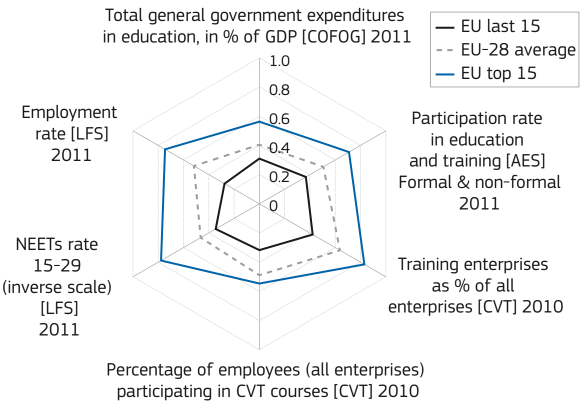
3.2.1. Lifelong learning and training: complementary roles of public and private sectors

The most competitive countries in the EU seem to be those which invest a higher share of GDP in education and which have high participation in formal and non-formal education and training (Chart 14) (65). In these countries, the private sector seems more likely to train employees, who then show a higher propensity to participate in continuous vocational training. Unsurprisingly, these countries also have significantly lower NEET rates and higher employment rates. The differences between the most competitive and least competitive countries can be observed. On the input side, the biggest gaps are in terms of participation rates and of the percentage of private sector enterprises investing in employee training. On the outcome side, NEET rates and employment rates differ greatly.

The role of the private sector in maintaining human capital, by investing in vocational training of employees, is particularly relevant not only from a public finance perspective, but also in terms of effectiveness of the investment, as enterprises can fine-tune and adapt training programmes to their specific needs.

In general, training provided by the public and private sectors can be seen as both necessary and complementary. Chart 15 shows that countries that spend more on education, as a share of GDP, are also those whose firms are more engaged in providing employee training. Moreover, this positive relationship has been rather stable over time, as shown by the trend line through 1999, 2005 and 2010 (66).

Chart 14: **More competitive countries are those more able to maintain human capital**



Source: Eurostat (COFOG, AES, CVTS, LFS), DG EMPL elaborations.

Notes: *Top EU countries include EU countries that were in 2014, according to the overall competitiveness ranking, among the top 15 competitive countries (out of 60) and the last 15 EU countries includes those ranking in places from 46–60. **TOP_EU countries: SE, DE, DK, LU, NL, IE. *** LAST_EU countries: IT, HU, SI, EL, RO, BG, HR. ****Overall ranking of the World Competitiveness Yearbook is based on four main factors: Economic Performance; Government Efficiency; Business Efficiency and Infrastructure. The scale 0 to 1 for the different indicators is calculated by normalising their values with a standard MAX/MIN normalisation formula.

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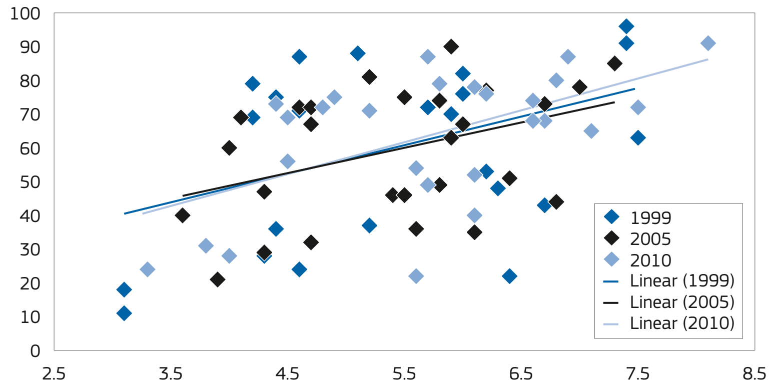
Chart 15: **Public and private sector investments in human capital are complementary and mutually reinforcing**
General government expenditure on education (X-axis), as a share of GDP, and share of enterprises providing training (Y-axis) (years 1999, 2005 and 2010)



Sources: COFOG and CVTS, DG EMPL elaborations.

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(63) So called 'self-productivity' and 'complementarity' upon skills (Cunha et al. 2006).

(64) Beblavy and Maselli (2014) argue that the number of low-skilled workers shouldn't be considered only as a stock, but also as a flow variable, as one can become low-skilled during working life. Kurekova et al (2013) point to structural and institutional barriers that can draw people into low-skillness such as technological change, growing service sector or educational expansion.

(65) In assessing the importance of training, several measures have proved useful. They have materialised in different indicators that measure the efforts of public finances, private enterprises and individuals in forming and maintaining human capital. In particular, we consider: total general government expenditure on education, as a share of GDP; overall participation rate in education and training of the population; the percentage of employees taking part in continuous vocational training courses; the share of enterprises providing training for their employees; the rate of young people (aged 15–29) neither in employment nor in education and training (NEET rate); the employment rate in the country. By normalising these indicators, with a max-min method, in a 0–1 scale, we can compare them directly in Chart 14. In particular, we can compare them with the aggregates of Member States used previously according to their level of competitiveness as stated in the IMD World Competitiveness Yearbook 2014 (see Box 2).

(66) See chapter 5 'Markets and systems of adult education and CVET: the governance challenge' in European Commission, 2013b.

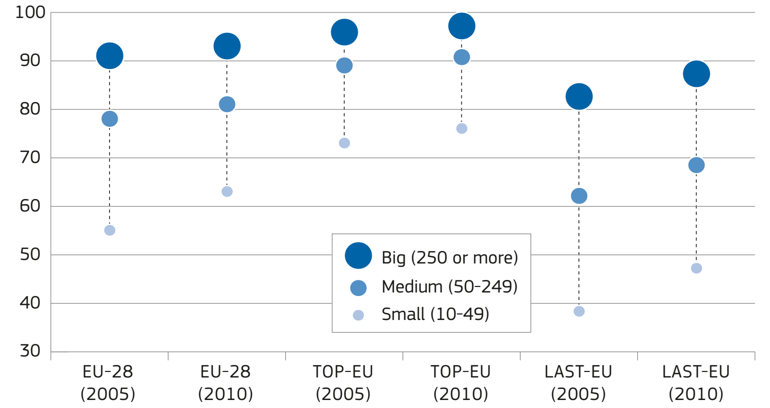
The service sector has a higher share of companies providing training for their employees, compared to the industrial, manufacturing or agriculture sectors. Moreover, within the service sector, knowledge-intensive industries, like ICTs and financial services, are most likely to invest private resources in training (67).

The size of enterprises is also seen to be an important factor in determining their propensity to invest in training for their employees. In general, larger companies seem more likely to provide training in both the most competitive and the least competitive countries, confirming previous results (68).

From 2005 to 2010 we see an EU-wide increase in companies providing training, most notably in small firms (Chart 16). In the most competitive EU countries (69) the increase is lower than in the least competitive ones, due to the already high share of companies providing training in 2005. The gap between big and small companies in providing training is being reduced at a faster pace in the least competitive countries.

Chart 16: **Big differences between small and large enterprises in less competitive countries**

Enterprises providing training as % of all enterprises, by size class (2005 and 2010, EU-28, most and least competitive countries)



Sources: Eurostat, CVTS.

Notes: *Top EU countries include EU countries that were in 2014, according to the overall competitiveness ranking, among the top 15 competitive countries (out of 60) and the last 15 EU countries includes those ranking in places from 46–60. **TOP_EU countries: SE, DE, DK, LU, NL, IE. *** LAST_EU countries: IT, HU, SI, EL, RO, BG, HR. ****Overall ranking of the World Competitiveness Yearbook is based on four main factors: Economic Performance; Government Efficiency; Business Efficiency and Infrastructure.

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These trends are confirmed by the recent 3rd European Company Survey (70), which found that some 71 % of companies in the EU provide paid time off for training for some employees at least, although small establishments are least likely to do this. Experiences vary considerably across countries, with Bulgaria, Greece, Croatia and Lithuania being those where this is rarest, as compared with Austria, Finland, Sweden and the Czech Republic. In general, where paid time off for training is provided, the training is mainly focused on enhancing employee skills in relation to their current job (71).

Certainly training is not the only way through which firms can help maintain and optimise the use of human capital. Workplace practices adopted by firms (72) are complementary to on-the-job training (see Box 1).

An analysis of the quality of human capital, through direct measurement of skills, can help shed some light on the relevance of training provided by enterprises to their employees. Looking at scores in numeracy, literacy and problem-solving can provide an overview of the quality of education and training.

We focus on PIAAC scores for employed people (both full-time and part-time) in the three dimensions of numeracy, literacy and problem-solving, and observe differences among EU countries. The share of employer-sponsored, job-related education and training (Eurostat, Adult Education Survey, 2011) correlates positively with the PIAAC scores across all three dimensions (Chart 17). This might suggest that the comparatively higher efforts done by the employers in providing training to the employees might contribute to these differences. Section 3.3.1. further investigates this stylised fact through an econometric analysis.

3.2.2. Active ageing and health

The demographic challenges posed by the combination of lower fertility rates, longer life expectancy, and a declining share of the working-age population creates pressures to mobilise all available human resources (73). Since the proportion of older inactive people per those in work is rising, the contribution that older people can make to the economy and society becomes even more relevant than in the past. Consequently, the stock of labour market skills becomes ever more dependent on the maintenance and updating of the existing workforce's skills (74), increasing the importance of policies to ensure a healthy life and promoting active ageing.

In this respect, age has a limited, but nevertheless significant, effect on the level of skill proficiency, as the analysis of microdata below shows. Older adults generally show lower proficiency in literacy, numeracy and problem solving than younger people, but data from the PIAAC survey also shows considerable variation in the skill proficiency of older people across countries. This suggests that differences in education and labour markets may influence adults' capabilities to develop and maintain skills as they age. Moreover, the general decline in cognitive skills can be mitigated, delayed or prevented by continuous vocational training, education and lifelong learning (75), highlighting their importance in active ageing policies.

In general, individuals with poor skills are less likely to engage in education and training on their own initiative, and tend to receive less employer-sponsored training. This applies particularly to older workers (76). Therefore, they need well targeted help to escape the low-skills/low-income trap.

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(67) Continuing Vocational Training Survey, Eurostat.

(68) Badescu et al. (2011).

(69) As ranked by the IMD World Competitiveness Yearbook 2014, International Institute for Management Development.

(70) Eurofound (2013).

(71) Ibidem, p.5.

(72) For instance, job latitude and employee control and empowerment, performance incentives etc.

(73) The next chapter (Chapter 3) will further develop the analysis of active ageing.

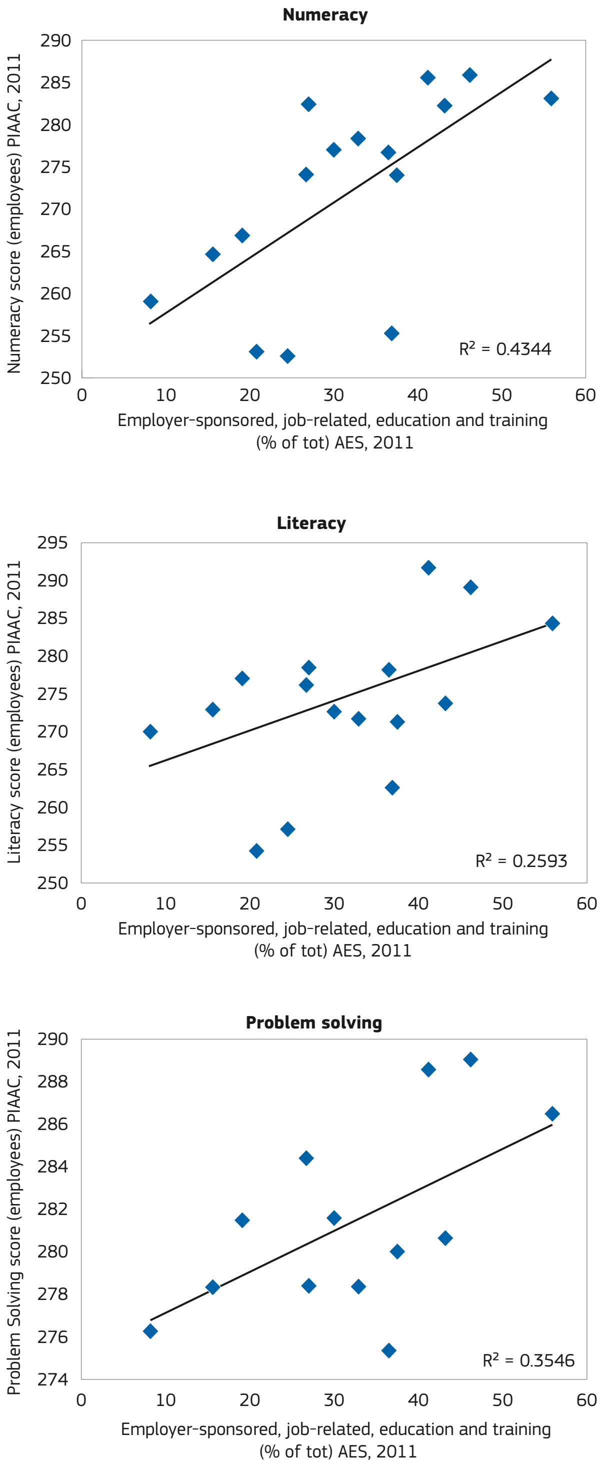
(74) Desjardins and Warnke (2012).

(75) Desjardins and Warnke (2012).

(76) OECD (2013a).

Chart 17: **More employer-sponsored training is associated with better skilled employees**

Employer-sponsored education and training and skills proficiency of employees



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Sources: PIAAC and Adult Education Survey, DG EMPL elaborations.

Previous studies have shown an association between higher rates of and more equal participation in training in EU countries, suggesting that differences in national training systems are mainly due to (77) their respective capacity for training older, less educated and less skilled workers. This is linked to institutions affecting the system of incentives for engaging in adult learning and the resources available for including older workers in lifelong training.

A key factor for ensuring that human capital is preserved is health. A useful indicator of health as a productivity/economic factor is the Healthy Life Years (HLY) indicator (78) (also called disability-free life expectancy), which measures the number of years that a person of a certain age is likely to live without disability. Eurostat data show that the expected length of healthy life in the EU has been decreasing since 2010 for both females and males.

A prolonged decrease in the number of healthy life years would present an important risk to the provision of human capital and the sustainability of public expenditure. Investment in health care will consequently have to, on the one hand, preserve human capital (supporting active ageing and participation in the labour market) and, on the other, prevent higher dependency costs. The importance of health and safety at work to promote active and healthy ageing becomes evident (79).

The Europe 2020 strategy highlights the importance of addressing health inequalities as part of achieving the goal of inclusive growth and poverty reduction. The evaluation of the European Strategy 2007-2012 on health and safety at work (80), highlighted that several occupational and safety issues are age-related and demographic trends make the needs of older workers, in particular older females, a priority in the immediate future. Data also show that the health status of people varies significantly according to their educational level. This is particularly relevant to understanding the dual link between human capital and health; better educated people enjoy better health status, which can in turn be linked to their better economic conditions. Ensuring good

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(77) Badescu et al. (2011).

(78) HLY is a functional health status measure that is increasingly used to complement the conventional life expectancy measures. The HLY measure was developed to reflect the fact that not all years of a person's life are typically lived in perfect health. Chronic disease, frailty, and disability tend to become more prevalent at older ages, so that a population with a higher life expectancy may not be healthier. Indeed, a major question with an aging population is whether increases in life expectancy will be associated with a greater or lesser proportion of the future population spending their years living with disability. If HLY is increasing more rapidly than life expectancy in a population, then not only are people living longer, they are also living a greater portion of their lives free of disability. Any loss in health will, nonetheless, have important second order effects. These will include an altered pattern of resource allocation within the health-care system, as well as wider ranging effects on consumption and production throughout the economy. It is important for policy-makers to be aware of the opportunity cost (i.e. the benefits forgone) of doing too little to prevent ill-health, resulting in the use of limited health resources for the diagnosis, treatment, and management of preventable illness and injuries. The HLY is a key indicator of health status of the European Core Health Indicators (ECHI). More information on the indicator is available at: http://ec.europa.eu/health/indicators/healthy_life_years/index_en.htm

(79) European Commission (2013f).

(80) European Commission (2013e).

health is thus an important precondition for maintaining the available human capital.

3.3. Using human capital

Research suggests that the availability of human capital does not generate benefits, notably economic ones, if it is left idle or under-utilised (81) with the quality of the national institutional and policy frameworks being important in this respect (82). Examples of poor human capital usage are reflected in evidence of outcomes such as high rates of unemployment and inactivity, especially of women, migrants and young people; high levels of (early) retirement; part-time work or skill-mismatch. On the other hand, institutions and policies such as: active labour market policies; financial incentives to work through tax and social welfare systems; retirement policy of increasing retirement age and extending working life, can all improve the utilisation of human capital and thereby indirectly support further investment in human capital.

Moreover, use of skills in and outside work is the best way to maintain and even increase them (83), as being employed generally corresponds to better skills (see Chart A.1 in Annex). Recent PIAAC data allow us to shed more light on the importance of using skills at work. The data not only show that the potential of highly skilled adults is not exploited to the same extent in all countries (84), but also stresses the role of a person's employment status on skill usage and maintenance (85).

Good utilisation of human capital covers a broad range of problems and policies, which cannot all be presented and analysed here. We decided to focus on the importance of work intensity on skills performance, on women and labour segmentation and skill mismatches, as potential key explanatory variables (86).

Skill proficiency is higher among those who are active on the labour market — a finding which may be part of a vicious circle: the inactive part of the workforce suffers from skill depreciation and has lower participation in education and training, further worsening their prospects to find a job. Such a result reveals that human capital capacity extends well beyond the 'stock' accumulated during formal education and develops through use at work.

3.3.1. Work intensity, the use of skills and skills performances

The phenomenon of skill usage and its impact on maintaining human capital can be investigated through a series of regression analyses using PIAAC micro-data. We build a new variable, which takes into account the full working history of individuals. 'Work intensity' can be proxied as the total number of years a person is paid to work, relative to his or her age (87). The so-defined 'work intensity' variable has been classified into quintiles (88). We include two variables reflecting the use at work of those skills which may be particularly relevant: the frequency of 'solving complex problems' (of any nature) and ICT experience (89). We then control for a number of core socio-demographic variables: education (highest educational attainment achieved), age, gender, and 'foreign born' — a dummy variable reflecting where the respondent was born.

The aim of the regression is to find evidence for the human capital depreciation phenomenon, such as the impact of skills and work intensity on PIAAC performance, i.e. the scores in literacy, numeracy, and problem-solving. Tables 3 to 5 show the results of the regressions (90) with the respective coefficients together with the standard error of estimation. The higher the coefficient relative to the standard error, the greater its statistical significance as indicated by the stars in the respective third column (91).

Results for the socio-demographic controls:

- Age has a clear, negative impact across all three disciplines. The older people are, the poorer they perform in literacy, numeracy and problem solving. Though cohort effects may play a role, this is an unsustainable situation in view of workforce ageing, which calls for stronger investment in their work-related qualifications and skills.
- Women score less favourably in all disciplines.
- As expected, higher educational attainment leads to better scores in all disciplines.
- Being foreign-born strongly reduces the chance of achieving high scores in all disciplines.

Of particular relevance for our analysis are the impact of work intensity and the use of skills. A number of results stand out.

- Not being exposed to ICT in one's working environment strongly reduces the scores in all three disciplines. The same is true for a low frequency of 'solving complex problems' at work.
- The longer someone has been working for pay, the higher their relative performance in numeracy, literacy and, to a lesser extent, problem solving.

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(81) Knowledge and skill are workers' capabilities for performing various tasks, and they can be used differently. Therefore Acemoglu and Autor (2011) argue for adding additional variables in the models to distinguish between skills (availability) and their use in order to better understand the labour market trends, and the impact of technology on employment and earnings. Also, within the companies, the value of its human capital depends on its potential to contribute to the competitive advantage of the firm. See Lepak and Snell (1999 in Baron (2011).

(82) See review of human capital policies in the EU in Heckman and Jacobs (2009).

(83) Reder (1994).

(84) In CZ, PL, NL and Flanders (BE) highly skilled individuals who are out of the labour force represented more than 2% of the total adult population and in FI the share was close to 4% while the highest share of inactive highly skilled adults is in CZ, SK, IT, and PL (more than 20%).

(85) Various studies had already found a link between national levels of educational attainment among EU Member States and the level of workforce training (Badescu et al., 2011).

(86) European Commission publishes extensively about activation problems and policies. See e.g. European Commission (2014g, 2012c, 2012d, 2012e).

(87) A more accurate definition of 'work intensity' would have been the number of years one has worked for pay, relative to the time elapsed since finishing formal education. However, as many people start working long before they finish formal education, we dropped that idea because so-defined work intensity would often have exceeded 100%. We have no information on the work history after finishing education.

(88) Dividing the population into five equal classes with respect to people's 'work intensity':
Class 1: Work intensity (WI) > 60%;
class 2: 48.15% < WI ≤ 60%;
class 3: 33.33% < WI ≤ 48.15%;
class 4: 16.67% < WI ≤ 33.33%;
class 5: WI ≤ 16.67%.

(89) The ICT experience variable is negatively expressed, i.e. equal to 2 if there is no experience, otherwise it is 1.

(90) The number of valid cases per country involved may be too small (ranging from around 2.500 to around 6.000). The last column shows the international average for countries where the results are most reliable, due to a higher number of observations.

(91) Third column: * and ** refer to the coefficient if it is (in absolute terms) greater than 1.96 and 2.576 times the standard error, resp. As the true coefficient then lies in the middle a confidential interval greater than 95% and 99%, resp., the estimated sign of the coefficient is significant at minimum 5% and 1%, resp.

Table 3: Linear regression — Literacy

	Age	S.E.	Sex	S.E.	Education	S.E.	Foreign born	S.E.	Work intensity	S.E.	Freq. of solving complex problems	S.E.	No ICT-experience	S.E.
Belgium (Flanders)	**-0.79**	0.12**	**-4.35**	1.35**	**4.99**	0.27**	**-35.48**	3.69**	**0.75**	1.15	**1.64**	0.6**	**-20.06**	2.04**
Czech Republic	**-0.59**	0.17**	**-3.69**	1.75*	**4.16**	0.34**	**-7.29**	5.91	**0.01**	1.67	**0.98**	0.8	**-10.53**	2.58**
Denmark	**-1.01**	0.07**	**-1.54**	1.1	**4.03**	0.18**	**-37.43**	2.46**	**1.58**	0.79*	**2.97**	0.58**	**-15.87**	1.88**
Finland	**-1.04**	0.1**	**-0.38**	1.67	**4.16**	0.26**	**-41.49**	5.35**	**-1.12**	0.87	**3.12**	0.67**	**-15.83**	2.63**
France	**-0.59**	0.08**	**-1.48**	1.16	**4.99**	0.2**	**-25.01**	2.24**	**-0.11**	0.74	**1.98**	0.46**	**-15.82**	1.6**
Ireland	**-0.41**	0.09**	**-5.29**	1.44**	**4.83**	0.31**	**-13.21**	2.11**	**1.28**	0.83	**1.79**	0.59**	**-10.03**	2.21**
Italy	**-0.56**	0.13**	**2.62**	2.1	**3.98**	0.33**	**-23.46**	4.11**	**2.34**	0.95*	**1.66**	0.79*	**-18.55**	2.5**
Japan	**-0.8**	0.08**	**0.91**	1.48	**4.05**	0.2**	**-31.12**	14.06*	**1.65**	0.77*	**1.34**	0.61*	**-10.38**	1.87**
Korea, Republic of	**-1.06**	0.07**	**-2.87**	1.39*	**3.6**	0.21**	**-44.45**	6.79**	**1.49**	0.63*	**0.38**	0.48	**-10.13**	1.82**
Netherlands	**-0.94**	0.08**	**-3.02**	1.32*	**4.25**	0.24**	**-34.09**	3.14**	**-0.12**	0.8	**2.61**	0.59**	**-20.26**	2.23**
Norway	**-0.83**	0.09**	**-3.97**	1.35**	**4.35**	0.19**	**-37.05**	2.58**	**1.87**	0.97	**3.23**	0.7**	**-19.61**	2.26**
Poland	**-0.64**	0.13**	**0.28**	1.86	**4.36**	0.28**	**6.3**	13.86	**1.62**	1.2	**1.39**	0.79	**-12.35**	2.29**
Russian Federation*	**-0.25**	0.19	**2.54**	2.03	**2.35**	0.51**	**-3.16**	8.54	**3.42**	1.81	**1.26**	0.99	**-1.46**	3.48
Slovak Republic	**-0.86**	0.12**	**2.6**	1.44	**2.69**	0.28**	**-0.42**	4.72	**5.37**	0.99**	**3.32**	0.58**	**-6.46**	1.86**
Spain	**-0.64**	0.08**	**-8.09**	1.63**	**4.06**	0.2**	**-20.37**	2.63**	**-1.41**	0.67*	**1.33**	0.56*	**-14.99**	1.87**
Sweden	**-0.99**	0.1**	**-2.97**	1.52	**4.85**	0.23**	**-40.46**	2.24**	**2.54**	1.09*	**3.05**	0.62**	**-15.26**	2.34**
UK (England/ N.Ireland)	**-0.32**	0.12**	**-1.24**	1.59	**2.92**	0.19**	**-24**	3.76**	**2.06**	1.19	**2.74**	0.72**	**-20.96**	2.45**
International average	**-0.73**	0.03**	**-1.76**	0.38**	**4.03**	0.07**	**-24.25**	1.54**	**1.37**	0.26**	**2.05**	0.16**	**-14.03**	0.55**

Sources: PIAAC, DG EMPL elaboration.

Notes: * Data for the Russian Federation do not cover the Moscow municipal area. ** Belgium refers only to Flanders. *** United Kingdom refers only to England and Northern Ireland.

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Table 4: Linear regression — Numeracy

	Age	S.E.	Sex	S.E.	Education	S.E.	Foreign born	S.E.	Work intensity	S.E.	Freq. of solving complex problems	S.E.	No ICT-experience	S.E.
Belgium (Flanders)	**-0.66**	0.13**	**-15.89**	1.71**	**5.44**	0.3**	**-33.69**	3.54**	**1.36**	1.17	**2.23**	0.66**	**-21.55**	2.07**
Czech Republic	**-0.39**	0.15**	**-9.02**	2.03**	**5.04**	0.4**	**-10.9**	6.07	**-0.56**	1.41	**1.57**	0.88	**-13.76**	2.77**
Denmark	**-0.7**	0.08**	**-12.61**	1.47**	**4.49**	0.22**	**-35.73**	2.8**	**2.34**	0.89**	**3.16**	0.66**	**-16.08**	2.09**
Finland	**-0.85**	0.1**	**-14.43**	1.62**	**4.69**	0.3**	**-40.22**	5.22**	**-0.74**	0.96	**3.5**	0.79**	**-15.58**	2.73**
France	**-0.55**	0.1**	**-12.02**	1.46**	**6.41**	0.23**	**-29.94**	2.99**	**1.41**	0.94	**2.23**	0.5**	**-21.4**	1.61**
Ireland	**-0.39**	0.1**	**-16.07**	1.5**	**5.11**	0.34**	**-8.4**	2.37**	**2**	1.01*	**1.54**	0.67*	**-16.98**	2.51**
Italy	**-0.72**	0.14**	**-5.14**	2.18*	**4.26**	0.35**	**-14.63**	4.57**	**4.72**	1.13**	**2.49**	0.88**	**-23.23**	2.83**
Japan	**-0.4**	0.08**	**-6.68**	1.79**	**4.43**	0.22**	**-32.17**	15.85*	**2.09**	0.96*	**2.35**	0.66**	**-15.96**	1.75**
Korea, Republic of	**-1**	0.08**	**-5.73**	1.41**	**4.41**	0.24**	**-42.15**	6.64**	**1.94**	0.69**	**0.29**	0.55	**-10.55**	2.1**
Netherlands	**-0.72**	0.08**	**-14.33**	1.34**	**4.3**	0.24**	**-36.71**	3.32**	**0.03**	0.85	**2.73**	0.67**	**-20.39**	2.6**
Norway	**-0.75**	0.1**	**-15.08**	1.42**	**5.26**	0.21**	**-43.97**	2.99**	**3.59**	1.04**	**2.56**	0.75**	**-17.77**	2.6**
Poland	**-0.52**	0.14**	**-8.49**	1.67**	**4.34**	0.31**	**-34.59**	15.97*	**2.56**	1.29*	**1.74**	0.74*	**-14.01**	2.25**
Russian Federation*	**-0.23**	0.2	**0.6**	2.36	**2.55**	0.58**	**-10.56**	4.45*	**2.3**	1.98	**2.55**	0.96**	**-4.48**	3.12
Slovak Republic	**-0.85**	0.14**	**0.16**	1.74	**3.62**	0.3**	**-3.35**	5.11	**6.79**	1.28**	**3.81**	0.69**	**-10.24**	1.94**
Spain	**-0.7**	0.09**	**-15**	1.7**	**4.11**	0.21**	**-18.16**	2.89**	**0.13**	0.76	**1.89**	0.63**	**-19.02**	1.78**
Sweden	**-0.8**	0.11**	**-14.38**	1.4**	**5.61**	0.22**	**-43.26**	2.5**	**2.83**	1.15*	**2.83**	0.75**	**-13.49**	2.39**
UK (England/ N.Ireland)	**-0.3**	0.12*	**-11.65**	1.79**	**3.25**	0.22**	**-30.05**	3.64**	**2.5**	1.33	**3.44**	0.79**	**-23.43**	2.61**
International average	**-0.62**	0.03**	**-10.34**	0.41**	**4.55**	0.07**	**-27.56**	1.63**	**2.08**	0.28**	**2.41**	0.18**	**-16.35**	0.58**

Sources: PIAAC, DG EMPL elaboration.

Notes: * Data for the Russian Federation do not cover the Moscow municipal area. ** Belgium refers only to Flanders. *** United Kingdom refers only to England and Northern Ireland.

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Table 5: Linear regression — Problem solving

	Age	S.E.	Sex	S.E.	Education	S.E.	Foreign born	S.E.	Work intensity	S.E.	Freq. of solving complex problems	S.E.	No ICT-experience	S.E.
Belgium (Flanders)	-1.28	0.14**	-8.19	1.67**	4.36	0.23**	-18.42	3.34**	-0.85	1.14	1.62	0.59**	-16.9	2.41**
Czech Republic	-0.9	0.21**	-5.15	2.37*	3.17	0.4**	-1.01	6.77	-2.73	2.05	4.58	0.91**	-20.82	3.45**
Denmark	-1.48	0.07**	-6.03	1.28**	3.61	0.22**	-21.63	2.74**	1.6	0.76*	2.8	0.62**	-15.98	2.26**
Finland	-1.47	0.1**	-6.23	1.35**	3.97	0.31**	-15.66	4.91**	-2.48	0.93**	3.01	0.66**	-12.16	2.09**
France	.	..	.	..	.	..	.	..	.	..	.	..	.	..
Ireland	-0.97	0.11**	-7.84	1.79**	4.35	0.34**	-0.03	2.14	0.57	0.97	1.41	0.7*	-10.12	2.1**
Italy	.	..	.	..	.	..	.	..	.	..	.	..	.	..
Japan	-1.58	0.14**	-6.07	1.99**	3.62	0.35**	4.2	15.55	3.51	1.26**	3.3	0.91**	-16.44	3.03**
Korea, Republic of	-1.61	0.1**	-4.93	1.5**	2.88	0.31**	-35.36	10.44**	0.95	0.81	1.41	0.64*	-5.87	2.1**
Netherlands	-1.12	0.08**	-5.45	1.42**	3.5	0.22**	-17.52	3.08**	-0.71	0.85	1.92	0.6**	-16.44	2.2**
Norway	-1.46	0.09**	-7.67	1.12**	3.84	0.22**	-22.51	2.86**	1.65	0.84*	2.36	0.68**	-15.35	2.1**
Poland	-1.33	0.21**	-12.14	2.53**	3.81	0.38**	-1.57	24.06	1.11	1.87	-0.56	1.04	-17.68	2.9**
Russian Federation *	-0.88	0.24**	1.07	3.65	1.37	0.76	-1.8	4.56	5.91	2.86*	2.71	1.29*	-11.98	4.92*
Slovak Republic	-0.98	0.16**	-1.99	1.9	2.49	0.39**	0.89	7.44	3.17	1.45*	1.22	0.78	-9.43	2.93**
Spain	.	..	.	..	.	..	.	..	.	..	.	..	.	..
Sweden	-1.44	0.11**	-5.34	1.48**	4.34	0.24**	-30.23	2.29**	0.77	1.01	3.03	0.71**	-11.98	2.42**
UK (England/ N.Ireland)	-1.02	0.09**	-7.91	1.67**	2.57	0.16**	-17.17	3.15**	1.73	0.88*	1.46	0.64*	-20.45	2.77**
International average	-1.25	0.04**	-5.99	0.52**	3.42	0.09**	-12.7	2.4**	1.01	0.37**	2.16	0.21**	-14.4	0.75**

Sources: PIAAC, DG EMPL elaboration.

Notes: * Data for the Russian Federation do not cover the Moscow municipal area. ** Belgium refers only to Flanders. *** United Kingdom refers only to England and Northern Ireland.

- The statistical significance for 'working intensity' is considerable, but less so than skill-use as measured in the questionnaire (92).

These results confirm a link between people's work history and usage of their skills with enhancing skills proficiency. At any level of educational attainment, the possibility of using skills at work is associated with a higher performance measurement of those skills (93). This, in turn, has strong implications for future labour market prospects of individuals. Successful workforce activation is therefore key, also from the point of view of skills maintenance.

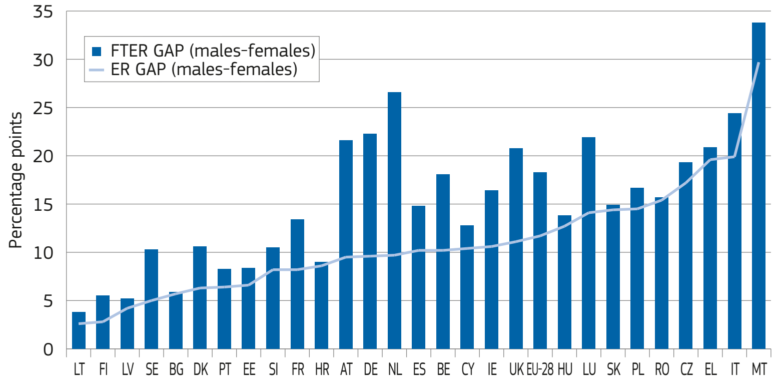
3.3.2. Utilising the potential of women in the labour market

One in four persons of working age in the EU is inactive, and about 15% of them have a tertiary education. This represents a significant cost in terms of potential human capital that is unused.

When it comes to a better utilisation of existing resources, female participation becomes a concern. Although the female employment rate has been increasing in the EU, women are still less likely to work than men with big variations across the EU (Chart 18). In 2013, the EU-28 employment rate for women aged 20–64 was more than

Chart 18: Men continue to be stronger integrated in the labour market than women

Gaps between male and female full-time equivalent employment rates (FTER) and employment rate (ER) in 2013, women and men aged 20–64, 2013, Member States



Sources: Eurostat, DG EMPL, own calculations.

Note: FTER — full-time equivalents calculated with regard to the working time of a full-time, full-year employee.

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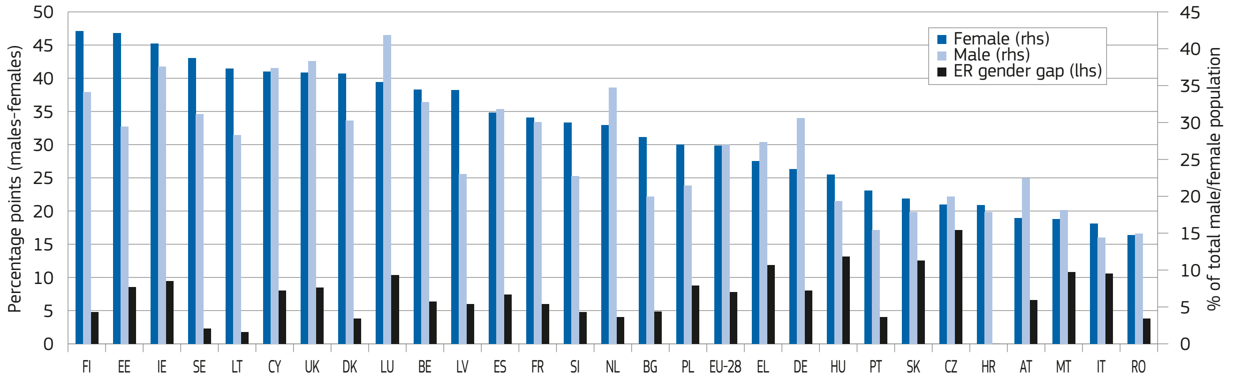
(92) One reason could be measurement problems since skill-use variables are strongly connected with work-intensity so that multi-collinearity problems emerge. Probably related to that problem (and the reduced number of valid observations), the country-specific coefficients vary and are not all positive. Apart from that, country differences also reflect different sectoral specialisations within each country, with more knowledge-intensive sectors determining a higher 'pay-off' of work to skills. All in all, the evidence of a positive impact of work history on skills proficiency across all countries is still convincing.

(93) The fact that our variable considers the whole work history of the individuals, while the test of skills proficiency are taken at one point in time (2011 in this case), should allow for a prudent inference of causal relations, from being at work to having better skills.

Chart 19: **High educated women — more in population, less in employment**

Employment rate gender gap in percentage points (male — female); share of female/male with high educational attainment (% of respective population), 2013, 25–64 years



Sources: Eurostat, DG EMPL, own calculations.

Notes: *Countries are ranked according to the decreasing share of women with high educational attainment. ** High educational attainments means short-cycle tertiary, bachelor or equivalent, master or equivalent and doctoral or equivalent (levels 5–8).

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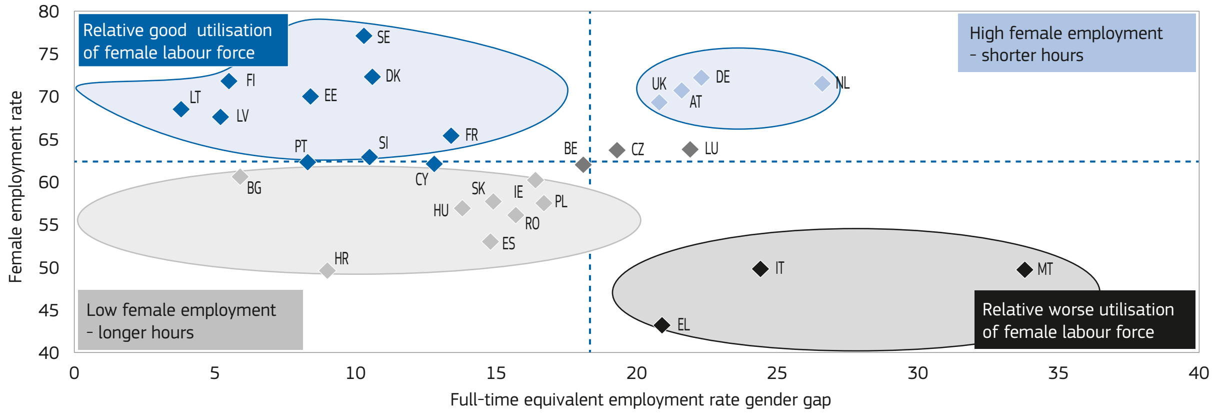
Chart 20: **Some policy mixes are better for women's labour market integration**

FTER gap (percentage points) and female employment rate (%) in the EU Member States in 2013



Sources: Eurostat, DG EMPL, own calculations.

Note: FTER — full-time equivalents calculated with regard to the working time of a full-time, full-year employee.

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12 percentage points lower than that of men (62.5 % vs 74.2 %) — yet this is a significant improvement on the 17 percentage points gap in 2002 (58.1 % vs 75.4 %) (94).

Not only are women less likely to work than men, those who do are, on average, likely to work fewer hours than men. When employment is measured in full-time equivalents, the largest gaps are in Member States where the female employment rate is relatively high (e.g. Austria, Belgium, The Netherlands, Ireland, Germany and the United Kingdom) (Chart 18). In other words, part of higher female employment rates is a result of greater participation in part-time work and, to that extent, reflects less, not more, exposure to work-related skill usage and strong under-employment.

The gender employment gap is strongly linked to **family and care activities**, with prime age women being most likely to work fewer hours or be inactive due to family and care-related activities, and this is only changing slowly (95).

Indeed, the stock of female human capital is not used effectively. As for men, for women too the likelihood of working increases with higher educational attainment, but the employment rate gender gap remains significant even at the highest levels of educational attainment (Chart 19). In all but four countries (Luxembourg, Germany, Austria and the Netherlands), a greater share of women have higher educational attainment than men, with the biggest differences occurring in Estonia and Latvia (more than 15 pps). Despite this, the employment rate of men exceeded that of women in all Member States, with the exception of Croatia, where the rates were the same. The Commission's analyses (96) reveal that a country's relative performance in terms of gender-gap tends to be similar across all educational levels: e.g. low gender gaps exist in Bulgaria, Lithuania, Latvia, Hungary and Slovakia and high gaps occur in Germany, Belgium, Ireland, the United Kingdom and the Netherlands.

The analysis in the 2013 Economic and Social Developments in Europe review showed some distinct patterns among Member States regarding the gender gap in total hours worked. Only a few Member States, mainly Nordic and Baltic countries, have so far succeeded in implementing a policy mix that combines high female employment rates with a low gender gap in total hours worked (Chart 20).

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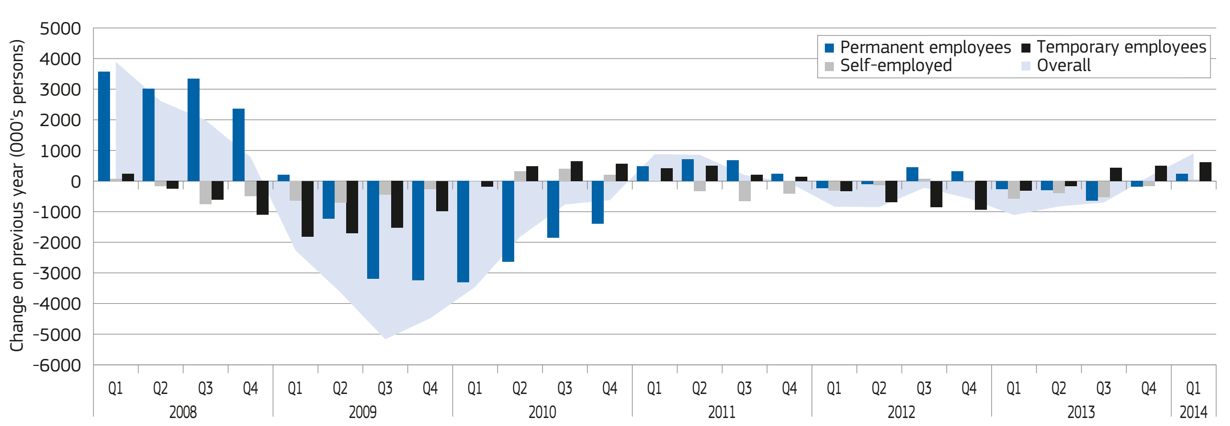
(94) Over the last two decades, the employment rate of women in the EU-15 increased by more than ten percentage points, from 52.8% in 1995 to 63.7% in 2013. [lfsa_ergan].

(95) European Commission (2014f).

(96) European Commission (2014f).

Chart 21: **Temporary contracts are the main typology of new jobs created in the last quarters**
Employees in permanent and temporary work in the EU-28, self-employment and total employment (15–64)



Sources: Eurostat, LFS [lfsq_egaps,lfsq_etgaed] Data non-seasonally adjusted.

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The policy mix notably includes: availability of flexible working arrangements and long part-time positions for parents; incentives to share unpaid work within the couple; and available, affordable, quality childcare. Some countries, such as Germany and the United Kingdom, have a high share of working women but with relatively short hours. Others, such as Spain or Ireland, have a lower female labour market participation rate although those women who do work tend to work longer hours.

OECD analysis reveals that closing the gender gap reveals some great potential in terms of economic growth through activating existing labour resources (97). In countries such as Ireland and Luxembourg, which have low female activity, a convergence in activity rates could increase the total labour force by more than 20 %. Moreover, an increase in the working time of women would obviously increase still further the convergence in labour force intensity. The convergence in intensity contributes more to the increase in the total size of the labour force in countries with a high share of women working part-time.

Furthermore, the OECD estimates that halving the gender labour-force participation gap could bring a 6.2 % gain in GDP across 21 EU members of the OECD by 2030, plus a further 6.2 % gain for full convergence. The largest gains from full convergence are projected in countries like Italy and Greece with large existing gender gaps (around 20 %) while the growth potential is limited in countries like Finland or Sweden (less than 5 %).

3.3.3. Labour market segmentation and skill mismatches

Strong labour market segmentation (high incidence of atypical work) and the persistence of skill mismatches on the labour market, together with a rising share of long-term unemployment, point to the increasingly structural nature of the EU's labour market problems and are a threat to future welfare. They create a persistent exclusion of 'outsiders' and force many people into work that does not match their skills. The resulting depreciation of skills will inhibit growth for a long period of time, while at the same time skills needs are changing, with an increasing need for highly-skilled workers. In light of the human capital shortages to be expected, the policy focus must lie on structural labour market reforms.

In recent years, changes in labour market conditions and policy changes, like deregulation of non-standard work forms (98), have contributed to the increase in non-standard forms of contracts and a rise in part-time work and the use of temporary contracts. For example, a tendency to make more extensive use of temporary contract was already evident before the crisis, particularly in some countries. However, temporary contracts have become the main form of new jobs created in recent quarters (Chart 21) (99).

While the share of temporary contracts in total employment is higher for women, more recently the increase has been faster for men.

Growing levels of atypical employment, such as part-time work, casual work or work on temporary contracts reflects strong labour market segmentation and is therefore considered to be one of the main drivers of increasing inequality, even in the pre-crisis period, despite employment growth (100). Recent studies have also demonstrated that the increase in non-standard work contracts has had a negative influence on total productivity as a result of an underinvestment in human capital (101).

In the vast majority of countries, workers on temporary contracts are found (102) to make less intensive use of their information-processing skills and some generic skills (e.g. task direction, influencing and self-organising), than those in permanent employment — suggesting that the tasks carried out by workers hired under different contractual arrangements vary substantially. Such a usage gap can potentially reduce future opportunities for temporary workers and have a negative impact on labour productivity of young workers if they are on temporary contracts for long periods. Moreover, employers invest less in training of temporary workers.

Therefore, tapping into existing labour resources requires the promotion of regular instead of atypical employment, helping transition to permanent jobs and

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(97) Thevenon et al. (2012).

(98) Eichhorst, 2013.

(99) An employee is considered as having a temporary job if employer and employee agree that its end is determined by objective conditions, such as a specific date, the completion of an assignment, or the return of an employee who is temporarily replaced. Typical cases include: people in seasonal employment; people engaged by an agency or employment exchange and hired to a third party to perform a specific task (unless there is a written work contract of unlimited duration); people with specific training contracts (Eurostat).

(100) OECD (2014a).

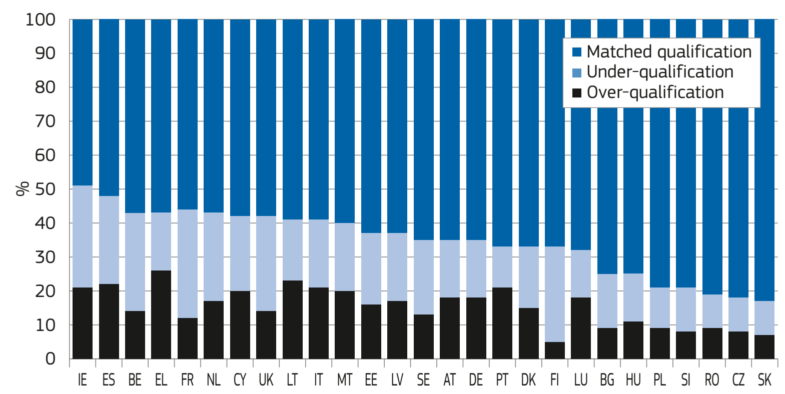
(101) Franceschi and Mariani (2014); and ISFOL (2014).

(102) Quintini (2014).

reducing the share of involuntary forms of at non-standard work contracts.

Chart 22: Qualification mismatch is very high in some Member States

Average incidence of vertical mismatch (2001–11) in EU-27 countries, % of employees (aged 25–64)



Source: European Commission (2012a).

Notes: Over-qualified (or under-qualified) workers are those whose highest level of qualification attained is greater than (or lower than) the qualification requirement of their occupation. The modal qualification in each occupational group at the two-digit level is used to measure qualification requirements. The appropriate EU-LFS weighting variable (COEFF) is used in the calculation of the modal qualification.

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However, the spread of fixed-term contracts can be seen to have encouraged firms to adopt a short-term approach to the management of human resources, which overestimates the short-term benefits of a reduction in labour costs due to short-term flexible or temporary contracts, and to discount the long-term collective costs associated with reduced human capital formation and the loss of innovative capacity (103).

Atypical contracts often coincide with people having to accept jobs below their level of education or not matching their skills. Skill mismatch — a difference between the skills and qualifications that are available and those which are needed in the labour market (104) — especially if it is persistent, implies real short- and long-term economic and social losses for individuals, employers and society. Individuals working in jobs below their qualifications may earn less, be more prone to change jobs and in the long-run will be more likely to lose skills by not using them (105) and become less satisfied with their jobs.

Those with insufficient skills are less efficient and productive in their work. In the long-run employers are faced with higher recruitment and turnover costs, as well as lower productivity and reduced competitiveness. For society as a whole, skill mismatch reduces matching efficiency and increases unemployment (106). In the long run it leads to under-investment in training, low-skills-bad-jobs-low-wage equilibrium, and undermines long-run growth and social inclusion (107). Some skill mismatch is inevitable in a dynamic economy, where skill requirements change as jobs are changing, where labour market information is imperfect and where education and training systems need time to respond to new knowledge and skill demands (108). However, in some EU Member States almost half of the labour force is seen to be mismatched, which is a huge waste of human potential (Chart 22), with vertical mismatch especially high in Mediterranean countries (e.g. Greece, Spain).

As the ageing society will require a strong acceleration of productivity growth due to the forthcoming workforce decline, this waste of resources belongs to the most serious recent socioeconomic developments and will inevitably result in lower growth potential unless policy takes decisive action.

Earlier Commission research has shown that countries with high levels of over-qualification appear to share some common characteristics (109). Already now (before the demographic shift) they tend to be less wealthy and have a lower share of services in GDP. They also have low levels of public investment in education and training and low expenditure in labour market programmes, which might reduce their quality and ability to respond to changing labour market needs. There are few jobs available for highly educated graduates and many business executives in these countries consider that their educational systems are not meeting their business needs; enterprises provide less company training and pay less attention to human resource management and recruitment. Highly mismatched countries tend to have more rigid labour markets and higher labour market segmentation (110).

Some skill mismatch is likely to continue in the future given that, according to forecasts by Cedefop, the demand for the highly educated is expected to fall short of supply, while the opposite is forecast for the low qualified, in 2015 (111). Raising awareness of the need to anticipate and address potential mismatches in different sectors and occupations is an important investment into future growth, but a reduction in skill mismatch requires

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(103) ISFOL (2014).

(104) Skill mismatch can be quantitative and qualitative. The first one shows differences between aggregate labour supply and demand. Qualitative mismatch shows differences between individuals' skills and job requirements at micro level, where individuals can have higher qualifications and skills than required (over-qualified or over-skilled) or lower (under-qualified or under-skilled). For a more detailed presentation of various forms of skill mismatch, see European Commission (2012a) and Flisi et al. (2014).

(105) See evidence by results on Adults skills survey (OECD 2013a) and Pellizzari and Fichen (2013).

(106) European Commission (2013d).

(107) For more details on the economic and welfare cost of skill mismatch, see European Commission (2012a).

(108) Even if there is today a skill match, this can change in the future, due to technological changes and changing job requirements, skill depreciation and obsolescence if there is no further training (European Commission, 2012a).

(109) Those characteristics are based on observing vertical mismatch for 2001–09. The high over-qualification cluster includes Greece, Italy, Portugal, Cyprus, Lithuania, Ireland and Spain, while the medium over-qualification cluster includes Austria, Belgium, Denmark, Estonia, France, Luxembourg, Latvia, the Netherlands, Sweden and the UK. See European Commission (2012a).

(110) See European Commission (2012a).

(111) Cedefop, Skills forecasts, Online data and results (April 2014) and Flisi et al. (2014). Eurostat has recently published a new population projection Europop 2013 that significantly changes current labour supply estimates, especially at the national level. Cedefop is currently working on the evaluation of possible impacts of the new population projections on the skills forecasting results and will produce a new forecast in early 2015.

policy intervention (112) across various policy domains, including: education and training; employment and social security; mobility and migration; and industrial and regional development (113).

Education and training systems could be more responsive to labour market needs, equipping graduates with good basic skills, promoting a variety of routes for qualifications (e.g. VET), and providing early career guidance to help students make more informed choices. They could also encourage adult and lifelong learning, with companies playing a bigger part by providing more work-based training.

Employment and social policies can improve mobility and more efficient matching by passing social security rules that allow easy transfer of social security rights. Active labour market policies can help job-seekers, notably the low-skilled, obtain relevant skills and shorten unemployment spells, although activation should not be led by a 'work-first' approach (114). Good quality labour market intermediaries, such as public employment services (PES), which support good matches and provide necessary guidance and job-counselling, play a very important role (115).

Industrial and regional development policies can reduce skill mismatch, mainly by influencing the labour demand side. Stimulating innovation and the creation of high-level jobs helps utilise the potential of Europe's high-qualified workforce. This is also achieved by supporting firms that rely on high-skill, high-productivity product strategies and exploiting synergies between skills and high-productivity firms by facilitating the growth of industrial clusters.

Research findings tend to emphasise the role of employers in reducing skill mismatch (116) by offering attractive working conditions, including performance pay, complex job tasks and learning opportunities. However, it is unrealistic to expect all employees, notably new ones, to have all the required skills for the available jobs. Employers can overcome this by becoming more involved in education and training systems, notably by providing quality apprenticeships. Another way to improve the match is to improve companies' human resource and recruitment policies to attract and select talent, and to facilitate internal labour mobility (117).

Employers and workers have a joint interest in investing in skills. Their representatives (employers' organisations and trade unions) often combine their (sector-specific) knowledge of the labour market to identify skill gaps and develop joint solutions. They may jointly develop training curricula or organise paritarian funds (e.g. financed through social security contributions) to provide training. In doing so, they overcome problems of collective action and positive spill-overs associated with skill investment.

4. Policies and their impact: Evidence from the Labour Market Model

This section uses DG EMPL's Labour Market Model (LMM) to demonstrate how different policies can help in forming, maintaining and using human capital (118). We show how investment in education helps in *forming* human capital. When it comes to *maintaining* human capital, investment in training is an efficient tool — particularly when it is embedded into a more comprehensive strategy which also uses educational investment to strengthen overall labour productivity, and hence growth. Finally, we may improve the *usage* of human capital by helping firms to lower labour costs in the most vulnerable segment of the labour market. But again, policies are most effective when they are part of a policy package that also includes policies supporting growth in addition to investment in human capital.

Given the precarious labour market situation for young people in Europe, simulation of policy measures in this section concentrates on young cohorts (aged below 24).

4.1. Forming HC: Investment in education — the case of Germany

The decisive role of formal education in human capital formation has been confirmed by many studies. Previous simulations using DG EMPL's Labour Market Model show that young people graduating from higher educational have better labour market outcomes leading to higher economic growth (119). These exercises show the impact of opting for higher education although, since higher education comes at a cost, it involves personal choices. From an individual's perspective, there is not only the cost, which can be particularly high in some countries, but also the question of foregone earnings and the possibility of missing out on career opportunities during the period of study. For the great majority, however, these costs are typically weighed against the long-term gains from higher education in terms of enhanced job opportunities, higher earnings, better recognition and better working conditions.

DG EMPL's model can take on board the endogeneity of education (120), which assumes that, before starting their careers, people decide on which educational path to follow, namely low, medium or high education (121), given

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(112) Intervention is needed due to various market failures preventing efficient reduction of mismatch by labour market adjustments alone, such as the lagged nature of skill supply relative to demand; positive spillovers ('externalities') in human capital outcomes; disincentives to investment in training by enterprises and recruitment deficiencies; missing insurance markets for skill investment and intergenerational transmission of education and training. (European Commission, 2012a).

(113) Berkhout et al. (2012); European Commission (2012a), World Economic Forum (2014).

(114) According to the World Economic Forum (2014), activation strategies should move away from the 'work-first' to a 'learn-first' approach and take into account the long-term consequences of training and placement decision on individuals' employability and adaptability.

(115) European Commission (2012a, 2013d); World Economic Forum (2014); Berkhout et al. (2012).

(116) World Economic Forum (2014), Cappelli (2014), CEDEFOP (2012b).

(117) World Economic Forum (2014), Berkhout et al. (2012).

(118) LMM is a general equilibrium model covering 14 EU countries and is used to show the impact of labour market policy measures on important internals such as employment, unemployment, wages, but also GDP and productivity. It has a particular focus on the labour market, and includes a detailed picture of the institutional surroundings in the different countries. LMM distinguishes eight age groups and three skill-levels (in the sense of educational levels). It also considers the impact of firm-training on individual labour productivity. For more detail, see Berger et al. (2009:2), p. 9. For a short explanation of LMM, consult European Commission (2010).

(119) European Commission (2014e), Chapter 1, Section 6.1 for Germany; Employment and Social Developments in Europe 2013; Peschner and Fotakis (2013), Section 4.2.1 on the example of France.

(120) Berger et al. (2009:1), pp. 27–28.

(121) According to the International Standard Classification of Education 1997: ISCED 0-2 (low), ISCED 3-4 (medium), ISCED 5-6 (high). See http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/Annexes/educ_esms_an5.htm

their respective costs (122) and benefits (123). On this basis it is assumed, in the traditional economic jargon, that they pursue further education so long as the marginal costs are lower than the marginal gains of higher education.

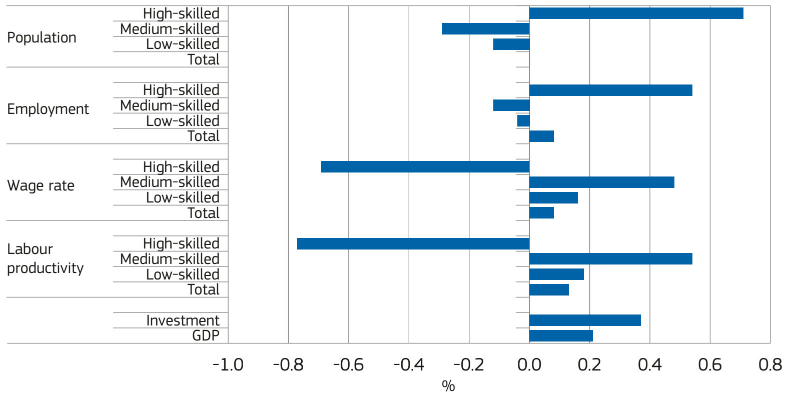
This endogenous educational choice is 'switched on' in this section — contrary to the analyses mentioned earlier (124). This means that an incentive is needed to attract more people to engage in higher education (125). It is assumed that the government spends 0.1 % of GDP on subsidies to young people aged between 20 and 24 years if they take up tertiary education (126). The measure is financed by lump-sum taxes levied on all households and they are assumed to 'have no incentive effects other than shifting income from the private to the public sector' (127). The results are similar in all 14 countries covered by the model, but we use Germany as a basic example.

The Europe 2020 target aims at having 40 % of people aged between 30 and 34 years with tertiary education in 2020, while Germany had set itself the national objective of increasing to 42 % the share of people aged between 30 and 34 years who successfully achieve tertiary *or equivalent* educational attainments by 2020 (128) — reflecting the relevance of good quality vocational (apprenticeship) education in Germany in providing skills relevant for the labour market.

In 2013, the share of tertiary educated people in Germany was only around 33 % — below the EU average of 37 %, according to the Labour Force Survey (129) (130). The 2014 Country Specific Recommendation (131) urges Germany to spend more on education and make efforts 'at all levels of government to meet the target for total public and private expenditure on education and research of 10 % of GDP by 2015, and even more ambitious follow-up targets should be aimed for in order to catch up with the most innovative economies'.

Chart 23: **Positive impacts of subsidising young people to take up higher education in Germany**

Simulation with DG EMPL's Labour Market Model: giving a subsidy to young adults to take up tertiary education (0.1 % of GDP)



Source: Own calculations based on DG EMPL's Labour Market Model.

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Chart 23 shows the long-term, steady-state results of the simulation. The subsidy increases the net-yield resulting from taking up high education. Those concerned adjust to the new situation as more of them take the step from medium to high education. On this basis, the share of population with tertiary degrees would increase by 0.7 % compared to the baseline scenario — this is mainly at the expense of medium-educated (-0.3 %) and some low-educated people (-0.1 %).

As a result of the changing skills mix, total employment is expected to increase by 0.1 %, but the composition changes strongly towards the highly educated. This has important implications for the countries' long-term growth perspective since physical investment is strongly complementary to the average skill level (132), and higher investment and better skills improve workers' productivity.

Hence, the changing skills composition would be expected to trigger investment and labour productivity, which in turn pulls up GDP by more than 0.2 %. That is, a long-term multiplier of more than two, which would bring an economic expansion more than twice as strong as the initial cost of the measure — which is a very typical finding for skill-/education-related policy measures (133).

4.2. Maintaining HC: Investment in training — the case of Slovakia

Informal training plays a major role in the acquisition of the new skills needed to achieve higher labour productivity growth and to limit human capital depreciation over time (134).

In Slovakia training intensity is low and 'despite government efforts to reform vocational education and training and subsidise jobs for young people, the youth unemployment rate remains among the highest in the EU' according to the 2014 Country Specific Recommendation

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(122) Educational cost is also assumed to be a function of individual 'abilities' of which agents are assumed to have a correct esteem.

(123) It is also assumed that agents have a perfect esteem on their individual abilities.

(124) For a similar exercise based on an older version of LMM, see Berger et al. (2009:2), pp. 50–56.

(125) The model assumes that the provision of higher education is oriented towards labour market needs and that the additional graduates are expected to be hired at least at the same rate as existing graduates.

(126) Currently, this corresponds to some EUR 2.7 bn per year and thus constitutes a medium-sized package. Today, this amount would be arithmetically sufficient to grant to each student of a German university support of around EUR 1 100 per year.

(127) Berger et al. (2009:2), p. 9.

(128) Unlike the general EU2020 target, Germany includes 'tertiary *and equivalent*' education, i.e., ISCED levels 4–6 (instead of 5–6) into its own education-related objective for 2020. ISCED level 4 includes post-secondary education.

(129) Germany had already exceeded national set targets in 2010 with a share of 43.5 % (Federal Ministry of Economic Affairs and Energy (2014), p. 31.

(130) http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database (table t2020_41).

(131) European Commission (2014a), p. 4.

(132) Capital intensity will be higher the stronger skills are distributed towards higher skills: high skills attract investment and vice versa. See Berger et al. (2009:1), p. 33.

(133) The strong negative impact on labour productivity of the highly educated is due to the expansion of high-educated employment.

(134) For example: Berger et al. (2009:1), section 9.5.2; Heckman et al. (1998), HC accumulation function on p. 3. For empirical evidence, see the micro-data analysis in section 2.3.1, based on the 'PIAAC' survey on adult skills.

to Slovakia ([135]). Therefore, the effectiveness of firm-sponsored training to support young people is the focus of this section.

We first simulate the effects of a Slovak government subsidy to firms that induces them to offer firm-sponsored training to workers. The magnitude of the subsidy is 0.1 % of GDP, and is assumed to be financed by lump-sum taxes levied on all households. In order to show the impact on different age groups, we first assume that the subsidy focusses on all workers. In a subsequent simulation, we drop that assumption and focus the subsidy on young workers only. Finally, in an attempt to find the 'optimal policy mix', we combine the training subsidy with a scholarship programme to encourage a higher take up of higher education.

Chart 24 shows the long-term results on the Slovak economy. In effect, the subsidy induces more firms to spend on training, as a result of which more workers take up training and become more productive which, in turn, increases demand for workers across all educational levels ([136]).

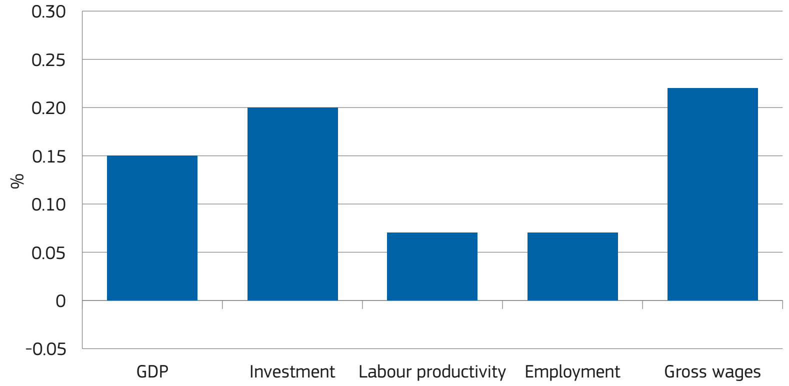
Chart 25 shows that employment increases are strongest for highly educated workers, since higher educated people in Slovakia have a higher propensity to undergo training. As capital is more complementary to higher educated workers, the changing educational mix would encourage further physical investment. As a result, GDP is 0.15 % higher than in the baseline scenario. The educational structure of the workforce plays a major role in explaining this result.

Since young people in Slovakia are disproportionally affected by unemployment, which is at a level of around 34 %,we consider the impact of the government devoting the same amount of money (0.1 % of GDP) to subsidise firm-sponsored training only for *young* workers below 25 years of age.

Chart 26 shows the resulting long-term simulation results. The employment effect is a little stronger than in the previous scenario because a given amount of subsidy constitutes a relatively big incentive to hire young workers since

Chart 24: **Impacts of subsidising companies' training in Slovakia**

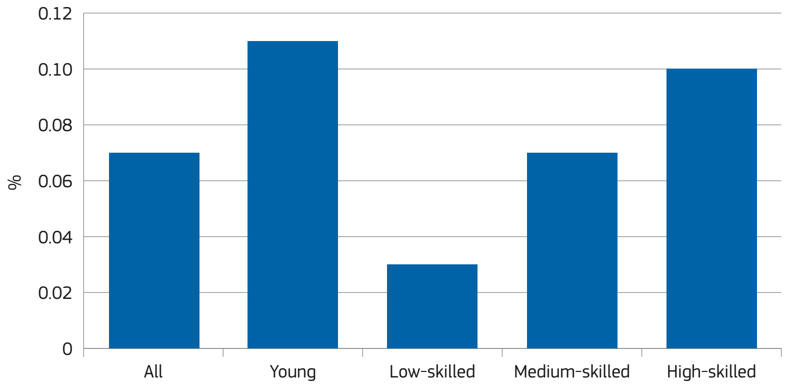
Simulation with DG EMPL's Labour Market Model: subsidise firm-sponsored training in Slovakia (0.1 % of GDP) — all age groups targeted



Source: Own calculations based on DG EMPL's Labour Market Model.

Chart 25: **Employment impacts of subsidising companies' training in Slovakia**

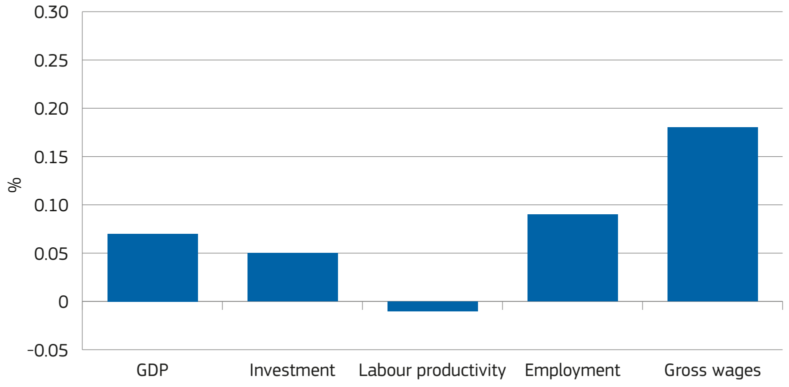
Simulation with DG EMPL's Labour Market Model: subsidise firm-sponsored training in Slovakia (0.1 % of GDP) — all age groups targeted — employment effect



Source: Own calculations based on DG EMPL's Labour Market Model.

Chart 26: **Impacts of subsidising companies' training only for young people in Slovakia**

Simulation with DG EMPL's Labour Market Model: subsidise firm-sponsored training in Slovakia (0.1 % of GDP) — young age groups targeted (aged 15–24 years)



Source: Own calculations based on DG EMPL's Labour Market Model.

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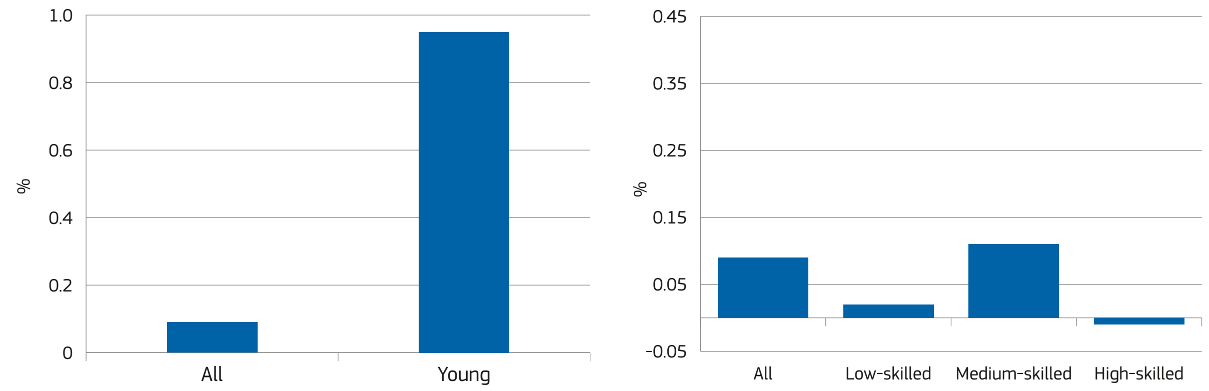
[135] European Commission (2014b), p. 5.

[136] Similar long-term outcomes were obtained in a previous simulation for France (Peschner and Fotakis 2013).

Chart 27: Employment impacts of subsidising companies' training only for young people in Slovakia

Simulation with DG EMPL's Labour Market Model: subsidise firm-sponsored training in Slovakia (0.1 % of GDP) — young age groups targeted (aged 15–24 years) — employment effect



Source: Own calculations based on DG EMPL's Labour Market Model.

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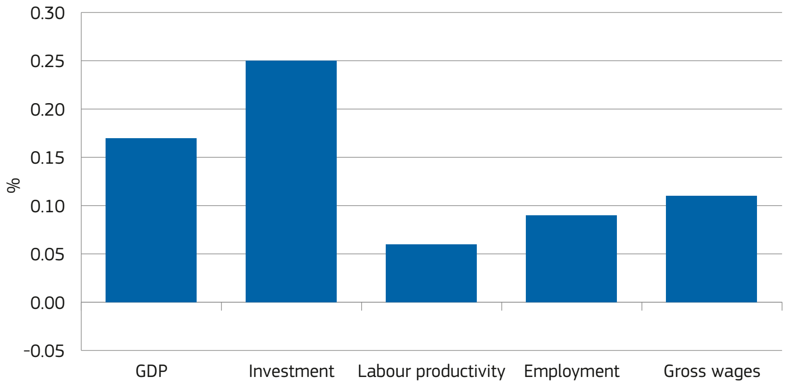
Chart 28: Impacts of policy mix support to young people in Slovakia

Simulation with DG EMPL's Labour Market Model: Policy Mix of firm subsidy for the training of young workers (15–24 years), combined with tertiary education scholarships for tertiary education (20–24 years), Slovakia. Magnitude: 0.05 % of GDP each



Source: Own calculations based on DG EMPL's Labour Market Model.

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their earnings are low. Firms offer higher wages to those young workers as a result of their increased individual productivity and as a result of the (wage) bargaining over the subsidy (137). Higher wages lead to youngsters staying in (low- and medium-skilled) employment rather than investing in higher education with a result that, in the long term, there will actually be more medium- and low-educated people in employment and fewer highly educated people than before the measure — as shown in Chart 27.

This changing educational mix would be expected to reduce total labour productivity, even if individual labour productivity of young people improves due to the training, since investment growth will be subdued as a result of the capital-skills-complementarity described earlier.

As a result, we see stronger employment gains than in the non-targeted scenario, which might be seen as good news by Slovak policy-makers in so far as the young people's labour market situation is seen as critical, even though this comes at the cost of relatively moderate economic expansion and decreasing total labour productivity. Knowing how important higher education is for stronger investment and higher productivity, Slovak policy-makers might, therefore, consider combining the positive employment-impact of a training subsidy aimed at young people with a subsidy that encourages high education — the idea being to continue to focus on young generations, while avoiding negative side-effects resulting from the lower educational mix in the training-only scenario.

Lastly, we assume that the 0.1 % of GDP is spilt into two equal parts. The first part is invested in the firm-subsidy that targets young people's training as in the previous scenario, with the second part used to fund tertiary education scholarships for people aged between 20 and 24 years. As assumed previously, funding will be through lump-sum taxes on all households.

Employment gains are similar to both training-only scenarios above. Contrary to the training-only-policy targeted towards young people, the strong incentive to take up tertiary education would be expected to result in the strongest employment gains for *high*-educated people, as shown in Chart 29.

The additional supply of highly educated people reduces their gross wages (138), resulting in a less pronounced increase in average wages than in the training-only scenarios above. However, as the workforce's educational mix moves upwards, the policy mix avoids a decline in total labour productivity and would result in strong shifts in investment, following the complementarity between capital formation and skills. The GDP increase is much stronger than in the training-only scenario focused on the young and is even a bit stronger than in the non-specialised training-only scenario.

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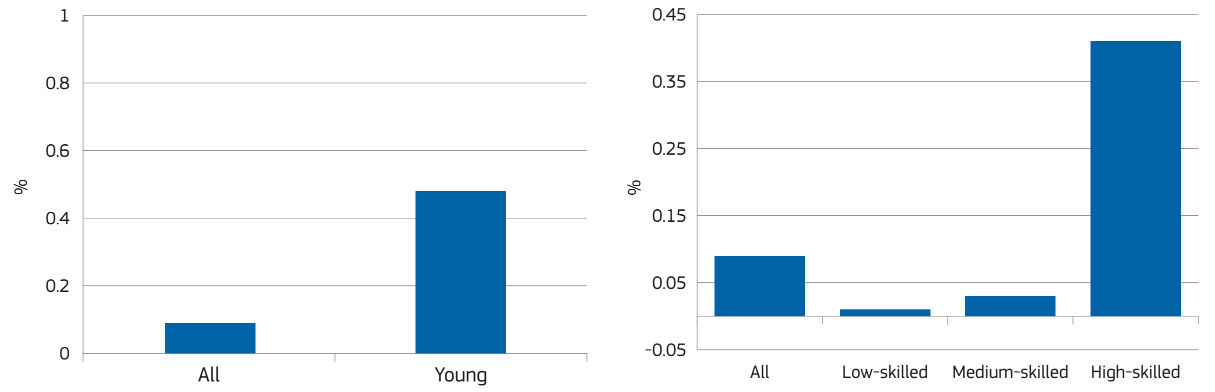
(137) The subsidy increases the rent of a firm-worker-pair and the two parties split this additional rent among them via higher gross wages, see also the wage bargaining equation in the model documentation. See Berger et al., (2009), Part II, p. 39.

(138) Again, this is also due to the wage-bargaining-effect. As the subsidy is lower than in the training-only case, so is the additional worker-firm rent to be spread over the two parties through wage bargaining. See previous footnote.

Chart 29: **Employment impacts of policy mix support to young people in Slovakia**

Simulation with DG EMPL's Labour Market Model: Policy Mix of firm subsidy for the training of young workers (15–24 years), combined with tertiary education scholarships for tertiary education (20–24 years), Slovakia. Magnitude: 0.05 % of GDP each — employment effect



Source: Own calculations based on DG EMPL's Labour Market Model.

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4.3. Using HC: Labour demand incentives to youth employment — the case of Italy

As hysteresis is seen to be particularly harmful for those who become unemployed early on in their working lives, there are arguments in favour of including measures that strongly encourage employers to hire young people.

Previous analyses (139) revealed that labour-cost oriented policies have a strong potential to generate pronounced employment gains, particularly among vulnerable groups of workers, such as low-skilled, young or low-income workers. However, these policies come at a cost in so far as they provide demand and supply-side incentives for stronger low-skilled employment at the expense of higher skill groups, which could lead to lower investment and lower economic growth in the long run.

Italy is a country where young people face severe labour market problems as their unemployment rate reaches 40%. In the 2014 Country Specific Recommendations, Italy is urged to take further steps 'in line with the objectives of a youth guarantee'. Policy that addresses the low youth labour market participation appears to be 'limited' (140).

Chart 30 reproduces the long-term result of a 0.1 %-of-GDP subsidy to lower young workers' labour cost by lowering employers' social contributions for the case of Italy (141). In contrast to the training subsidy simulated for Slovakia above, we assume that the measure is financed by an increase in the VAT rate. This is in order to reflect more popular strategies of shifting the tax-burden away from labour towards consumption. That is, we assume tax-reform away from labour towards VAT.

As the subsidy is restricted to young workers, employment gains concentrate almost exclusively on the 15 to 24 years age group. Compared to the situation where the wage-cost subsidy is not restricted to a specific age group, the overall employment impact is substantial because the given subsidy has a stronger relative impact where wages are low, as is the case for young workers. As the initial stimulus is clearly demand-driven (decreasing labour costs), the strong employment effect is in fact the endogenous result of higher labour market participation (and lower unemployment) within the group of young people. This is because young workers' wages shift pronouncedly, following stronger demand.

The measure's side effects are revealed by Charts 30 and 31. Concentrating labour cost subsidies to young people will change the educational composition towards the low-skilled — an effect already seen in the previous section on the training subsidy. As higher wages make employment more attractive to young people, more of them decide not to invest in higher education but take up employment — remaining medium- or low-educated. The changing educational composition would drag down investment (and hence GDP), following the capital-skills-complementarity.

To avoid this side-effect on the skills-composition, the Italian government may decide to split the subsidy in two parts, similarly to the training-example for Slovakia: with half of the 0.1 % of GDP devoted to lowering labour costs — the other half being spent on support for tertiary education, all funded through higher VAT. In fact, Italy's share of young people aged 30 to 34 years holding tertiary degrees is the lowest in the EU: only 22.4 % — way below the EU average (some 38 %) and the country-specific target for the year 2020 (26 %). Hence, further efforts to increase education attainment seem necessary, despite recent progress.

The long-term effects of such a policy-mix are displayed in Chart 32. Total employment shifts quite significantly, by 0.12 %, compared to the reference scenario — the increase being twice as strong as in the case of only reducing labour costs. On the other hand, looking at young workers, their employment gains are less pronounced than in the scenario where all resources are devoted to reducing labour costs. This result appears logical, only half of the 0.1 % of GDP is now devoted to reducing young workers' labour costs, whereas total employment takes advantage of a changing educational mix when young people are subsidised into tertiary education (where they are assumed not to be employed).

The education-subsidy is a strong incentive to take up tertiary education, so the number of highly skilled workers increases markedly, whereas medium-skilled employment declines. In so far as there is currently a shortage of skilled labour relative to supply, and a surplus of unskilled labour relative to supply, this would boost total labour productivity (despite strong employment gains), as the additional complementary physical investment triggers faster GDP growth.

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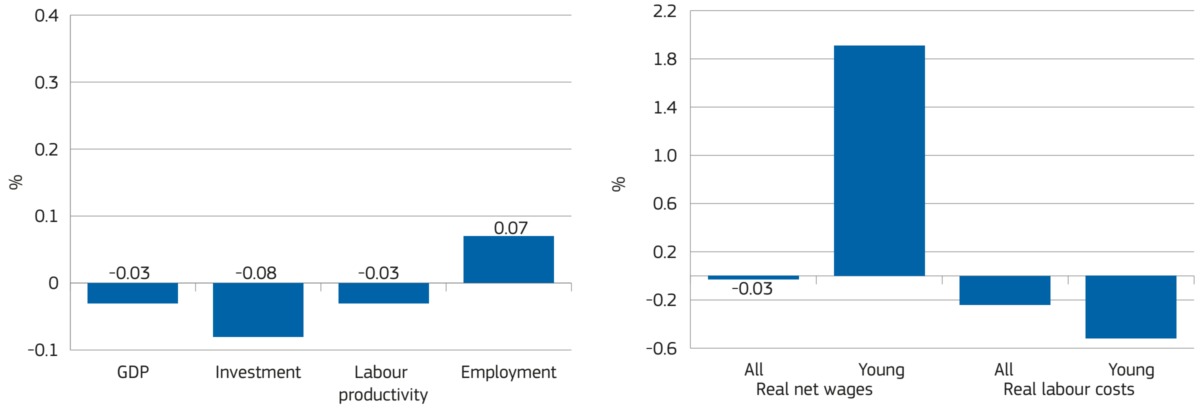
(139) European Commission (2012b), section 4 and European Commission (2012a).

(140) European Commission (2014c), paragraph 13.

(141) European Commission (2012b), especially p. 277–279.

Chart 30: Balancing between short- and long-term benefits and costs of lower social security contributions for young people in Italy

Simulation with DG EMPL's Labour Market Model: lowering employers' social contributions for young workers (15–24 years), Italy. Funding: VAT increases. Magnitude: 0.1 % of GDP



Source: Own calculations based on DG EMPL's Labour Market Model.

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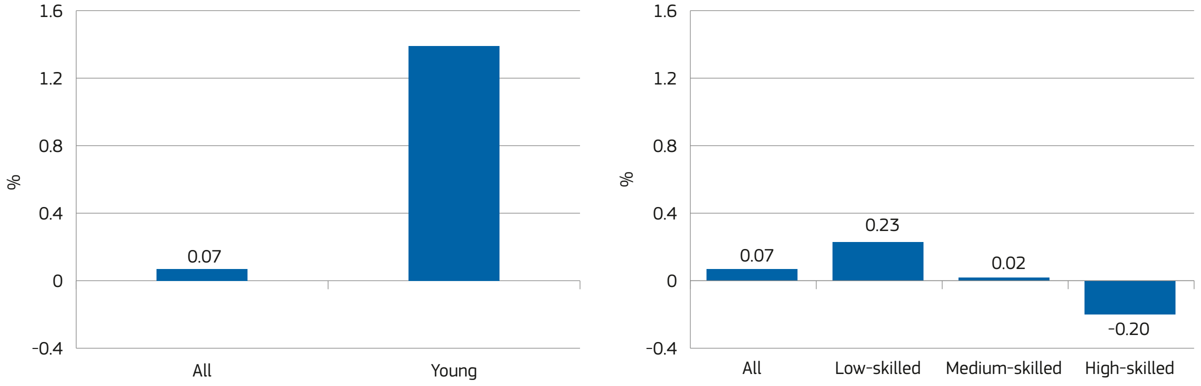
Chart 31: Lowering social security contributions for young people in Italy increases employment of the low-skilled at the expense of the highly skilled

Simulation with DG EMPL's Labour Market Model: lowering employers' social contributions for young workers (15–24 years), Italy. Funding: VAT increases. Magnitude: 0.1 % of GDP — employment effects



Source: Own calculations based on DG EMPL's Labour Market Model.

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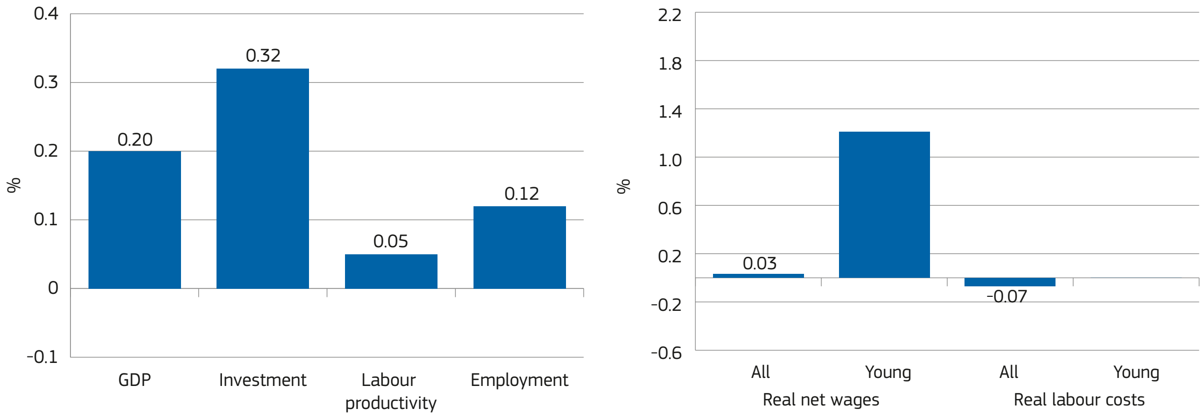
Chart 32: Impacts of policy mix support to young people in Italy

Simulation with DG EMPL's Labour Market Model: lowering employers' social contributions for young workers (15–24 years), combined with tertiary education scholarships for tertiary education (20–24 years), Italy. Magnitude: 0.05 % of GDP each



Source: Own calculations based on DG EMPL's Labour Market Model.

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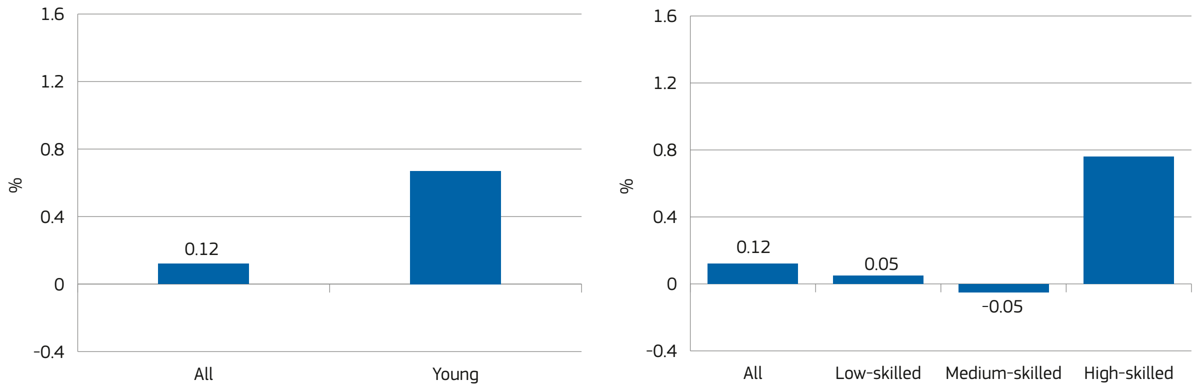
Chart 33: **Employment impacts of policy mix support to young people in Italy**

Simulation with DG EMPL's Labour Market Model: lowering employers' social contributions for young workers (15–24 years), combined with tertiary education scholarships for tertiary education (20–24 years), Italy. Magnitude: 0.05 % of GDP each — employment effects



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Source: Own calculations based on DG EMPL's Labour Market Model.

5. CONCLUSIONS

Demographic trends and globalisation are considered among the major challenges that threaten a job-rich and inclusive growth in the EU over the long run. In the absence of the demographic dividend from which the EU has benefited in the past, ensuring positive prospects for economic growth and social welfare in Europe requires increased productivity and a better utilisation of labour capacity.

Investment in human capital is crucial to supporting productivity gains and ensuring that future growth is both job-rich and inclusive. Effective human capital investment must be understood not only in terms of forming skills through the education and training of individuals, but also as the creation of the policy and institutional frameworks that can help individuals maintain and use their skills.

This chapter has illustrated the importance of various elements of a supportive policy and institutional mix for the formation of human capital, including accessible and affordable good quality early childhood care and education, which reduces generational transmission of social-inequalities.

Similarly, at the other end of the initial formation spectrum, the importance of higher education is rapidly increasing. Various reports suggest that demand for better educated people will continue to be strong in future decades, particularly for expanding businesses (142). The analysis, including macro-model simulation, adds to the evidence that the supply of a highly-educated workforce represents a necessary condition for achieving higher productivity and stronger economic growth. Hence recent progress in Member States towards the Europe 2020 objective of increasing the share of tertiary educated people aged 30 to 34 years to 40 % is encouraging.

At the same time, and especially given the current demographic situation and projections, the EU cannot afford to rely solely on the supply of highly skilled people newly entering labour markets. As the whole society and its workforce continues ageing and the relative contribution of older people to the economy and society increases, policy makers must pay more attention to mobilising and optimising existing human resources. Maintaining human capital is mainly dependent on provision of lifelong learning and continuous vocational training, together with investment in health and other policies to support longer working lives. This chapter particularly highlights the complementary roles of the public and private sectors and shows how the maintenance of human capital is decisive in avoiding skill depreciation.

Finally, the chapter argues that stronger supply of highly skilled workers, combined with a focus on human capital maintenance through training and health policies, will not suffice to ensure future sustainable and inclusive growth. Labour market inactivity, weak labour market attachment, skill mismatch and underutilisation of women's employment potential all represent a waste of resources in the form of unused human capital, which needs to be mitigated by appropriate public policies. In particular, the changing skills profile of our economies must be supported by comprehensive skills-strategies to fully realise its potential.

Integrated policy approaches targeted at all three aspects of human capital development — skills formation, maintenance and use — are crucial for strengthening EU competitiveness and for sustaining its social welfare model. But the relationship runs both ways, as this chapter repeatedly demonstrates. Functioning welfare systems and, in particular, well-designed social investments, are paramount if Europe is to continue to benefit from its main competitive advantage in the international markets — highly skilled and productive human capital.

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(142) For example: CEDEFOP (2012).

ANNEX

Table A.1: **Share of low achievers among young people too high in several Members States and has even increased in some**

Share of low achievers in reading, maths and science among 15 year olds (PISA), benchmark less than 15%, 2012, change 2009–12 in percentage points, EU and EU Member States

	2012 Reading	Evolution 2009-12 (% points)	2012 Maths	Evolution 2009-12 (% points)	2012 Science	Evolution 2009-12 (% points)
EU	**17.8**	**-1.9**	**22.1**	**-0.2**	**16.6**	**-1.2**
Belgium	16.1	-1.5	19.0	-0.2	17.7	-0.4
Bulgaria	39.4	-1.6	43.8	-3.3	36.9	-1.9
Czech Republic	16.9	-6.2	21.0	-1.3	13.8	-3.5
Denmark	14.6	-0.6	16.8	-0.3	16.7	0.1
Germany	14.5	-4.0	17.7	-0.9	12.2	-2.6
Estonia	9.1	-4.2	10.5	-2.1	5.0	-3.3
Ireland	9.6	-7.6	16.9	-3.9	11.1	-4.1
Greece	22.6	1.3	35.7	5.4	25.5	0.2
Spain	18.3	-1.3	23.6	-0.1	15.7	-2.5
France	18.9	-0.9	22.4	-0.1	18.7	-0.6
Croatia	18.7	-3.7	29.9	-3.3	17.3	-1.2
Italy	19.5	-1.5	24.7	-0.2	18.7	-1.9
Cyprus	32.8	:	42.0	:	38.0	:
Latvia	17.0	-0.6	19.9	-2.7	12.4	-2.3
Lithuania	21.2	-3.2	26.0	-0.3	16.1	-0.9
Luxembourg	22.2	-3.8	24.3	0.4	22.2	-1.5
Hungary	19.7	2.1	28.1	5.8	18.0	3.9
Malta	:	:	:	:	:	:
Netherlands	14.0	-0.3	14.8	1.4	13.1	-0.1
Austria	19.5	-8.0	18.7	-4.5	15.8	-5.2
Poland	10.6	-4.4	14.4	-6.1	9.0	-4.1
Portugal	18.8	1.2	24.9	1.2	19.0	2.5
Romania	37.3	-3.1	40.8	-6.2	37.3	-4.1
Slovenia	21.1	-0.1	20.1	-0.2	12.9	-1.9
Slovakia	28.2	6.0	27.5	6.5	26.9	7.6
Finland	11.3	3.2	12.3	4.5	7.7	1.7
Sweden	22.7	5.3	27.1	6.0	22.2	3.1
UK	16.6	-1.8	21.8	1.6	15.0	0.0
Japan	9.8	-3.8	11.1	-1.4	8.5	0.0
USA	16.6	-1.0	25.8	2.5	18.1	-2.2

Source: EC Press release, http://europa.eu/rapid/press-release_IP-13-1198_en.htm.

Note: [1] The PISA 2012 scores are divided into six proficiency levels ranging from the lowest, level 1, to the highest, level 6. Low achievement is defined as performance below level 2: reading (score <407.47), mathematics (score <420.07) and science (score<409.54).

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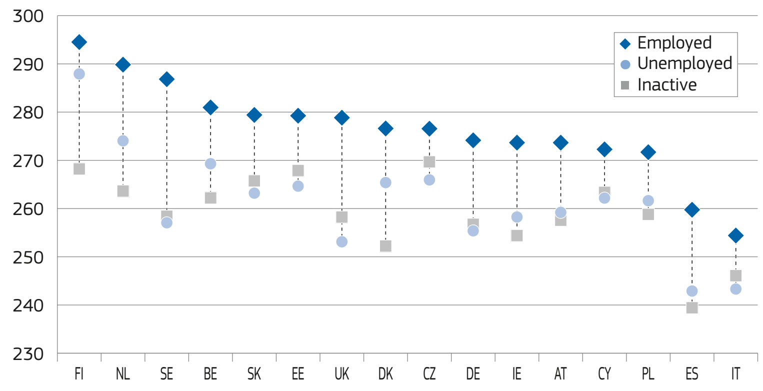
Chart A.1: **Being employed generally corresponds to better skills**

Average literacy scores by labour status



Source: PIAAC, DG EMPL elaboration.

excel file
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Chapter 3

The future of work in Europe: job quality and work organisation for a smart, sustainable and inclusive growth (1)

1. BETTER JOBS AND WORK ORGANISATION YIELD A MORE PRODUCTIVE WORKFORCE

This chapter assesses the future EU labour market challenges and opportunities in terms of job quality and work organisation and their likely impact on labour market developments over the next 10 years. It presents recent developments in job quality and work organisation (and their interactions) and highlights their impact on productivity, labour market participation and social cohesion as indicated by recent research. It then explores how technological progress and innovation, globalisation, demographic change and the greening of the economy may affect the workforce's potential via their impact on job quality and work organisation. It ends by discussing how labour market policies can help prevent, cushion or correct adverse developments in job quality and work organisation associated with those structural changes, including issues such as polarisation and inequality, while reinforcing positive developments. The chapter builds on the analysis presented in the 2014 ESDE review(2).

Since the onset of the crisis, job creation has been high on the agenda of policy makers across the EU. As the signs of an economic recovery (albeit weak and unevenly spread across Member States) are growing, attention is turning to other emerging challenges such as those associated to globalisation or technological progress. These may exacerbate some of the negative developments ensuing from the economic crisis. Such forces may render some jobs obsolete, increase the health and accident risks associated with certain types of jobs or increase the pressure to ensure employees' availability around the clock. They may also bring new opportunities. In this context, forward-looking policies need to address the impact of such forces on jobs, job quality, work organisation and human capital formation. Policy makers will need to monitor, prevent and correct adverse developments, while strengthening positive ones.

The chapter is structured as follows. **Section 2** introduces the general and EU concepts of job quality. It also identifies different forms of work organisation across the EU(3). **Section 3** presents patterns and trends in job quality across EU Member States and highlights the link between some dimensions of job quality and labour productivity and labour market participation. **Section 4** identifies future challenges to job quality associated with globalisation, technological progress and innovation, demographic change and the greening of the economy. Challenges include rising job insecurity, increased polarisation, accelerating skill erosion, gender inequality and a stronger emphasis on knowledge and creativity. **Section 5** describes different types of work organisation, distinguishing those that offer greater autonomy to employees. It explores how work organisation can foster productivity and longer working lives and reduce both absences and health-related costs. It discusses how workplaces can stimulate creativity and foster exchanges between workers, prevent stress, help maintain good physical and mental health and accommodate older workers or those with disabilities or certain diseases. It identifies modern management strategies that can facilitate employees' empowerment and are key to facing future challenges. **Section 6** concludes on how to strengthen productivity growth and labour market resilience via improved job quality and increased work organisation innovation, while ensuring that costs and benefits are distributed equitably.

2. JOB QUALITY AND WORK ORGANISATION: MULTI-DIMENSIONAL CONCEPTS

This section reviews the concepts of job quality and work organisation. It describes the EU concept of job quality, based on the EU Quality of Work system of indicators, as agreed within the Employment Committee (EMCO). In this system, indicators are grouped in four main dimensions: socioeconomic security; education and training; working conditions; and work-life and gender balance (Annex 1, Table A1.1). The section then focuses on the EU's four main different forms of work organisation that relate to employees' performance and labour market participation. These are:

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(1) By Eric Meyermans, Teodora Tchipeva and Bartek Lessaer, with a contribution on work organisation by Agnès Parent-Thiron (Eurofound) and Milos Kankaras (Eurofound).

(2) Employment and Social Developments in Europe 2013 Review. Chapter 1, European Commission (2014f).

(3) Note that while the analytical framework of this chapter makes a distinction between job quality and working conditions, due regard is given to the possible reinforcing interactions between the two.

Discretionary Learning forms; Lean Production forms; Tayloristic forms; and Traditional Simple forms. See Annex 2 for a brief discussion of the methodology used to classify different types of work organisation.

2.1. Job quality dimensions

Job quality is a complex and multidimensional concept that has been extensively analysed and debated by economists, sociologists, and psychologists. Several factors make its definition and measurement a challenge.

There are a variety of perspectives on work and jobs depending on each individual's work role, and the perspectives of workers and their employers may not necessarily always coincide. Nevertheless, from an employer's perspective there are several factors that should encourage employers to increase the quality of jobs. For example, there is a direct link between a higher level of skills and a firm's productivity, which may encourage employers to provide continuous training. Furthermore, a physically safe and healthy working environment reduces accidents and absences from work and improves productivity and output. Hence, increased job quality can result in better quality goods and services together with a positive impact on companies' income and welfare as a whole.

2.1.1. Job quality: 'subjective' and 'objective' concepts

It is commonplace in analytical research to distinguish between the subjective and objective concepts of job quality. The subjective approach assumes that job quality is the 'utility' a worker derives from the job. That utility depends on job features over which each worker has personal preferences. Each worker values one feature against another in a different way. Some academics argue that measures of well-being or job satisfaction can be used as subjective indicators of job quality (4). Such measures take the individual differences into account as it is workers who evaluate the positive and negative aspects of a job and rank them (5).

However, the use of job satisfaction as a one-dimensional measure of job quality has limitations. For instance, it may be sensitive to each individual's aspirations and expectations. Indeed, workers with low aspirations or expectations often express high job satisfaction, even when— on the basis of measurable variables such as earnings — they are in low-quality jobs. Moreover, factors like one's cultural environment and traditions or personality (e.g. disposition to pessimism/optimism) can affect subjective job satisfaction. Therefore, subjective job satisfaction is prone to bias and can be misleading in measuring and monitoring job quality.

Objective approaches assume that job quality encompasses job features that meet workers' needs. Objective measures of job quality are derived from a given theory of human needs and measure how far jobs meet those needs (6). Thus, the objective concept of job quality is not assessed by a one-dimensional measure (e.g. job satisfaction) but by a set of indicators measuring various dimensions associated with the job (7).

Different disciplines tend to focus on different dimensions. Economists tend to focus on monetary aspects such as wage levels or working hours (8). Sociologists tend to focus more on such factors as occupational status and the extent to which workers have autonomy and control over their jobs (e.g. Jencks et al., 1988; Goldthorpe and Hope, 1974; Prandy, 1990; Stewart et al., 1980). Psychologists often emphasise how intrinsically meaningful and challenging work is, and thus analyse a variety of psychological measures of job satisfaction such as workers' discretion and trust in their jobs (Guillen and Dahl, 2009; Kalleberg and Vaisey, 2005).

Even though different academic fields conceptualise and measure job quality in different ways, there is some convergence in terms of the work features that are seen to be crucial. Integrated insights from psychology, sociology, applied economics and other fields are enriched by considering the workers' point of view, notably through the development of surveys on job satisfaction and workers' well-being (e.g. Layard, 2005).

Therefore, objective approaches to job quality are based on a *selected* set of indicators depending on the researcher's objectives (see Annex 1 for examples of objective definitions of job quality). Some researchers tend to focus on the characteristics of the job (e.g. Eurofound, European Parliament); others include broader indicators of the economic and labour market environment as well as indicators relating to the personal characteristics of the worker (e.g. ILO 'decent work concept', with indicators on child labour, social protection; UNECE concept).

Most approaches either group the multitude of individual indicators into a system of indicators, or aggregate those indicators into a composite index. Both approaches have advantages and disadvantages. An aggregate index typically trades off the ease of presentation for strong assumptions on the weighting attributed to each indicator, i.e. assumptions about people's preferences for one job feature over another (9). Several examples of such aggregation and the use of composite indices are available (Annex 1).

2.1.2. A set of job quality indicators for policy-making at EU level

Job quality issues were first explicitly introduced into the European policy agenda at the Lisbon Council in March 2000, which

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(4) For a discussion, see Eurofound (2012b).

(5) Some questions in the semi-structured interviews of the NEUJOBS project reflect this focus on preferences by asking 'Which of the following features (attributes) of your job are more/less important to you?'.

(6) E.g. Maslow's hierarchy of needs applied to the world of work leads to a number of key job characteristics. Similarly, Green (2006) adapts Sen's capability approach and develops the idea that a 'good job' is one that offers workers a high capability to do and be things that they value.

(7) Some confusion may arise regarding self-reported variables in surveys (e.g. in the EWCS), which sometimes are referred to as 'subjective'. It should be stressed that the variables included in the EWCS refer to 'objective' job features; the term 'subjective' is reserved for reports of feelings, perceptions, attitudes or values. See Eurofound (2012b).

(8) In the standard neo-classical model, for example, work is disutility and wages are the sole motivation of workers. At market equilibrium the wage level fully reflects the job quality, and it equals the level of productivity and compensates for the disutility of work. In the framework of compensating wage differentials some displeasures that arise from work are explicitly taken into account in the utility function (e.g. injury and occupational diseases, commuting costs, working hours); they are fully compensated by a wage premium because (by assumption) workers trade off working conditions and benefits for pay (see e.g. Rosen, 1986). In other words, ceteris paribus, workers with similar qualifications who work under bad working conditions are paid more by employers to compensate for the unpleasantness of the job. In a perfectly competitive labour market with perfect information, as assumed in the framework, the wage level reflects job quality. Bustillo et al. (2012), part 5, provide an overview of the empirical literature testing the link between working conditions and differences in pay. By contrast, dual labour market theorists (e.g. Piore, 1971; Edwards, 1979) have contended that bad job characteristics tend to cluster so that a job that is bad in one dimension tends to be bad in others.

(9) The pros and cons of composite indices against a system of indicators are discussed in more detail in Annex 1.

established the objective of 'more and better jobs for all'. In 2001, the Laeken European Council agreed to a comprehensive framework on job quality. The resulting concept of job quality included 10 dimensions, categorised into two themes: 1) characteristics of the job/worker and 2) the wider socioeconomic and labour market context (Annex 1). In 2013, the EU's Employment Committee (EMCO) Indicators Group agreed upon a four-dimensional concept of job quality, subdivided into 10 further sub-dimensions, each with several indicators (Annex 1, Table A1.1). The indicators are drawn predominantly from the EU Labour Force Survey (EU-LFS), the Statistics on Income and Living Conditions (EU-SILC) and Eurofound's latest European Working Conditions Survey (EWCS). The four dimensions are:

1. Socioeconomic security, including adequate earnings and job and career security;

2. Education and training, including skills development through life-long learning and employability;

3. Working conditions, including health and safety at work, work intensity, autonomy and working practices, as well as collective interest representation;

4. Work-life and gender balance.

Operationalising the multitude of indicators to facilitate monitoring, assessment and policy-making remains a challenging work in progress. Through factor analysis, their number has recently been compressed but the list still remains long([10]).

2.2. Work organisation can take different forms

In the ever-changing world of work, employees' well-being, performance and labour market participation depend on the organisation of work by firms. Based on the findings of the three most recent EWCS waves (2000, 2005 and 2010), four broad forms of work organisation can be identified. Table 1 describes the main characteristics of these forms of work organisation among private non-agricultural establishments employing 10 or more workers (see Annex 2 for the methodology used to underpin the classification).

The 'Discretionary Learning form' (hereafter Learning) is the first and most prevalent type of organisation, covering some 36% of employees in private companies with 10 or more employees. They are characterised by the highest level of task autonomy (methods of work, speed of work), a very high cognitive dimension (problem solving, learning new things, complexity of tasks), a high level of self-assessment of quality and some autonomous teamwork. There is a low level of monotonous and repetitive tasks and a low incidence of various forms of work pace constraints. These characteristics are similar to models of learning organisations or the 'adhocracy' model of Mintzberg (1979), and coincide with many features of the Scandinavian sociotechnical model, notably its emphasis on self-autonomous teams.

The 'Lean Production form' (hereafter Lean) covers nearly 29% of employees. It is characterised by a strong presence of team work, including self-managed teams, the highest reported use of quality norms and self-assessment of quality, the highest level of task rotation and horizontal and norm-based constraints, a very high level of cognitive demands and higher levels of task autonomy. This type of organisation displays strong learning dynamics and relies on employees' abilities to solve problems themselves. Work is embedded in numerous quantitative and organisational pace constraints and requires the respect of strict quality standards, granting employees a rather 'controlled' autonomy in their work.

The 'Tayloristic form' covers about 20% of employees. This type of work organisation displays a high level of non-autonomous team work, the lowest level of task autonomy, limited cognitive demands at work, very high levels of use of pre-defined quality standards (and lower levels of self-assessed quality standards) and a very high level of pace constraints, especially those created by limitations in the speed of machines or production flow.

The 'Traditional or Simple form' of organisation covers nearly 16% of employees. It is characterised by the lowest incidence of work pace constraints and the use of pre-defined or self-assessed quality standards. Workers belonging to this organisational form have less work pace autonomy and generally face the least cognitively demanding tasks, with only a few instances of teamwork and work rotation. In such establishments, work organisation methods are not (strictly) codified and are largely informal, probably as a consequence of the lower complexity of the work tasks involved.

2.3. Work organisation impacts on job quality and performance

As can be seen in Table 1, nearly two thirds of employees in private establishments with 10 or more employees (excluding agriculture) work in forms of work organisation characterised by strong learning dynamics and high problem-solving activity: the Learning and the Lean production forms. These are often labelled together under the heading of High Performance Work Places — HPWS (Appelbaum and Batt, 1993).

Though similar, Learning and Lean organisations differ in a number of dimensions. Learning organisations place additional importance on the wholeness of tasks, a higher level of personal autonomy and initiative, less emphasis on strict adherence to standards and more open access to decision-making process. In contrast, Lean organisations are more hierarchical, and task autonomy and pace of work are more limited and controlled. Also, Learn organisations do not appear to compensate workers fully for their increased level of responsibility and the need to address ongoing problem-solving activities in an increasingly complex environment. This may result in problems relating to personal well-being, health or work-life balance similar to those experienced in Tayloristic organisations.

Employees working in Tayloristic and more Traditional or Simple forms of work organisation, which account for around a third of all employees, have much less task autonomy, rarely deal with cognitively demanding tasks and have fewer opportunities to learn new things. Furthermore, while workers in more Traditional and Simple forms of work organisation face fewer quality norms or work pace constraints, Tayloristic forms of organisation are marked by much stricter controls in both respects.

Finally, a meta-analysis of 92 studies (Combs et al., 2006) found evidence that HPWS enhance organisational performance. These organisations are better suited for more volatile and complex environments, including more competitive and globalised markets.

([10]) In the table in Annex 1 these indicators are marked 'FACTOR indicating...(the particular aspect of work)'.

Table 1: Work organisation variables across the classes (% of employees) — 2010

		Work organisation classes			
		Discretionary learning	**Lean production**	**Tayloristic**	**Traditional or simple**
Autonomy in work	Methods of work*	85.90 %	64.20 %	7.70 %	33.70 %
	Speed or rate of work*	88.80 %	66.20 %	13.80 %	46.20 %
	Order of tasks	80.80 %	62.20 %	14.60 %	35.70 %
Cognitive dimensions of work	Learning new things*	83.40 %	90.80 %	37.60 %	22.50 %
	Problem solving activities*	98.00 %	91.50 %	58.10 %	46.00 %
	Complexity of tasks*	74.60 %	86.00 %	32.20 %	12.70 %
Quality	Self-assessment*	83.20 %	91.30 %	63.40 %	23.00 %
	Quality norms*	77.80 %	97.70 %	94.50 %	35.40 %
Monotony of tasks*		29.60 %	60.60 %	75.90 %	52.40 %
Repetitiveness of tasks*		16.50 %	38.20 %	51.60 %	24.00 %
Task rotation*		40.20 %	76.30 %	46.30 %	31.20 %
Work pace constraints	Automatic*	8.00 %	43.20 %	64.00 %	13.40 %
	Norm-based*	41.80 %	77.20 %	73.00 %	17.70 %
	Hierarchical*	28.50 %	68.40 %	65.90 %	27.20 %
	Horizontal*	29.50 %	86.40 %	66.60 %	27.00 %
	Direct demands from other people	62.80 %	65.00 %	53.10 %	55.10 %
Teamwork*	With autonomy	32.46 %	46.28 %	16.78 %	16.18 %
	Without autonomy	24.94 %	46.86 %	43.72 %	25.99 %
Assistance	From colleagues	70.49 %	82.61 %	65.54 %	62.70 %
	From hierarchy	61.06 %	62.29 %	47.66 %	46.35 %
Overall proportion of workers in the four forms of work organisation		36.00 %	28.70 %	19.50 %	15.80 %

Source: Eurofound based on EWCS (2010).

Note: Variables with an asterisk (*) have been used to identify the four main different organisation forms. Further variables are used to provide additional information.

3. THE EFFECTS OF JOB QUALITY ON PRODUCTIVITY, LABOUR MARKET PARTICIPATION AND SOCIAL COHESION

This section presents patterns and trends in job quality based on the EU job quality concept and *selected* (11) EU Quality of Work Indicators agreed by the EMCO Indicators group. The structure of this section follows the breakdown of the EMCO job quality indicators into its four dimensions (here subsections): 1) socioeconomic security, 2) education and training, 3) working conditions and 4) work-life and gender balance (EMCO Indicators table in Annex 1). For each subsection, the transmission mechanism between job quality and productivity, labour market participation or inequality is presented.

3.1. Socioeconomic security: synergy of interests

3.1.1. Earnings affect workers' motivation and effort

Earnings from work are an important dimension of job quality: they are the main source of income for workers, and affect many dimensions of workers' well-being, including better access to goods and services or better health. An adequate level of pay helps avoid in-work poverty and social exclusion (12).

The literature suggests that the level and distribution of earnings can have a direct impact on productivity and output. A higher wage (above the free market level) increases the cost of job loss for workers and creates incentives to be productive and not to shirk (e.g. Akerlof and Yellen, 1986). Alternatively, the amount above the market level rate may be seen by the worker as a 'gift', inducing higher motivation, commitment and effort. For employers, a wage above the market level can reduce labour turnover and thus reduce the cost of recruitment and initial training, especially of highly qualified workers.

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(11) The aim of the chapter is not to review all indicators in the EMCO list. Rather, it reviews a selected number to illustrate main trends and the links between job quality and outcomes such as productivity, labour market participation and existing inequalities among groups. Furthermore, the high levels of correlation between indicators within each sub-dimension make it unnecessary to provide a detailed analysis of all the indicators on the EMCO list. Additional information is presented in footnotes or in Annex 3.

(12) More details on brochure on in-work poverty available at http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-10-015/EN/KS-RA-10-015-EN.PDF

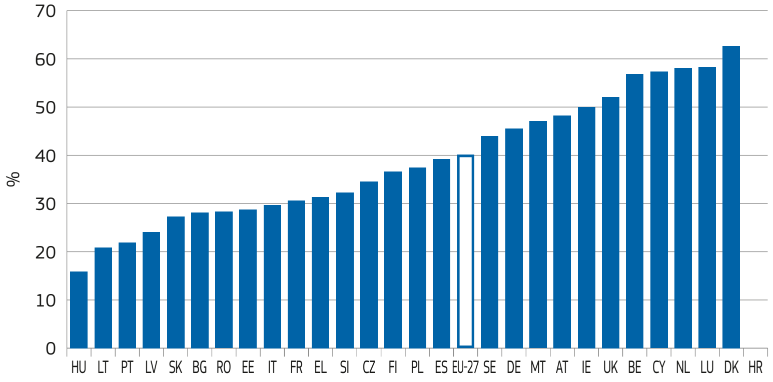
Workers derive job satisfaction not only from the level of their earnings but also from their earnings relative to those of other workers, i.e. the distribution of earnings (e.g. OECD 2014), though the effect may be ambiguous(13). On one hand, a wider wage dispersion may induce workers to make a stronger effort to get into the upper wage scale, increasing individual and overall productivity (e.g. Lazear and Rosen, 1981). However, it may undermine cooperation among workers, decreasing the overall productivity level (e.g. Akerlof and Yellen, 1990). Moreover, it may limit the ability to pay for education and training of those in the lower brackets and result in an under-investment in human capital with a negative impact on the individual's own productivity (e.g. Galor and Zeira, 1993) and potentially that of their co-workers (e.g. Lucas, 1988; Lloyd-Ellis, 2003). Finally, to the extent that workers perceive they are not receiving their fair share of the wealth they create, the call for redistribution via taxes may increase, with an effect on innovation and productivity growth (e.g. Alesina and Rodrik, 1994; Alesina and Perotti, 1994; Ostry et al., 2014; Piketty 2014).

Based on the EWCS 2010, Chart 1 shows that satisfaction with pay in 2010 was lowest in Hungary, Lithuania, Portugal and Latvia, and highest in Denmark, Luxembourg and the Netherlands(14).

Chart 2 shows that in-work poverty was highest in Poland, Luxembourg, Greece and Romania in 2013, while it was among the lowest in Finland, the Czech Republic, the Netherlands and Denmark. The in-work at-risk-of-poverty rate measures 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).

Chart 3 shows the distribution of earnings, as measured by the Gini earnings index, in 2000 and 2010 for the Member States for which the data are

Chart 1: Am I well paid for the work I do?



Source: Eurofound, EWCS 2010, question 77b.

Note: No observation available for HR.

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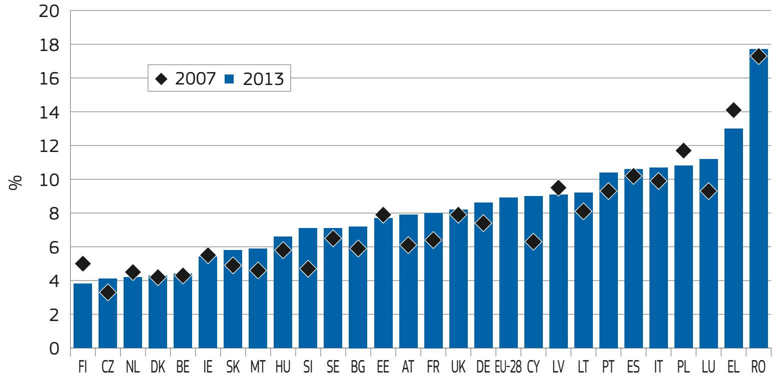
Chart 2: In-work poverty, 2007 and 2013



Source: Eurostat SILC, 2012, table: ilc_iw01.

Notes: The in-work at-risk-of-poverty rate measures 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). For more details see http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-10-015/EN/KS-RA-10-015-EN.PDF; 2012 observation for IE.

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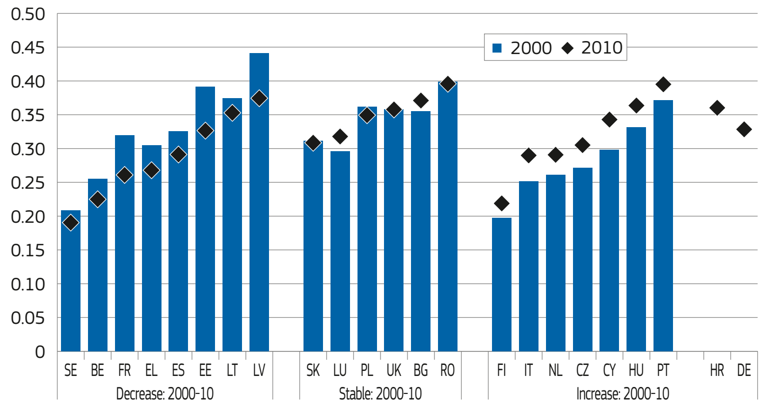
Chart 3: Inequality as measured by the Gini earnings coefficient



Source: WiiW (2014) using EU Structure of Earnings Survey.

Notes: Gini coefficient calculated on basis of earnings of employed persons, not income.
The Gini coefficient is an indicator with a value between 0 and 1. Lower values indicate higher equality.
No observation available for HR and DE for 2000.

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(13) The literature on the determinants of subjective well-being has focused on the relative importance of absolute and relative earnings, without however providing for a conclusive answer so far. Easterlin (1974), who sparked the debate, argued that once basic needs have been met it is only the relative income that matters for increasing one's well-being. Recent studies challenged this proposition by arguing that the relationship between income and life satisfaction is log-linear (Deaton and Kahneman, 2010; Sacks et al., 2012; Stevenson and Wolfers, 2008 and 2013), or that there are declining marginal returns to income in terms of subjective well-being, from which follows that overall welfare is a function of both absolute income and its distribution. Most studies that have analysed the role of relative wage comparisons for well-being found negative effects (Clark and Oswald, 1996; Luttmer, 2005; Card et al., 2012) that have been typically interpreted as status effects: the higher the earnings of the reference group relative to one's personal earnings, the lower one's social status and well-being.

(14) See also Annex 3, Charts A3.1 and A3.2 for real wages adjusted for productivity and mean monthly earnings.

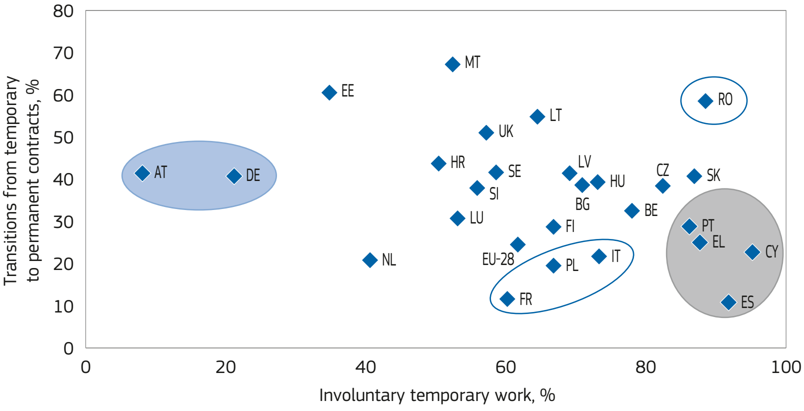
available (^{15}). On average, this indicator remained fairly constant over the period at around 0.3, but ranging from about 0.2 (e.g. Sweden, Finland) to more than 0.4 (e.g. Romania, Portugal) — with a higher value indicating higher inequality. Since the beginning of the decade, inequality has decreased substantially in the Baltic countries and France, while it has increased in Cyprus and Italy.

3.1.2. Job and career security effects on commitment, enhanced firm-specific skills and productivity

Job security strengthens workers' commitment and the opportunities to acquire firm-specific skills, which in turn may enhance individual and team performance, with a positive impact on productivity (e.g. Auer et al., 2005; Brown et al., 2011) (^{16}). In contrast, involuntary part-time work or long spells of inactivity/unemployment between temporary jobs) may erode human capital and lead to poor mental health and low life satisfaction (e.g. Green, 2011; Sverke et. al, 2006), negatively affecting personal performance and overall productivity. Moreover, involuntary part-time work or long spells of inactivity/unemployment between temporary jobs decrease the household work intensity and increase the risk of in-work poverty and social exclusion. Job security may, nevertheless, induce shirking in some circumstances if not counteracted by specific measures (e.g. Yellen, 1984; Shapiro and Stiglitz, 1984; IchoNo and Riphahn, 2005) (^{17}).

A high proportion of workers in Spain, Greece, Portugal, Cyprus, Romania and Slovakia are on involuntary temporary contracts (Chart 4) (^{18}). Moreover, the transition from temporary to permanent contracts is particularly difficult in Spain, Greece, Cyprus and Portugal. In contrast, Austria, Germany, the Netherlands and Estonia have low rates of involuntary temporary employment and high transition rates to permanent employment (^{19}).

Chart 4: Involuntary temporary work and transitions from temporary to permanent contracts



Sources: Eurostat LFS, table lfsa_etgar and ilc_lvhl32. Data for involuntary temporary employment is for 2013 (^{1}); data for transitions if for 2011. Transitions data for Denmark and Ireland is missing.

Note: 15 to 64 years age group; % of total temporary workers.

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[1] Involuntary temporary work used in this subsection is based on the Eurostat concept. In particular, employees with temporary contracts are those who declare themselves as having a fixed-term employment contract (see below) or a job which will terminate if certain objective criteria are met, such as completion of an assignment or return of the employee who was temporarily replaced (for more details check the Eurostat metadata available at http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/lfsa_esms.htm. Employees with fixed-term contracts: Following Eurostat, the concept of fixed-term contract is only applicable to employees, not to the self-employed. In some countries, contracts of this type are settled only in specific cases, e.g. for public-sector jobs, apprentices or other trainees within an enterprise. Given wide institutional discrepancies, the concepts of 'temporary employment' and 'work contract of limited duration' (or 'permanent employment' and 'work contract of unlimited duration') describe situations which, in different institutional contexts, may be considered similar. For the reference definitions, please consult the EU-LFS explanatory notes at http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/EU_labour_force_survey_-_methodology#LFS_explanatory_notes

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Temporary work needs not necessarily be a negative job feature. If, for example, the reason for temporary employment of young people is that they are in education or training (as in Germany, Austria and Denmark) (^{20}) or on a probation period, then a temporary job can be seen as a stepping stone to more stable forms of employment. However, if upward transitions in pay level and/or contract type are impeded and the labour market is highly polarised, the prospects for career advancement and perceptions about the quality of their jobs will be poorer. This may reduce motivation, and thus productivity and growth (see for instance OECD, 2014).

Chart 5 shows the unfavourable changes observed in the majority of the Member States during the recent crisis (^{21}). Involuntary temporary work increased while the transition to more stable employment contracts fell. The situation appears to have deteriorated further in the Southern countries (Greece, Spain, Cyprus) and Slovakia, followed by Bulgaria, the Czech Republic, Hungary and Latvia. Noticeable changes are also seen in Luxembourg and Italy (^{22}) (^{23}).

Chart 6 shows a positive change in at least one of the indicators for a limited number of Member States (^{24}). In Austria,

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(^{15}) Earnings distribution is not to be confused with distribution of income, wealth or opportunities. For a comprehensive study on the latter, see, for example, the GINI project available at http://www.gini-research.org/articles/home

(^{16}) Using macro-data covering 13 European countries between 1992 and 2002, Auer et al. (2005) report a positive (though eventually decreasing) relationship between job tenure and productivity. Using micro-data from 2004, Brown et al. (2011) show strong employee commitment decreases the probability that labour productivity is below the sample mean by about 10 pps.

(^{17}) Note that job security need not exclude internal job flexibility. For example, it is possible that short-time working arrangements adopted during an economic downturn can have a positive impact on long-run labour productivity to the extent that the free time is used for skill formation.

(^{18}) Note that this chart draws from different surveys covering data for 2013 and 2011.

(^{19}) However, there is a high gender imbalance in transition rates to permanent contract in Estonia (see Annex 3, Chart A3.5).

(^{20}) In 2013, the share of employees aged 15–24 in temporary contracts due to education or training in all temporary employees aged 15–24 was 85 % (though this figure is flagged as unreliable by Eurostat), 80 % and 54 % in Germany, Austria and Denmark. This percentage remained stable between 2007 and 2013.

(^{21}) Note that this chart draws from different surveys covering data for 2013 and 2011.

(^{22}) The share of employees aged 15–24 in temporary contracts due to education or training in all temporary employees aged 15–24 decreased substantially in Italy (from 54 % to 40 %) and Luxembourg (from 52 % to 44 %) between 2007 and 2013.

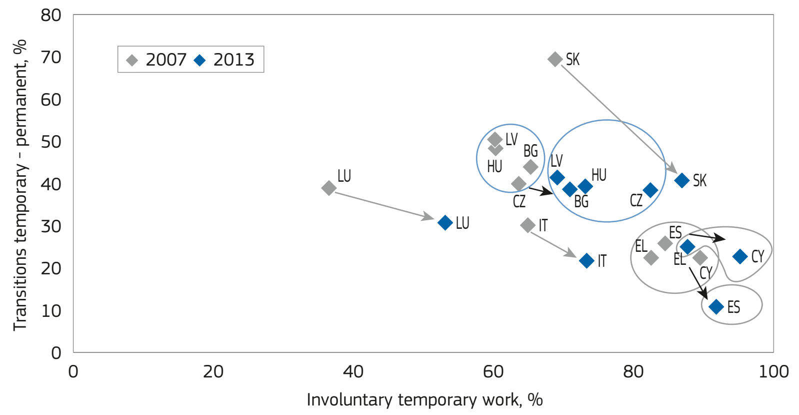
(^{23}) These trends may reflect an increased tendency of firms to use temporary contracts to absorb more easily shocks in product (and hence also in labour) demand during the crisis, especially in countries where employment protection legislation is much stricter for permanent than for temporary contracts.

(^{24}) Note that this chart draws from different surveys covering data for 2013 and 2011.

involuntary temporary work declined. In Finland and Portugal it increased slightly, but transitions improved. In Germany and Lithuania, involuntary temporary work declined and transitions to more stable employment contracts became easier. Annex 3 gives more detail about the evolution of involuntary temporary work and transitions by country (Annex 3, Charts A3.3–A3.8).

There are significant gender inequalities in the transition from temporary to permanent contracts. In many Member States, men have higher transition rates to permanent contracts than women. Gender differences in transition rates stand out in Lithuania (30 pps), Estonia (15 pps) and Cyprus (18 pps) (Annex 3, Charts A3.5). Women show better transition rates than men in Romania and Latvia. Annex 3 also shows how transition rates evolved during the recent crisis by gender (Annex 3, Charts A3.5–A3.7). *Involuntary* temporary work is also more widespread among workers on temporary contracts who are aged 55–64 than among younger workers (aged 15–24), especially in Germany (where the gap is the highest at 60 pps), Luxembourg, Denmark and Ireland[25] (Annex 3, Chart A3.8).

Chart 5: Involuntary temporary work and transitions during crisis deteriorated in some Member States



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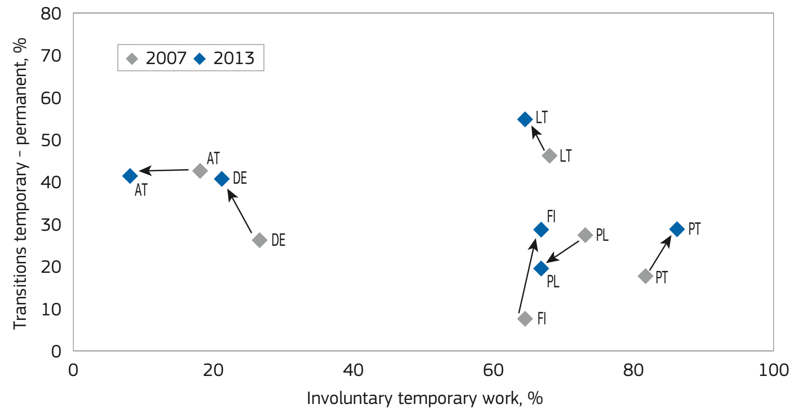
Source: Eurostat LFS, table lfsa_etgar and ilc_lvhl32.

Note: 15 to 64 years age group; % of total temporary workers.

Chart 6: Involuntary temporary work and/or transitions during crisis improved in some Member States



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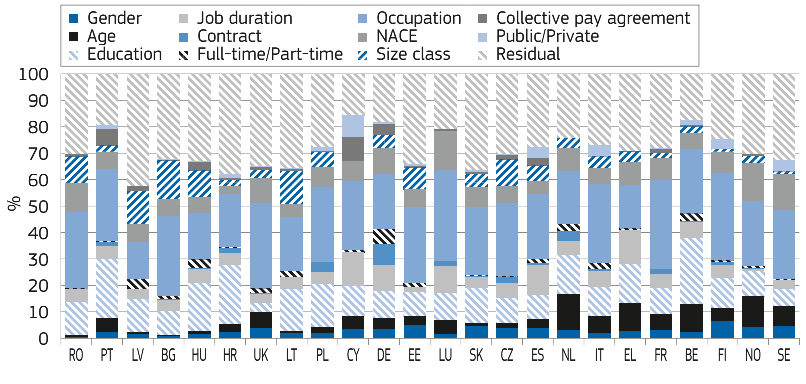
Source: Eurostat LFS, table lfsa_etgar and ilc_lvhl32.

Note: 15 to 64 years age group; % of total temporary workers.

Chart 7: Contribution to GINI earnings index (2010)



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Source: WiiW (2014) using EU Structure of Earnings Survey.

Note: Gini coefficient calculated on basis of earnings of employed persons, not income.

Box 1: How much does job security (duration) contribute to earnings dispersion?

The extent to which individual (i.e. gender, age, educational level), job (i.e. occupation, job duration, employment contract type) and firm (i.e. economic activity, size of the enterprise, existence and type of pay agreement, ownership) characteristics affect the earnings distribution differs within Member States. (See Chart 7 for those for which data are available). On average, occupation is estimated to contribute about 25 % to earnings dispersion, followed by education (12 %), industry (10 %), enterprise size (6 %), job duration (6 %), age (5 %) and gender (3.5 %), leaving some 30 % of earnings dispersion unexplained by these factors. Job duration appears relatively strong in explaining earnings dispersion in Southern European countries, and also in Germany and Luxembourg. Whether a contract is permanent or of fixed duration contributes strongly in Germany, Poland and the Netherlands, while part-time versus full-time work is estimated to contribute strongly to earnings dispersion in Germany, Latvia, Hungary, the Netherlands, Belgium and Lithuania (WiiW, 2014).

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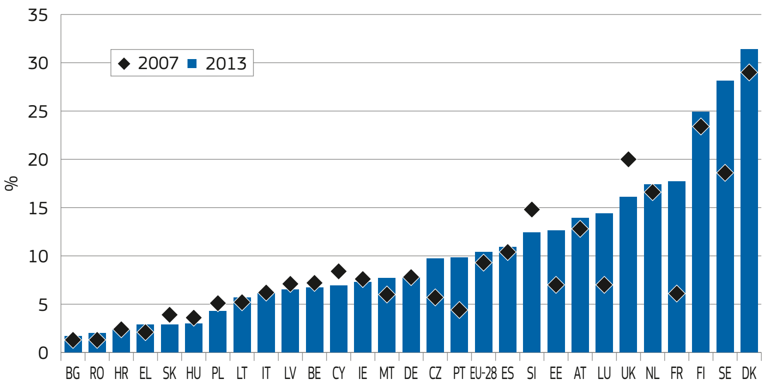
(25) The low share of involuntary temporary young workers in Germany, Austria, Luxembourg and Denmark may be due to the fact that many young people on temporary contracts in these countries are in education or training (see footnotes 20 and 22).

Chart 8: **Participation rates in life-long learning (LLL), 2007–13**



Source: Eurostat table trng_lfse_02

Note: Break in series for CZ, FR, LU, LV, NL, PT and SE.

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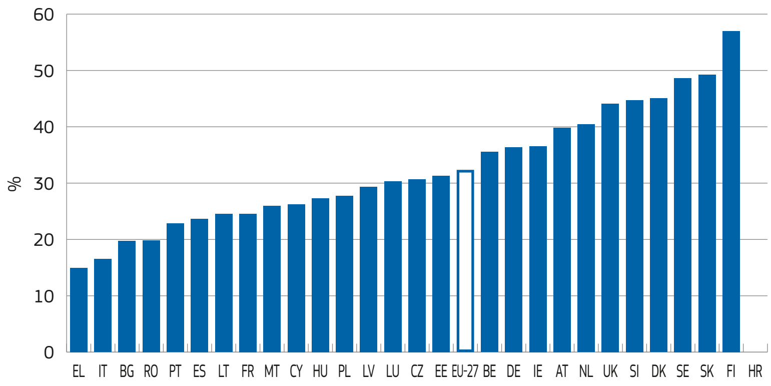
Chart 9: **On-the-job training, 2010**



Source: Eurofound, EWCS 2010, question 61c.

Note: No observation available for HR.

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3.2. Education and training may enhance employability and productivity

The literature (e.g. Lucas, 1988; Rebelo, 1991; Dearden et al., 2006; Christen et al., 2008) suggests that human capital formation is directly and positively linked to productivity and labour market participation. Investment in education and training leads to individual increasing returns and generates positive spill-over effects increasing the productivity of co-workers (26). Strengthening human capital and its formation may be crucial to strengthen European firms' comparative advantage on international markets in the face of increased global competition and the knowledge economy, as developed in section 4. However, investing in human capital formation through education alone is not enough. Appropriate skill-development and skill-anticipation policies and working conditions (i.e. ensuring good skills matching and the best use of the accumulated human capital) are crucial.

There is a wide variation between Member States in terms of their efforts to strengthen skill development. Denmark, Sweden and Finland perform the best across all the selected indicators (See participation in life-long learning (Chart 8), on-the-job training (Chart 9) and new learning opportunities on the job (Eurofound, EWCS 2010, question 49f)). The lowest participation rates on life-long learning are found in Bulgaria, Romania, Croatia and Greece. Spain and Italy perform poorly in terms of on-the-job training. These countries also show the poorest outcomes in other indicators of skills development (27). Bulgaria, Romania, Cyprus, and Greece also rank the lowest of all EU Member States of the OECD in the latest PISA test (2012) (28). Note that less effective training systems and an inappropriate skill mix due to weak training and skill-anticipation policies can lead to lower productivity and output and result in persistent labour market structural problems (fragmentation, polarisation).

The recent crisis has affected participation in life-long learning in around one third of the Member States, but in different ways (Chart 8). Sweden, France, Luxembourg and Portugal saw an increase, while the United Kingdom and Slovenia saw the highest declines (29). Employers may tend to increase training during a recession because training costs, including opportunity costs (lost productivity is less problematic when demand is slack), are lower (e.g. Caponi et al., 2010; Felstead et al., 2011). In addition, difficult conditions may encourage employers to compete on quality or to diversify their products, both of which require increased training efforts (e.g. Felstead et al., 2011). In contrast, a crisis can make employers reluctant to provide training if this is seen as a financial strain with an uncertain return on

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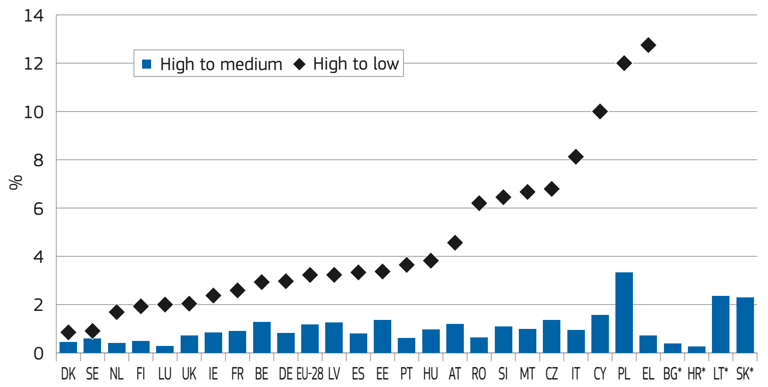
(26) Endogenous growth models illustrate how human capital accumulation increases the growth rate (Lucas, 1988; Rebelo, 1991). Christen et al. (2008) show that differences in job performance between male and female physicians were fully accounted for by differences in their communication skills. Dearden et al. (2006), using a dynamic perspective on skills, show that training which enhances skills is also associated with higher productivity.

(27) Percentage of early school leavers (highest shares are in Spain (23.5 %), Malta (21 %), Portugal (19 %), Romania and Italy (17 %), Bulgaria (13 %); percentage of population with at least medium computer skills (lowest shares are in Romania (21 %), Bulgaria (29 %), Greece (41 %), and Italy (44 %). Data source: Eurostat, tables [edat_lfse_14], [edat_lfse_08] and under the link http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsdsc460. The data on early school leavers refers to 2013, while data on level of computer skills is from 2012, the latest available at the time of drafting.

(28) The Member States performing best on the PISA test in 2012 are the Netherlands, Finland, Belgium, Germany and two new Member States (Estonia and Poland). More information about the PISA results is available at http://www.oecd.org/pisa/keyfindings/pisa-2012-results-overview.pdf

(29) Based on data from the European Social Survey of 19 countries over the period 2004–10, Dieckhoff (2010) found that the odds of training in 2010 were 20 % lower than in 2004, even after controlling for a range of employee and workplace characteristics. However, there were country differences: there was no significant change in the volume of training in any of the Nordic countries, there was an increase in two Continental countries, and there was a decrease in the UK and Ireland and in some of the Eastern European countries.

Chart 10: **Participation in LLL by educational attainment, aged 25–64, 2013 — relative difference**



Source: Eurostat LFS, table [trng_lfs_10].

Notes: Lifelong learning (LLL) measures participation rate in education and training (last 4 weeks). The Chart shows the relative difference in the life-long learning participation rates between those with high education and those with medium, respectively low, education. It reflects the situation of the population (aged 25–64) engaged in formal or non-formal education and training. 'Low' stands for pre-primary, primary and lower secondary education corresponding to levels 0–2 (ISCED 1997); 'medium' stands for upper secondary non-tertiary education corresponding to levels 3–4; and 'high' corresponds to levels 5–6. * No data for 'low' education for 2013.

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their investment (e.g. Dieckhoff, 2013; Felstead et al., 2011; Majumdar, 2007).

The low-skilled, who are already disadvantaged in terms of obtaining a job, also receive less life-long learning, see Chart 10. The difference in participation rates between highly and lowly educated people is the highest in Poland, the Czech Republic, Greece, Cyprus and Italy. It is the lowest in Denmark, Sweden, Finland and the Netherlands.

3.3. Good working conditions can attract and develop human capital and improve performance and output

Good working conditions create the environment to attract and develop human capital and improve the performance of workers. A physically safe and healthy working environment leads to fewer accidents and absences from work and, hence, to lower costs (European Commission, 2014; OECD, 2014; Cottini and Lucifora, 2011; Lewis and Malecha, 2011). Furthermore, work-related stress or negative social relations in the workplace may lead to employees working below their full potential, higher distraction levels or neglect of responsibilities, and may affect career-related decisions (Lewis and Malecha, 2011; Mather and Lighthall, 2012). A working environment too focussed on competition may also generate unethical behaviour (Shleifer, 2004; Schwieren and Weichselbaumer, 2010; Gill et al., 2013; Charness et al., 2013)(30).

The EMCO framework distinguishes four sub-dimensions of working conditions and organisation: health and safety at work; work intensity; work autonomy; and collective interest representation(31).

3.3.1. Reducing health and safety risks may increase overall productivity

Health and safety at work can have a direct impact on employers' costs and employees' productivity, absenteeism and job satisfaction. While the incidence of work accidents has declined in recent years, significant differences across different groups of workers can be observed. Chart 11 shows the relative accident rate of those with medium (alternatively high) education to those with low education. It can be seen that the lower the education level, the higher the accident rate. More generally, those with lower levels of education are more often in jobs that present greater risks in terms of health and safety conditions at work(32).

Note that important structural changes will likely bring along new products and production processes with potentially unknown health and safety risks which may need to be borne in mind, as discussed in section 4.

3.3.2. Combining work autonomy with work intensity can increase productivity

Work intensity(33) and work autonomy are two important characteristics of work organisation that can affect workers' performance through their impact on the level of motivation, stress and physical and mental health. They can also impact the labour market participation decisions of particular groups such as older workers, second earners with children and/or people with disabilities. By reinforcing positive interactions between work intensity and work autonomy, an organisation can achieve greater effort from its employees, thus increasing productivity and output.

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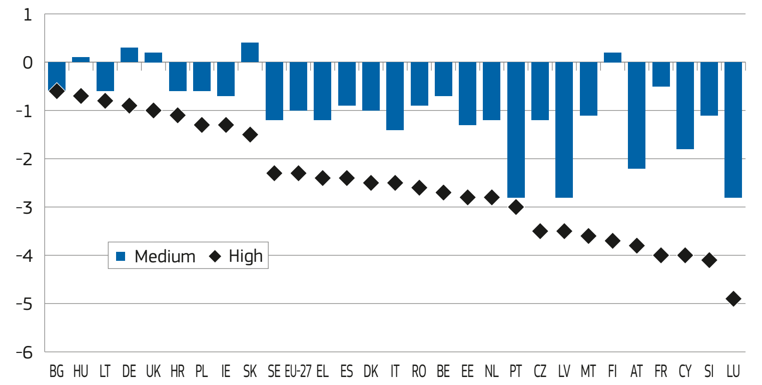
(30) Work-related psychological disorders and mental health problems were behind 42 % of all early retirements of white-collar workers in Austria in 2009 and the main reason for long-term sick leaves in the Netherlands (55 days on average) in 2010 (European Commission 2014 — Social Agenda 02/2014, p. 9). High psychological job demands, long working hours and poor physical environment are detrimental to the mental and physical health of workers (e.g. increasing obesity) and can influence the health status of the worker's family (Morrissey et al., 2011; Cottini and Lucifora, 2011). Lewis and Malecha (2011) find that negative social relations in the workplace have detrimental effects on the productivity of nurses. Mather and Lighthall (2012), reviewing the literature on mental stress and reward processing, find that overly stressed employees are more likely to be distracted and may neglect to adjust their working habits after negative feedback from their hierarchy. Halko et al. (2014), Shleifer (2004), Schwieren and Weichselbaumer (2010), and Gill et al. (2013) suggest that competitive pressures at the workplace, notably compensation-related, can lead to greater risk-taking by men and lower risk-taking by women (shyness to compete for promotion and under-representation in leading positions), and can increase cheating, sabotage, corruption, excessive executive pay and corporate earnings manipulations with no or a negative effect on productivity.

(31) For the 'working conditions' dimension the EMCO set of indicators relies mostly on the EWCS questions. One should note that while they relate to objective outcomes, the indicators reflect people's feelings and perceptions about their working environment. However, this adds valuable information to the comprehensive picture about the general labour market conditions.

(32) The Chart refers only to accidents rate, while in many jobs work-related health and safety risks are much broader, including respiratory diseases, skin conditions, musculoskeletal disorders, etc.

(33) Note that in this subsection 'work intensity' is used in line with the sociological literature in the sense of a characteristic of work organisation, rather than in the most narrow sense used by Eurostat (the indicator persons living in households with low work intensity is defined as the number of persons living in a household having a work intensity below a threshold set at 0.20). 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. More details at http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Persons_living_in_households_with_low_work_intensity.

Chart 11: **Relative rate of accidents at work by skill level (relative to the low-skilled), in pps**



Source: Eurostat ESAW 2009, table [hsw_ac1]. 'Low' stands for pre-primary, primary and lower secondary education corresponding to levels 0–2 (ISCED 1997); 'medium' stands for upper secondary non-tertiary education corresponding to levels 3–4; and 'high' for levels 5–6.

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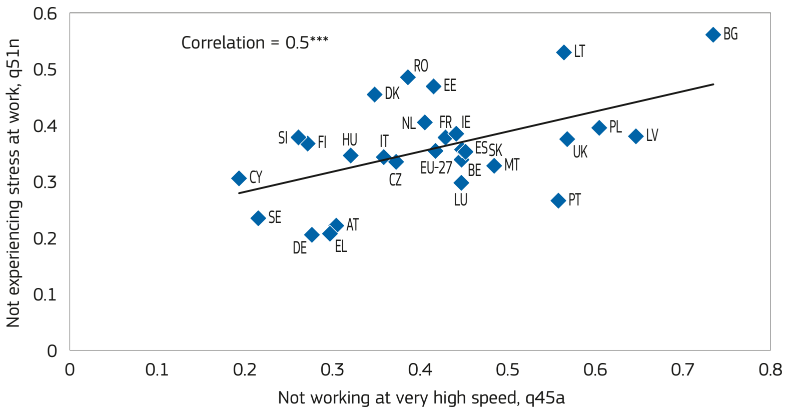
Chart 12: **High speed at work and stress based on Eurofound data**



Source: Eurofound, EWCS 2010, question 45a and 51n.

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In general, work intensity does not need to have a negative connotation. Arguments emphasising the negative effects of work intensity on employees' well-being focus on "constrained" work intensity, where employees have little choice about the effort they put into their work. Higher work intensity may be a result of organisational policies, such as management strategies, supervisory pressures or machine pacing, but may also reflect individuals' choice (e.g. Gallie and Zhou, 2013). Some degree of work intensity is an inherent part of creative effort, providing a challenge that enables people to develop their skills (Gallie and Zhou, 2013).

Empirical research indicates that the combination of high work intensity and low job autonomy increases work stress and can severely impact employees' physical and mental health. Excessive workloads and unclear or conflicting demands on the job-holder, combined with the lack of role clarity, lack of involvement in decision-making, lack of influence over the job design, poorly managed organisational change and job insecurity, lead to psychosocial risks and physical and mental ill health, in particular depression, burnout and cardiovascular diseases, and therefore lower productivity and output (Karasek and Theorell, 1990; Theorell and Karasek, 1996; Marmot, 2004; Theorell, 2007; European Commission, 2014d; OECD, 2014).

As Chart 12 shows, according to the Eurofound EWCS (2010), in some Member States (Bulgaria, Poland, Latvia and Lithuania) people appear not to experience stress and do not work at high speed nor to tight deadlines. In contrast, in Sweden, Germany, Austria, Greece and Cyprus people work at very high speed, to tight deadlines and under stress. However, the level of self-responsibility is also much higher in the Nordic countries. Note, though, that measuring exposure to stress across the EU is not straightforward, since workers' perception of stress may be affected by cultural differences, their understanding of the notion of stress or their propensity towards admitting to stress.

Chart 13 links the three dimensions of working conditions: work intensity, work autonomy and the level of job stress. The Chart shows that there are two groups of countries that are characterised by a low level of stress: one where job control and work intensity are low (e.g. Bulgaria and Lithuania); and one where the 'demands' of the job are high but are compensated by a high level of self-responsibility (e.g. the Netherlands and Denmark). High levels of stress are experienced in Germany, Cyprus and Austria, where the 'demands' are among the highest but levels of self-responsibility are relatively low (34). Unsurprisingly, there are no countries with high autonomy and low 'demands'.

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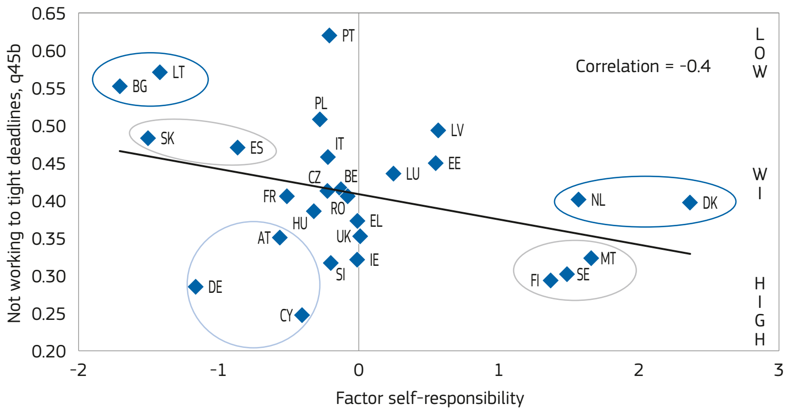
(34) Sweden represents an exception: even though it is in the yellow circle, stress is perceived to be high in Sweden regardless of the high level of job autonomy. However, if one looks at the separate indicators behind the composite factor of self-responsibility, one can see that the control over the speed of own work (EWCS question 50c) is remarkably low, the third lowest in the Union. This may convey the impression of time pressure and explain the registered high levels of stress in the country.

Chart 13: Work intensity, autonomy and stress



Source: DG EMPL calculations based on the Eurofound EWCS 2010, question 45b. For explanation of the factor “self-responsibility” and the underlying questions from the EWCS, see the source , see the source of Chart 16. The colours of the circles show the degree of work stress (based on question 51n): dark blue — low; light blue — high; and gray— about the average.

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Box 2: Stress, happiness and productivity

In 2014, stress was the second most-reported work-related health problem in the EU. A 2013 European opinion poll conducted by EU-OSHA (35) found that more than half of all workers considered work-related stress to be common in their workplace. The most common causes of work-related stress are job reorganisation or job insecurity (72 %), hours worked or workload (66 %), being subject to unacceptable behaviour such as bullying or harassment (59 %), lack of support from colleagues or superiors (57 %), lack of clarity on roles or responsibilities (52 %), and limited possibility of managing one’s work patterns (46 %) (European Commission, 2014d). In the Enterprise Survey on New and Emerging Risks (2010) (36), around 8 in 10 European managers expressed concern about work-related stress in their workplaces, though less than 30 % admitted having implemented policies to deal with its risks. Between 50 % and 60 % of all lost working days are related to stress and psychosocial risks.

The question of whether happiness makes people more productive occupies economists, behavioural scientists and policy makers. The well-being of employees concerns many company managers. For example, “At Google, we know that health, family and wellbeing are an important aspect of Googlers’ lives. We have also noticed that employees who are happy demonstrate increased motivation …[We] …work to ensure that Google is …an emotionally healthy place to work” (Lara Harding, People Programs Manager, Google). Several studies show the link between positive mood and productivity (Oswald et al., 2014) (37), between well-being and motivation and higher capacity to solve anagrams (Erez and Isen, 2002), and between job satisfaction and value added per hours worked in manufacturing (Boeckerman and Ilmakunnas, 2012).

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(35) See reports in figures at https://osha.europa.eu/en/safety-health-in-figures.

(36) Results and publications available at https://osha.europa.eu/en/esener-enterprise-survey.

(37) Oswald et al. (2014) set up three short (five-minute) GMAT-style maths experiments on more than 700 individuals whose mood was measured and then manipulated with video clips, snacks and drinks. The measurements took into account negative real-life events in the previous five years (e.g. bereavement and family illness). The study concluded that those made happier had productivity gains of 12 %, while individuals who suffered a major real-life shock in the preceding five years showed lower productivity.

3.3.3. Job autonomy can boost productivity

Job control or autonomy (38) is a core factor in determining the quality of work. Several studies report that workers who are free to make choices in the workplace and are accountable for their decisions are happier, more committed, put more effort into their work, and are therefore more productive and show a lower tendency to quit their job (Chirkov et al., 2011 for a review; Mahdi et al., 2012; Gellatly and Irving, 2001; Langfred and Moye, 2004). This is especially the case when the work is complex or requires more creativity, though in a very routine job, autonomy can still increase satisfaction and reduce turnover (DeCarlo and Agarwal, 1999; Finn, 2001; Liu et al., 2005; Nguyen et al., 2003; Thompson and Prottas, 2005). Job autonomy has also been seen as an important factor in moderating the impact of work intensity (Liu et al., 2005).

Chart 14, Chart 15 and Chart 16, based on the Eurofound EWCS (2010), show that job autonomy is the highest in Sweden, Denmark, Finland and the Netherlands. It is the lowest in Cyprus, Greece, Portugal and Bulgaria. Germany and Austria score among the lowest on the perceptions of the level of self-responsibility (Chart 16) (39). Gallie and Zhou (2013), using European Social Survey data (40), report similar country patterns that are stable over time. The authors explain this stability over time with the fact that job autonomy is embedded in wider institutional structures. In some countries, job autonomy and control have been embedded for many years at company as well as national level institutions.

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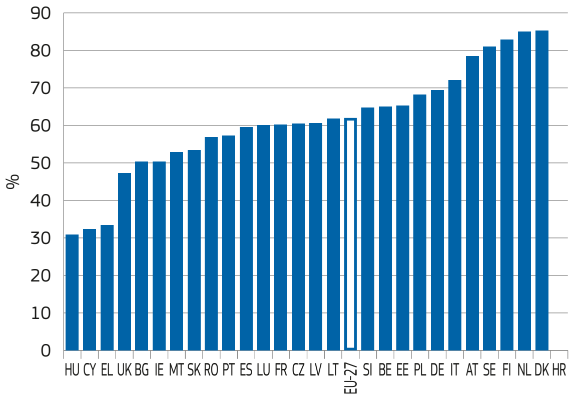
(38) Job autonomy can take different forms depending on the country context and the organisational culture. Organisations may let employees set their own schedules or choose how and where to do their work.

(39) Germany scores low in terms of control over the speed of own work (EWCS question 50c), order of tasks (50a), employee consultation on targets (51c), ability to apply own ideas (51i) and employee involvement in improving work organisation (51d). Austria scores low in terms of control over speed of work, ability to apply own ideas and involvement in improvements of work processes.

(40) There are three items in the ESS that provide a measure of job control: how much ‘the management at your work allows you (a) to decide how your own daily work is organised; (b) to influence policy decisions about the activities of the organisation; and (c) to choose or change your pace of work’. The items then cover not only immediate control over the work task (task discretion), but also people’s perceptions of wider influence over organisational decisions.

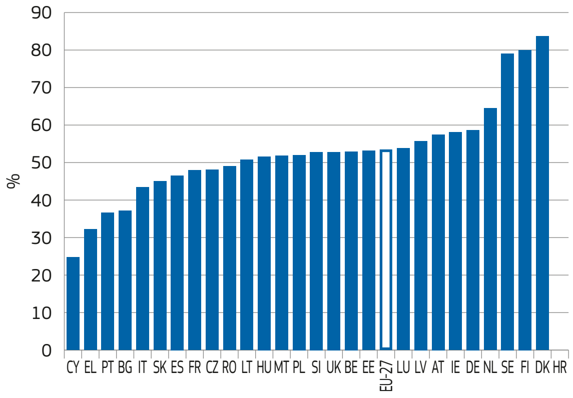
Chart 14: **Workplace NOT dependent on the direct control of your boss**



Source: Eurofound, EWCS 2010, question q46e.

Note: No observation available for HR.

Chart 15: **Team members decide by themselves on the division of tasks**



Source: Eurofound, EWCS 2010, question 57a.

Note: No observation available for HR.

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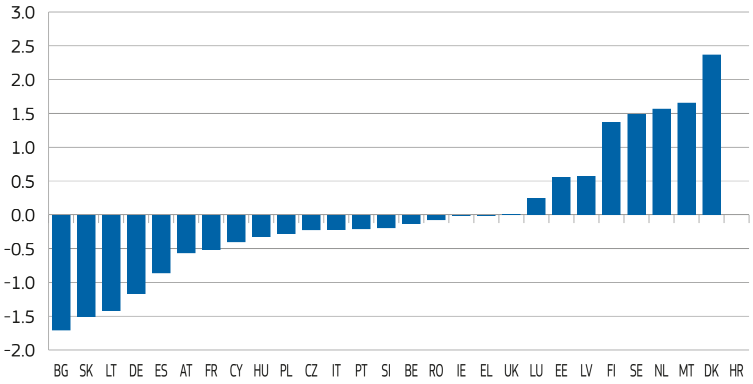
Chart 16: **Self-responsibility**



Source: DG EMPL calculations based on Eurofound EWCS 2010, compressing questions q49b — main job involves assessing the quality of own work; q49c — solving unforeseen problems on your own; q50a — able to choose or change your order of tasks; q50b — able to choose your methods of work; q50c — able to choose/change your speed of work; q51c — you are consulted before targets are set for your work; q51d — involved in improving the work organisation; q51e — you have a say in the choice of your working partners; q51f — can take a break when you wish; q51i — able to apply your own ideas in your work; q51o — can influence decisions that are important for your work.

Note: No observation available for HR.

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3.3.4. Social dialogue

By promoting win-win solutions for employers and workers, social dialogue (41) plays an important role in the improvement of working conditions. Throughout Europe employers' and workers' representatives combine their expertise on work-related matters to promote job quality (42).

Workers' and employers' representatives are uniquely well-placed to identify skill needs and promote lifelong learning. Social partners play a key role in European Sector Skills Councils, which are designed to anticipate the need for skills in specific sectors more effectively and achieve a better match between skills and labour market needs (43). European social partners have concluded a number of skills-related autonomous agreements, which national social partners implement in accordance with procedures and practices specific to management and labour in the Member States (44).

Employers and workers have a joint interest in promoting safe and healthy workplaces. EU cross-industry social dialogue led to agreements on stress and violence at work, while EU sectoral social dialogue led to sectors-specific agreements or campaigns (45). With the support of the European Agency for Health and Safety at Work, social partners at European and national level cooperate to develop 'Online Interactive Risk Assessment' (OiRA) tools (46).

Europe has a rich tradition of social dialogue on working time, contractual arrangements and the reconciliation of work and family life. Framework agreements cover a large number of areas from parental leave (47) and working time, to equal treatment between part-time workers and full-time workers and between fixed-term contract workers and those on open-ended contracts (48).

A number of EU Directives establish minimum requirements regarding information and consultation of workers at

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(41) Social dialogue refers to discussions, consultations, negotiations and joint actions involving organisations representing the two sides of industry (employers and workers).

(42) This section cannot exhaustively cover all social partners' activities at company, sectoral, national and European level. Rather, it focuses on a number of key initiatives at European level. Interested readers will find additional information in the 'Industrial Relations in Europe' series published by the European Commission (e.g. European Commission 2010b and 2013d), and in publications by the European Foundation for the Improvement of Living and Working Conditions (e.g. Eurofound 2014a).

(43) See http://ec.europa.eu/social/main.jsp?catId=784

(44) Examples include a European licence for drivers on interoperable services (railway sector), training standards and European certificates (hairdressing), or core competences for process operators and first-line supervisors (chemical sector).

(45) For instance in the hospital sector http://ec.europa.eu/social/main.jsp?catId=521&langId=en&agreementId=5136

(46) These tools can help micro and small organisations to put in place a step-by-step risk assessment process — starting with the identification and evaluation of workplace risks, through to the decision-making and implementation of preventative actions, to monitoring and reporting.

(47) Established at cross-industry level, giving all employees an individual non-transferable right to parental leave was first signed by European social partners in 1995, revised in 2009.

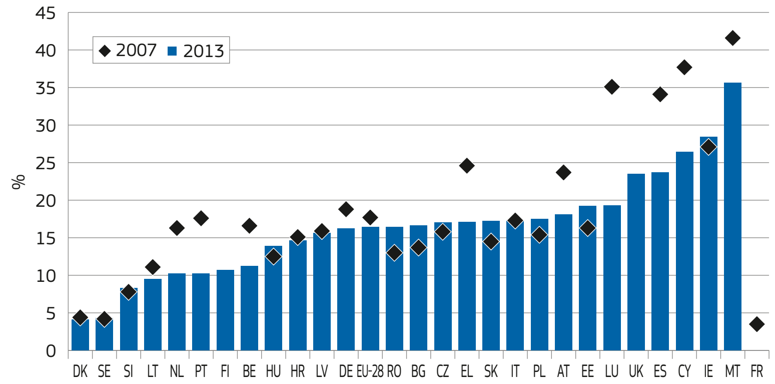
(48) Each of these cross-industry agreements has been made legally binding through Council Directives. The same applies to a number of sectoral agreements on working time of mobile workers, including sea farers, mobile civil aviation staff and mobile workers assigned to interoperable cross-border rail services. A recent agreement between social partners of the inland waterways sector has been forwarded to the Council for implementation by directive.

company level(49). A recent fitness check of these directives(50) found that information and consultation of workers at company level can contribute to solving problems at work, engage workers in changes in work organisation and work conditions, appease conflicts, promote trust and partnership, increase job satisfaction and commitment, reduce the rate at which workers leave the company, and improve the physical health and well-being of workers. It was also found that information and consultation has a positive impact on staff performance and on the company's competitiveness and reputation.

Finally, setting wages is one of the key functions of industrial relations systems in the EU. Despite a tendency for the company level and individual bargaining to gain importance, multi-employer bargaining remains important in many European countries. Beyond the main level of bargaining, it is important to consider coordination of different processes, both vertically (between different levels) and horizontally (between units at a given level, e.g. between companies).

While the promotion of dialogue between management and labour is an objective of the European Union (Article 151 TFEU), there is no single model of social dialogue in the EU. Across Europe, there exists a large diversity of national industrial relations systems, which the Union has to take into account when promoting social dialogue at its level (Article 152 TFEU). Industrial relations should be considered as complex systems whose institutions interlock, which cannot be measured along a single dimension or in a single statistic. There are different qualities, each with different effects on the regulation of the economy and the labour market. In whichever form, social dialogue makes an important contribution to job quality, both directly as a key dimension of a 'good job' and through its positive impact on working conditions.

Chart 17: **Inactivity due to family responsibilities, 2007–13 (% of total inactive population)**



Source: Eurostat LFS, table [lfsa_igar].

Note: No observation available for FR in 2013.

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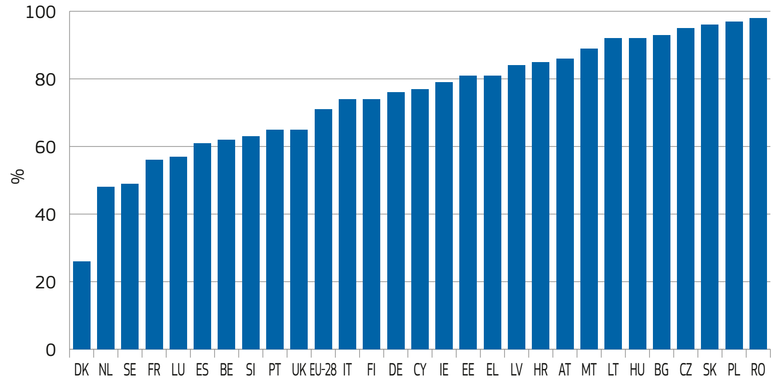
Chart 18: **The proportion of children who are not in formal childcare < 3 years old, 2012 (% of the population under 3 years old)**



Source: Eurostat SILC, table [ilc_caindformal].

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3.4. Work-life and gender balance to strengthen participation, efficiency and equity

3.4.1. Work-life balance

Insufficient opportunities(51) for combining work with other private and social responsibilities may lead to higher inactivity rates among certain groups of the population (e.g. older people, persons with family responsibilities), with potential consequences in terms of social exclusion and greater dependence on social protection systems.

The inactivity rate due to family responsibilities is the highest in Malta, Cyprus, Spain and Ireland (Chart 17), followed by Luxembourg and the United Kingdom. It has decreased over time in Spain, Cyprus, and Greece though. In the United Kingdom, supply of childcare facilities is around the EU average (Chart 18) but childcare costs are high(52). In contrast, Denmark, Sweden, France, Estonia, the Netherlands and Portugal have some of the lowest inactivity rates due to family responsibilities (Chart 17), as well as more readily available childcare facilities (Chart 18) and at an affordable cost.

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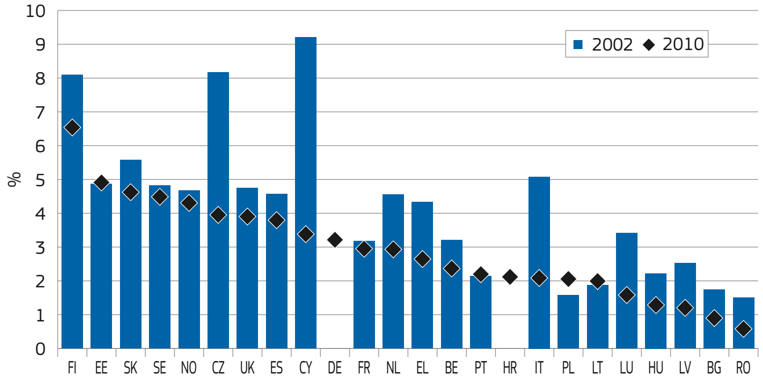
(49) In particular, Directives 98/59/EC on collective redundancies, 2001/23/EC on transfers of undertakings and 2002/14/EC on a general framework relating to information and consultation of workers.

(50) The results of the fitness check were published on 26 July 2013 in a Commission Staff Working Document available at http://ec.europa.eu/social/main.jsp?langId=en&catId=707&newsId=1942&furtherNews=yes

(51) For example, availability of easily accessible and affordable childcare facilities, voluntary part-time work patterns, parental leave, adaptations for older workers or workers with disabilities, etc.

(52) The 2013 Northern Ireland Childcare Cost survey (Dennison, 2013) shows that a full-time childcare place (50 hours) costs GBP 213 per week in Britain. In Northern Ireland, childcare costs are also high, and increased to GBP 158 per week in 2013. Moreover, 35 % of the nurseries in Ireland charge the same price or even higher for a part-time place than for a full-time one.

Chart 19: **Contribution of wage differences between men and women to Gini index (in %)**



Source: WiiW (2014).

Notes: Using the Shapley approach, i.e. a decomposition that calculates the contribution of each of thexplanatory variables to the Gini index — for more details see WiiW (2014). No observation available for DE and HR in 2002.

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3.4.2. Gender balance

Gender stereotypes can lead to lower labour market participation of women, fewer job opportunities for women and lower pay which, in turn, may lead to a higher risk of social exclusion. The gender pay gap is an important indicator of persistent discrimination in the labour market. The unadjusted gender pay gap stood at 16.4 % in 2012 in the EU as a whole. For example, WiiW (2014), using EU-SES data, estimates (53) that in 2010 the adjusted gender pay gap ranged from around 5 % in Romania and Bulgaria to more than 15 % in Estonia (Annex 3, Chart A3.11). The median adjusted gender pay gap decreased from 13.2 % in 2002 to 10.4 % in 2010. The adjusted gender wage gap has declined over time in all except four Member States (Lithuania, Poland, Portugal and Slovakia).

Chart 19 shows the extent to which gender pay gaps contribute to overall wage inequality. On average, gender differences contribute about 3 % to overall inequality, though there are important cross-country differences ranging from more than 6 % in Finland to less than 1 % in Bulgaria and Romania. The contribution of gender differences to inequality fell between 2002 and 2010 in all countries except Lithuania, Poland and Portugal. The declines were particularly large in Cyprus (from initially around 9 % in 2002 to only 3 % in 2010), the Czech Republic (from initially 8 % to 4 % in 2010) and Italy (from 5 % in 2002 to 2 % in 2010).

3.5. Summary of findings

The literature review suggests that higher productivity can be attained through adequate levels of earnings; higher job security; higher education and life-long training, including on-the-job training; good working conditions — a safe and healthy working environment, an appropriate balance between work intensity and job autonomy and greater employee participation and empowerment, including social dialogue; and better work-life and gender balance. These can strengthen human capital formation, including firm-specific human capital, and increase motivation, commitment and effort. They can reduce accidents, absenteeism and stress, induce creative effort, foster cooperation and generate positive externalities on co-workers. They may also contribute to fostering higher labour market participation and longer working lives, particularly of certain population groups (e.g. older workers, those with family responsibilities or disabilities), reducing dependency on social security systems and ensuring greater social cohesion.

EMCO indicators show that job quality varies across EU Member States and may have deteriorated during the crisis in several dimensions.

- In-work poverty increased in most countries during the crisis. In-work poverty is high in Romania (due to low earnings), Italy, Spain and Greece (due to a high proportion of people in low work-intensity households).

- The crisis increased the share of involuntary temporary work and impeded the transition rates to permanent contracts in many Member States. There is a high share of people on involuntarily temporary contracts in Italy, Spain, Greece, Portugal, Cyprus, Romania and Slovakia. Transitions from temporary to permanent contracts are difficult in Italy, Spain, Greece, Portugal and Cyprus, and in most Member States are more impeded for women than for men. Austria, Germany, the Netherlands and Estonia have the lowest rates of involuntary temporary work and high transitions rates to permanent employment.

- The lowest participation rates in life-long learning are found in Bulgaria, Romania, Croatia and Greece, while Denmark, Sweden and Finland have the highest participation rates. Spain and Italy perform rather low on on-the-job training.

- Low work intensity and low autonomy lead to low levels of perceived stress in Bulgaria and Lithuania; high work intensity and job autonomy generate average stress in Netherlands and Denmark; high intensity with low autonomy lead to high levels of stress in Germany, Austria and Cyprus.

- The unadjusted gender pay gap stood at 16.4 % in 2012 in the EU as a whole. Inactivity rates due to family responsibilities are the highest in Malta, Cyprus, Spain, Ireland and UK, and the lowest in Denmark and Sweden. They decreased in most Member States during the crisis due to increased strain on family budgets.

4. STRUCTURAL CHANGES CAN IMPACT ON JOB QUALITY AND PRODUCTIVITY GROWTH

Job quality can have a direct impact on labour productivity and labour market participation and both are crucial to the success of the European social market economy. This section identifies future challenges to job quality and labour market outcomes (labour market participation, productivity) brought about by a range of structural changes such as further technological progress and innovation, further globalisation, demographic

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(53) Correcting for differences in age, education, contract type, occupation, enterprise type (private, public), firm size, industry and country.

change and the general greening of the economy. The section assesses to what extent labour market polices can reinforce positive developments and prevent or correct adverse outcomes associated with those changes and which are to a large extent conditioned by labour market institutions (e.g. social dialogue mechanisms, wage bargaining systems, minimum wages schemes, employment protection legislation, unemployment insurance, active labour market policies and life-long learning) and the business cycle (54).

This section starts by assessing the extent to which further innovation in information and communications technologies (ICT) and key enabling technologies (KETs)(55) may affect job quality. It focus on the job quality potential of an industrial renaissance, the role of small and medium enterprises (SMEs) and the risk that skill and talent biased technological progress may involve an unequal distribution of the costs and benefits between low and medium-skilled workers and high-skilled workers. In other words, technological progress has strong potential to improve productivity but may have a polarising effect in terms of job quality, impeding further technological progress and productivity growth and generating inequalities.

Next, the section looks at globalisation (associated with changes in international trade, foreign direct investment and labour mobility) and its potential to increase productivity and hence earnings. Again, costs may be incurred primarily by the most vulnerable workers, such as the low-skilled and employees on temporary contracts. They may experience stronger job insecurity (e.g. due to off-shoring or relocation) and lower wages (e.g. to compete with countries with an abundant supply of low-skilled workers). Such adverse outcomes may, in turn, have negative feedback on productivity and labour market participation if they reduce workers' commitment, motivation, abilities and upward job mobility.

The section then focuses on the opportunities and challenges for job quality brought about by an ageing population and high youth unemployment. These developments pose some important labour market policy challenges related to active ageing, gender equality, work-private life balance and discrimination, which may have a negative impact on employment and productivity if they hinder the optimal allocation of resources.

Finally, the section explores the policy challenges and opportunities related to job quality in the transition to a greener economy. The shift to a green and resource-efficient economy is above all an opportunity to support sustainable and high-quality employment, while contributing to the recovery from the recent economic crisis. However, better targeting and coordination of labour market measures and tools are essential in order to create the necessary conditions to bridge skill gaps and overcome labour shortages, manage restructuring, anticipate change and emerging health and safety risks (especially for low-skilled manual workers), and ensure gender balance. These may have an important impact on workers' performance and participation in the production of new green goods and services.

4.1. The two sides of knowledge and technology-intensive growth

This subsection focuses on challenges posed by technological progress on job quality. It starts by assessing the increasing importance of knowledge and creativity in the future labour market and the risks associated with the automation of tasks, such as jobs losses and labour market polarisation. It investigates the extent to which an industrial renaissance associated with the potential for further innovations in ICT and KETs has the ability to generate more and better jobs. It looks at the role of SMEs and the challenges they face in improving job quality in the context of technology innovation. It then discusses the role of labour market policies in tempering labour market polarisation driven by technological progress.

4.1.1. Technology change and innovation will change the job landscape of the future and can render jobs obsolete

Technological progress is a key defining factor in how goods and services are produced and delivered to consumers. The fact that production processes are changing is by no means new, but the speed of that change may be. It can take decades for a new invention to be applied, but when it is applied, changes accelerate. The typewriter was invented in the 1860s but was not introduced into the office until the early 20th century, when it joined a wave of mechanisation, with Dictaphones, calculators, mimeo machines, address machines, and the predecessor of the computer — the keypunch (Frey and Osborne, 2013, after Beniger, 1986; Cortada, 2000). There are many signs that the cumulative effect of advancements in information sharing, computing power, machine learning, machine vision and data mining will soon accelerate the changes in terms of the types of jobs that are needed, how rewarding these jobs are and the requisite organisational arrangements.

In the not-so-distant past the switchboard operator became obsolete due to direct number dialling, the copy typist gave way to personal word processing, the bank teller was replaced by cash machines, the travel agent fell prey to online booking systems and many car assembly line workers were replaced by industrial robots. Deindustrialisation and relocation to low-cost countries have been shaping the economic landscape and labour markets of the high-income countries over the past forty or so years. A long-term decline of heavy industries such as mining or steel production has been observed, while specialised high-tech industries have been holding ground even if employing fewer workers per output (automotive manufacturing being one of many examples).

However, current changes are expected to have a stronger and polarising impact on labour markets (e.g. Acemoglu and Autor, 2010; Eurofound, 2013). Currently, technology is changing the face of education through online lectures classes

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(54) A macroeconomic downturn may reduce job quality through: lower job security, lower skill formation, stronger health and safety risks, more involuntary temporary/part-time labour contracts, distorted work-private life and gender balances (e.g. Eurofound, 2012a; RWI, 2014; Tahlin, 2013; Dieckhoff, 2014; Johnson, 2012; McGinnity and Russel, 2013; Ravn and Sterk, 2013; Gallie, 2014).

(55) Key enabling technologies (KETs) enable the development of new goods and services and the restructuring of industrial processes needed to modernise EU industry and make the transition to a knowledge-based and low-carbon resource-efficient economy. They play an important role in the R&D, innovation and cluster strategies of many industries. More particularly, KETs cover micro-/nano-electronics, nanotechnology, photonics, advanced materials, industrial biotechnology and advanced manufacturing technologies. See European Commission (2012b) and HLGKET (2010).

and learning resources that are available globally and often at a fraction of the cost. Digital applications have shown the ability to compete with and potentially undermine various traditional service providers such as taxis or hotels (e.g. ride-sharing app 'Uber' or 'AirBnb' flat rental and sharing). Computerisation, typically confined to manual and cognitive routine tasks, is now spreading to activities that were commonly defined as non-routine (e.g. Autor and Dorn, 2013; Goos et al., 2009). Tasks regarded as non-routine only a decade ago have since been computerised at a rapid pace (Autor, et al., 2003; Markoff, 2011; Frey and Osbourne, 2013). Recent examples of how the boundary between routine and non-routine tasks and between automatable and non-automatable routines will be pushed further by technology include handwriting recognition, machine translation and the use of language analysis to identify general concepts in documents (56).

Authors speculate about the scale of the challenge ahead if new technologies mature and spread beyond prototypical and experimental applications: self-driving vehicles, health diagnostics, automated call centres and robot-assisted remote surgery are some examples. The impact may spread to related sectors. For example, self-driving vehicles can reduce drivers' jobs and, if safer, reduce business opportunities in the insurance sector.

In some sectors, there are already palpable signs of rising automation in work spaces such as container ports, logistics warehouses or even hospitals (e.g. robots pulling trolleys with meals, medicines and blood samples in hospitals (Bloss, 2011) or climbing wind turbines much faster than a human and inspecting the blades 100 metres above ground (Robotics-VO, 2013)).

While intellectual and knowledge work (e.g. computer programming) is flourishing and craftsmanship-based manual trades remain in high demand, many middle-class occupations, typical of the industrialised societies of the latter half of the 20th century, are being eroded. Programmable machines are expected to take over many routine and less routine tasks, many of which are performed by unskilled and semiskilled industrial and clerical service workers who typically occupy the middle layers of employment. Some studies strike an alarmist tone and argue that the process has only just begun. Frey and Osborne (2013) predict that 47 % of current jobs in advanced economies like the United States are at risk of being automated over the next 20 years.

Further technological change is therefore expected to have a strong and polarising effect, affecting jobs and skill levels in a different manner (see below). In this context, managing the transition into a new labour market where many jobs succumb to automation must become a key priority for policymakers.

4.1.2. Occupations resilient to automation: the importance of knowledge and creativity (human capital) in view of technology change

The non-routine jobs that are likely to resist automation in the foreseeable future are located at either the lower or higher end of the wage and skill spectrum. At the lower end, there are services such as hospitality, care, beauty, cleaning, customer service, construction, decorating and installation. These may be subjected to some vocational training and licensing in particular legal settings but require soft skills such as empathy, improvisation and complex decision making. Further, they feature complex manual tasks which in turn rely on specific skills and experience. These jobs are not suited to outsourcing since they have to be performed on-site.

Despite their undisputed social utility, such non-routine, manual, low- to medium-skilled jobs often offer modest remuneration with precarious job arrangements and physically demanding working conditions. Likely reasons for this are the abundant labour supply, the possibility of using underpaid migrant workers and, in some cases, the threat to relocate some part of these tasks to low-wage countries (Standing, 2011). In this context, there is clearly a need to step up efforts to improve the working conditions in these jobs and to ensure the application of existing worker protection laws.

At the high end of non-routine and non-automatable jobs are those consisting of complex cognitive tasks and a high level of professional competence, usually combined with a long and versatile formal education (e.g. computer programmers, creative industries, engineers, managers, investment bankers, lawyers, doctors, teachers and scientists). Europe has great stakes in developing the knowledge-based economy, investing in high-end skills and assuring optimum job conditions for knowledge workers. Compared with low-skilled workers, knowledge workers already enjoy a more privileged position on the labour market, with more favourable working conditions and a higher pay. Yet, the knowledge sector is where the highest potential for productivity growth is likely to lie. Hence, a focus on more efficient working arrangements will be key to securing Europe's position as a hotspot of high productivity.

4.1.3. Technology change can lead to a possible industrial renaissance in the EU

In the recent past, increasing job losses and the rise in job uncertainty have affected job quality, particularly in industry. For example, the employment share of the industry sector in the EU as a whole dropped from 22.1 % in 2000 to 17.7 % in 2013. At the same time, jobs in industry typically offer a high wage level (compared with the national average wage): average gross wages in industry were 10.6 % above the national average gross wage in the EU. The drop in industry shares and high wages are a combined effect of: a) strong productivity growth in industry; b) the opening of world markets and changing business models, whereby manufacturers outsource certain tasks (such as logistics, marketing or legal advice); and c) a shortage of skilled human capital in engineering and science which may have been aggravated by the recent crisis that stifled access to funds for innovation (e.g. European Commission, 2013).

A variety of policy measures have been implemented to temper the adverse socioeconomic impact of delocalisation and offshoring (e.g. Eurofound s.a.) (57). These initiatives have primarily been used to accommodate the ongoing job shift from industrial activities to other

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(56) For instance, Symantec's Clearwell system proved to be capable of analysing (conceptual contents, not just words) and sorting more than 570 000 documents in two days.

(57) At http://www.eurofound.europa.eu/areas/industrialrelations/dictionary/definitions/restructuring.htm http://www.eurofound.europa.eu/areas/industrialrelations/dictionary/definitions/restructuring.htm

activities notably in the services sector (though not necessarily associated with higher job quality).

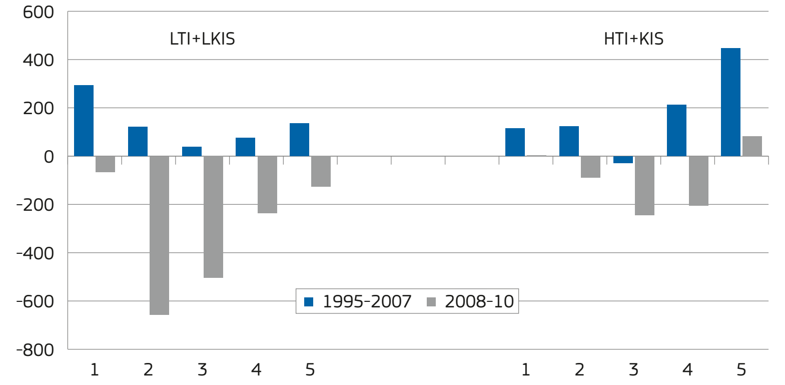
An important policy challenge will be to exploit the future job growth potential of emerging innovations in ICT and KETs, such as bio-based products, smart vehicles, sustainable construction and smart grids. Where future developments are characterised by a shift from mass-produced goods and services to more customised high-quality goods, there is strong potential for the resource-poor, skills-rich EU to create high quality and value added jobs.

SMEs will have an important role to play in this industrial renaissance since they are a major source of job creation and innovation. Workers' performance is largely determined by the scope with which educational systems are complemented by in-work training (see Chapter 2). Therefore, job training in SMEs will be important to ensure their workers' productivity and their international competitiveness. In this context, SMEs face very specific challenges that may reduce their efforts to reinforce their workers' educational attainment. Indeed, compared to larger firms, SMEs have fewer internal human and financial resources for skill development both at managerial and lower personnel level. Therefore, improved regulation of credit markets and lending conditions for SMEs is crucial to ensuring sufficient access to credit for skill formation. Where financial markets may fail to provide such finance, public funding should be considered.

4.1.4. Technology change can produce unbalanced outcomes in the population: stronger labour market polarisation

As discussed, there is a risk that the skill and talent-biased industrial renaissance brought about by strong technological changes will sharpen the ongoing labour market polarisation. It is expected that further digitalisation of economic activity, in combination with globalisation (see below), will increase the demand for highly skilled workers, increasing their job security and earnings, while the opposite may be observed for low- to medium-skilled groups and the long-term unemployed. The coming technology change is expected to benefit the strongest talents disproportionately, i.e. the 'superstars' that create services such as Facebook, for which there is a very strong demand (e.g. Brynjolfsson and McAfee, 2014).

Chart 20: Annual average change in absolute employment by wage quintile in private sector, EU, 1998–2010 (1 000)



Source: DG EMPL calculations based on Eurofound (2013) available at http://www.eurofound.europa.eu/emcc/ejm/summary.htm

Notes: LTI: low-tech industry, LKIS: low knowledge intensive services, HTI: high-tech industry, KIS: knowledge intensive services. No data for BG, MT, PL or RO.

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Such developments will reinforce ongoing labour market polarisation in the private sector in the EU economy (Chart 20). The left pane of Chart 20 shows changes in the earnings quintiles in low-tech industries and basic knowledge services, while the right pane of Chart 20 shows changes in the earnings quintiles in the high-tech and knowledge intensive services. Blue bars show the pre-crisis period (i.e. 1995–2007), while the red bars show the period since the onset of the crisis (i.e. 2008–2010).

In the run-up to the crisis, the lowest quintile within the low-tech and basic knowledge services showed the strongest increase, while the highest quintile within the high-tech and knowledge intensive services showed the strongest increase. In both sectors, the other quintiles showed more modest increases. During the crisis, the same pattern can be observed but in the context of employment reduction: the lowest quintile within the low-tech and basic knowledge services showed the weakest decrease, while the highest quintile within the high-tech and knowledge intensive services showed an increase.

Uncertainties about projecting future developments in employment and earnings distribution remain. For example, some analysts, e.g. Gordon (2014), claim that today we are facing the first phase of a secular stagnation as future innovation will not carry the same productivity growth potential as past innovations related to the use of power generation, chemistry, etc., and that the observed changes in employment distribution generated by information technology will be short-lived. This view is in sharp contrast with, for example, Brynjolfsson and McAfee (2014) who argue that the ongoing 'digital revolution' (characterised by exponential growth in computing power, digital information and supply of relatively cheap devices which leads to new business opportunities) carries an even stronger potential for sustainable innovations and growth than the past 'industrial revolution' — though its benefits will not automatically be distributed in an equitable way.

At the same time, others, e.g. Autor (2014), emphasise that employment polarisation does not automatically lead to wage polarisation since the latter is also determined by 1) degree of complementarity (e.g. performances of workers may improve significantly to the extent they can be complemented with the computing power of machines), 2) the price- and income-elasticity of demand for services (e.g. low price elasticity for intensive manual work allows for stronger wage increases for these service providers) and 3) elasticity of labour supply (e.g. it usually takes more time to form highly-skilled workers than to train intensive manual workers).

This uncertainty requires permanent monitoring and assessment of developments in the field of technological progress.

4.1.5. The role of adequate labour market policies

In this context, the potential for technology change to improve job quality will require proactive labour market policies developed in synergy with other policies(58) to support the reallocation of labour towards these new activities in a secure way and in a way that benefits all employees, especially the low-skilled. For these workers, adequate earnings could be provided in the short to medium run by measures that have a direct impact on wages (such as the minimum wage paid by the employer), hiring subsidies (paid by the taxpayer to employer) or by social transfers or fiscal benefits (paid by the taxpayer to the employee).

However, since differences in gross earnings are largely driven by differences in productivity(59), closing the earnings gap through nominal unit labour cost increases(60) may be unsustainable for companies. In other words, to keep workers with excessive labour costs (relative to productivity) may be financially unsustainable to companies, especially in the face of increased international competition. Therefore, it is crucial immediately to reinforce the incentives and opportunities for skills formation and life-long learning directed at the low skilled and both inside and outside the job (European Commission, 2010a). These productivity-enhancing measures should complement the wage/income and other targeted measures towards workers at the lowest end of the earnings distribution (e.g. access to support services, such as child and elderly care).

Anticipating future changes in jobs and associated skill needs will remain a challenge, requiring a stronger collaboration between stakeholders (including employers, employees, education providers and skills forecasters) and better support for job mobility including through better information flows on job availability and the portability of social security benefits (health, pensions).

4.2. Globalisation creates opportunities but also challenges for job quality and productivity

This subsection looks at the potential impact of further globalisation brought about by the removal of barriers to free and fair trade, foreign direct investment (FDI) and migration. These are expected to create upward and downward impacts on job quality which have a direct impact on labour market participation and productivity, as the following analysis shows.

4.2.1. International trade may enhance productivity and job quality

Further opening to world markets strengthens countries' ability to exploit their comparative advantages, thereby reinforcing their overall productivity growth. For example, it is estimated that a 1 % increase in the openness of the economy generates an increase of 0.6 % in labour productivity the following year, based on an analysis of EU trade flows between 1996 and 2005 (e.g. European Commission, 2007c). These increases in productivity create the potential to raise real wages, which is an important determinant of job quality. In turn, these increases in earnings may strengthen workers' commitment, with further positive impacts on productivity.

Production patterns will change as globalisation, in combination with technological progress, will allow (large) firms to specialise in core activities and delegate much of their non-core activities to global suppliers so as to reduce production costs. For the resource-poor, skill-rich EU this may imply a shift from traditional manufacturing (e.g. agro-food, steel, textiles) to more knowledge- and technology-intensive activities (e.g. high-tech business services, haute couture and design, as well as industrial activities such as computing, biotechnology and nanotechnology)(61). These developments will strengthen workers' opportunities to move to jobs of higher quality and value added (e.g. in terms of earnings or autonomy).

However, not all workers (especially the low-skilled) will have the opportunity to benefit from the opportunities created by globalisation (in combination with technological progress). Moreover, increased international competition from firms located in countries with lower job quality standards and low wages may also result in increased job insecurity (e.g. due to off-shoring, restructuring), poorer worker conditions (e.g. in terms of maintenance of hygiene, occupational health and safety norms) and cuts in wage and non-wage labour costs (e.g. severance pay, individual and collective dismissal procedures), especially for workers performing routine tasks in the production of tradable goods and services. Globalisation may then have a persistent adverse impact on job quality in these types of activities.

Nevertheless, several policy instruments can be used to strengthen upward job mobility, including job-searching assistance, skill formation and portability of social security benefits(62). Job-searching assistance is a relatively effective, low-cost tool for smoothing the reallocation of labour. However, as the transition to new knowledge- and technology-intensive activities poses new challenges, awareness of job opportunities and skills requirements by workers, employers and employment services can be low.

Hence, European and National platforms that facilitate the exchange of information between all stakeholders should be strengthened to improve the effectiveness of job-searching structures. Another policy is to strengthen the expertise and capacity of employment services to be more proactive and to increase their offer of re-training programmes and other relevant services.

In addition to modernising education and training systems to meet the emerging demand for new skills, equal access to skills formation should be ensured to avoid any further polarisation. Despite a strong political commitment to life-long learning, only half of all European workers underwent training in 2010 (Eurofound, 2010). The figures are particularly low among women, older workers, lower-skilled workers, workers in small companies and workers on temporary contracts.

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(58) Such as investments in innovation, improvements in the functioning of the Internal Market and opening up international markets, mobilising public resources and unlocking private funds, equipping labour force for industrial transformations. See, for example, 'Industrial revolution brings industry back to Europe' at http://ec.europa.eu/enterprise/initiatives/mission-growth/index_en.htm#h2-4

(59) At least if competition and information flows are not distorted too much. Notable exceptions are, for example, in 'winner-takes-it-all' games where it is relative (not absolute) productivity which determines earnings, as is the case, for example, for Olympic athletes or employees in the financial sector.

(60) I.e. nominal compensation per employee adjusted for productivity, whereby gross wages are an important part of compensation per employee.

(61) For example, from 1970–2003, the textile workforce dropped by 60 % in the G7 countries (Huwart and Verdier, 2013).

(62) Apart from guidelines for Multinational Enterprises that establish responsible business conduct wherever they operate, as is outlined in, for example, OECD (2011a).

Improving the cross-border portability of social security benefits and pensions, together with better information about rights and assistance and their enforcement, can further reduce institutional barriers to labour mobility and increase the opportunities to exploit job quality to the fullest extent across the EU.

Finally, particular attention will need to be placed on the low- to medium-skilled workers who are in a disadvantageous position in their ability to upgrade their skills to meet the requirements of the new knowledge- and technology-intensive activities and are employed in jobs subject to international competition from countries with lower job quality standards. In such cases, just as with technology, a combination of targeted measures in terms of adequate earnings, support services, targeted skill-formation programmes and appropriate health and safety standards is necessary.

At the same time, a level playing field with trading partners could be assured via, for example, the inclusion in Free Trade Agreements of provisions covering minimum working conditions and the enforcement of national labour laws, with monitoring and enforcement of labour standards, in line with existing good practices. The ILO (2013a) reports a substantial growth in the number of trade agreements featuring labour-related measures since the mid-1990s as a result of a growing awareness of social and employment effects of trade liberalisation(63). In this context, implementing health and safety at work legislation in the EU but also more globally may be important (Box 3).

Box 3: Promoting Health and safety at work

The EU(64) has a strong interest in health and safety at work and develops, implements and monitors EU legislation to improve occupational health and safety in all activity sectors. EU legislation seeks to reduce the risk element associated with particular jobs (e.g. magnetic fields), therefore protecting the health of those workers(65). Part of the EU awareness-raising and legal process is also to promote workers' rights to make proposals to improve their health and safety and to appeal to competent authorities and stop their work in the event of serious danger. The European Commission Strategic Framework on Health and Safety at Work 2014–20(66) identifies the following key challenges:

- to improve the 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 strategies;
- to improve the prevention of work-related diseases by tackling new and emerging risks without neglecting existing risks;
- to take account of the ageing of the EU's workforce.

Actions to address these challenges include:

- Consolidating national health and safety strategies through, for example, policy coordination and mutual learning;
- Practical support (technical assistance and practical tools, such as the Online Interactive Risk Assessment tool (OiRA) that assesses sector-specific risks) to micro and small enterprises to help them comply with health and safety rules;
- Evaluating and improving the enforcement ability of national labour inspectorates;
- Eliminating unnecessary administrative burdens associated with existing legislation;
- Addressing the ageing of the European workforce and improving prevention of work-related diseases associated with new risks such as nanomaterials, green technology and biotechnologies;
- Improving data collection and developing monitoring tools;
- Reinforcing coordination with international organisations (e.g. ILO, WHO and OECD) and partners to contribute to improving working conditions and reducing work accidents and occupational diseases worldwide.

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(64) Supported by Committees of national experts such as the Advisory Committee on Safety and Health at Work (ACSH), the Scientific Committee on Occupational Exposure Limits (SCOEL) or the Senior Labour Inspectors Committee (SLIC).

(65) For more details see Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work, available at http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:31989L0391. See also IRE (2014 — Chapter 7).

(66) For more details, see http://ec.europa.eu/social/main.jsp?langId=en&catId=89&newsId=2053&furtherNews=yes

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(63) In total, there were 58 agreements with labour provisions in June 2013 — almost a quarter of the total 248 trade agreements currently in force.

4.2.2. Labour mobility and free movement of services within the EU may affect job quality

Strengthening labour mobility and free movement of services (such as posted workers) within the single market can have an important impact on job quality and productivity.

Labour mobility can have a positive impact on job quality as it can reduce the risk of unemployment and increase employment opportunities in more productive activities, thus yielding higher earnings for the workers involved. This is especially true for workers in sectors that are vulnerable to ongoing structural changes (e.g. energy-intensive industries). Nevertheless, labour mobility within the EU is still only taking place on a small scale despite the considerable opportunities offered by the EU single market(67). This is the combined outcome of factors such as language barriers or family constraints, as well as skill mismatches (such as in the case of coal miners — ILO and OECD, 2012). In such cases, workers tend to remain in their countries despite poor prospects for high quality jobs.

The free movement of services may also have a positive impact on job quality. The free movement of services is one of the founding principles of the European Union (Article 56 TFEU). The principle of the freedom to provide services enables a business providing services in one Member State to offer services on a temporary basis in another Member State, without having to be established. The exercise of this right entails that companies, when providing services in another Member State, may need to post employees to work temporarily in an EU country other than the one where they are habitually employed. Posting workers(68) allows companies to exploit their competitive advantages across borders and to meet temporary shortfalls in labour supply (such as in construction and transport)(69), while it may offer workers an opportunity to increase their job quality. At the same time, it may benefit European consumers by increasing competition in the single market(70).

Box 4: Job quality of posted workers

The 1996 Posting of Workers Directive(1) requires Member States to ensure that posted workers are subject to the host country's laws, regulations or administrative provisions, and generally applicable collective agreements in the construction sector as regards a core of employment conditions, such as: applicable minimum wages, maximum work and minimum rest periods, minimum paid annual leave, health, safety and hygiene at work, employment terms for pregnant women and young people, rules prohibiting child labour, and equality of treatment between men and women. However, the Commission's close monitoring of the implementation of the 1996 Directive found that the rules laid down by the Directive were not always correctly applied in practice by Member States.

This led the Commission in 2012 to table a proposal for an Enforcement Directive, aimed at providing clearer rules on posted workers and practical safeguards. A new Enforcement Directive(2) on the posting of workers based on the Commission's proposal was subsequently adopted by the co-legislator in May 2014. Some of the measures in the new Directive are: a clearer definition of posting to inhibit the growth of letter-box companies; a list of national control measures that the Member States may impose on posting companies; the possibility for Member States to require the designation of a contact person within the posting company to liaise with enforcement authorities; the option of applying an obligation to declare the identity of the company, the number of workers, their period of posting and the nature of services, and to keep basic documents such as employment contracts and payslips available at the workplace. Moreover, the new Directive includes the provision that penalties imposed on service providers in one Member State can be enforced and recovered in another. In addition, it also introduces a limited subcontracting liability in the construction sector. This means that posted workers in this sector can hold the contractor in a direct subcontractor relationship liable for any outstanding net remuneration corresponding to the minimum rates of pay, in addition to or in place of the employer.

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(1) Directive 96/71/EC of 16 December 1996, available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:1997:018:0001:0006:EN:PDF

(2) Directive 2014/67/EU of 15 May 2014, available at http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0067&rid=1

Nevertheless, the job quality of posted workers is a policy concern. Posted workers may suffer abuses such as not being appropriately or fully paid. In addition, one study found that only a very small minority of foreign workers were unionised compared to native workers(71). In turn, abuses may affect the job quality of residential workers by placing downward pressure on their wages and working conditions, with a potential negative impact on their motivation and productivity. All in all, the empirical evidence on the impact of posted work on the job quality of resident workers is scant and not clear-cut, partly due to lack of adequate data.

To counteract such adverse outcomes, important EU measures have been put in place to ensure that posted workers are not deprived of the protection of basic employment rights in the host country and that enterprises face a level playing field of competition (Box 4). Nevertheless, the

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(67) At the end of 2012, 14 million EU citizens resided in another Member State, i.e. 2.8% of the total EU population, up from 1.6% at the end of 2004, but lower than the share of non-EU nationals (4%) (European Commission, 2013b). On average the employment rate of mobile EU citizens was 67.7% in 2012; mobile EU citizens not in employment represent only a limited share (European Commission, 2013b).

(68) A 'posted worker' is a worker who, for a limited period, carries out their work in the territory of a Member State other than the Member State in which they normally work. Posted work relates to the free movement of services and is legally distinct from individual migration, which relates to the free movement of labour. For a summary on EU legislation on posting of workers, see, for instance, http://europa.eu/legislation_summaries/employment_and_social_policy/employment_rights_and_work_organisation/c10508_en.htm

(69) Comparable estimates of the number of posted workers across sectors, occupations and countries are not readily available but some studies provide ad-hoc estimates. For example, Idea and ECORYS (2011), European Commission (2011) and European Commission (2014) (June 2014 supplement to EU Employment and Social Situation, available at http://ec.europa.eu/social/BlobServlet?docId=11945&langId=en) estimate that there are about 1 million posted in the EU, employed in the construction, transport, telecommunications, entertainment, repairs, maintenance and servicing sectors, but also in specialised, high-skilled activities such as in the IT sector.

(70) Nevertheless, the impact of current regulations on competition is not unambiguous. For example, Mustilli and Pelkmans (2013) identify the imposition of, for example, a minimum wage for posted workers as a barrier to freedom of services in that it pre-empts Eastern European EU workers from exploiting their lower wages as a competitive advantage in the internal market.

(71) See, for example, Hansen and Andersen (2008) for the case of Eastern European workers working in the Danish construction sector.

monitoring of the employment conditions of posted workers — where relevant in cooperation with the social partners in the 'posting' as well as 'hosting' countries — needs to be intensified, while maintaining a balance between the protection of workers' job quality and the cost of administrative requirements imposed on service providers operating across borders.

4.3. Demographic change calls for an innovative approach to job quality

This subsection looks at the workplace challenges faced by older workers, and briefly discusses how structural changes are expected to affect their job quality and how policies can address present and future challenges and improve job quality of older workers. The section then looks at young workers, who have seen their unemployment rate soar to historical levels in recent times, the challenges they face and the policies needed to improve young workers' employment and avoid human capital erosion.

An ageing population and changing family structures (including a rising number of one-parent families) are important future demographic developments that pose important challenges to EU job quality, with a direct impact on labour market participation, productivity and growth. Job quality (e.g. straining working conditions) and specific characteristics of tax and benefit systems (including pensions) have an important impact on older workers' decisions regarding labour market participation and retirement (e.g. European Commission, 2011a; Lindström, 2006). In addition, the crisis has shown that young workers' job quality can be especially vulnerable, potentially reducing future opportunities for employment in high-quality jobs and thus productivity and growth. In order to preserve the European social model, a set of policies is needed to help older people stay active longer, retire later and become more productive, while ensuring that young workers find and keep a suitable job and use and reinforce their human capital.

4.3.1. More flexible work arrangements and skill-updating for older workers while addressing age discrimination

About six out of ten EU citizens perceive that workplaces are not adapted to the needs of people aged 54 and over, although there are large differences across Member States: from about 80% in Hungary to below 40% in Sweden (e.g. Eurobarometer, 2012). Work psychosocial(72) and physical strain is a strong push factor to early retirement for older workers (e.g. Bonsdorff et al., 2010; Park, 2010; Pollack, 2012). Such strains are often rooted in a loss of control over working conditions and a (perceived) lack of recognition of their performance (e.g. Siegrist et al., 2007; Oorschot and Jensen, 2009; Siegret and Wahrendorf, 2011).

Older workers have the lowest probability to transit to unemployment (if compared with the other age groups), but their probability to transit from unemployment to employment is also the lowest and their probability to transit to inactivity is the highest (e.g. RWI 2014). In addition to skewed financial incentives (e.g. expected pension income that exceeds contributions), poor career prospects may contribute to such an outcome. Poor career prospects for older workers often reflect a lack of recognition of their experience and expertise, which in turn discourages the search for a better or more adequate job. This calls for measures that strengthen the recognition of older workers' informally acquired qualifications, in combination with an enhancement of their job search intensity (in close collaboration with public employment services).

Furthermore, skills, especially ICT skills, are an important driver of job opportunities for older workers. For instance, Biagi et al. (2011) estimate that being skilled and using a PC at work reduced the probability of exiting employment by 12 percentage points in Italy in the early 2000s. This example illustrates that barriers to learning and training for older workers should be lowered.

Age discrimination in the workplace is still prevalent. For example, in 2011 one in five people surveyed experienced or witnessed age discrimination in the workplace or when looking for work (Special Eurobarometer, 2012). Strong differences exist between Member States, from almost 40% in Hungary compared to about 15% in Ireland. Nevertheless, employees aged 54 and over are thought to be more experienced and more reliable than younger employees (i.e., respectively 87% and 67% 'more likely').

Age discrimination and stereotyping may push older workers to early retirement (e.g. Gringart et al., 2011). They may be rooted in the perception that older workers are more reluctant to accept organisational change or new types of work (e.g. Taylor and Walker, 2003). Institutional reforms can address these forms of discrimination. Note though that 'age discrimination' laws that counteract these trends by reinforcing the employment protection of older workers may in fact reduce their hiring opportunities by increasing firing costs (e.g. Heywood and Siebert, 2009).

Measures to strengthen older workers' control over their working conditions could include the promotion of technologies that create more flexible and safer and healthier working conditions such as flexible working time and teleworking. The provision of eldercare facilities for partners may also ensure a better balance between family and working lives. Barriers to learning and training for older workers should be lowered. Special programmes (including training subsidies) focused on updating the skills of older workers, especially the low-skilled, may play an important role. Finally, ensuring an appropriate balance between efforts spent and earnings may improve their motivation, career prospects and recognition.

4.3.2. Investing in young workers' job quality

Occupational together with geographical mobility will be key to improving job quality in the future. In an ever-changing economy, workers will have to become receptive to more frequent job change if they want to improve their job quality. Young people have a stronger potential in this regard. They are on average more willing and able to move geographically since they often face fewer family commitments and are more likely to speak foreign languages and therefore adapt more quickly to new settings.

However, young people often lack the initial experience in professional life to kick-start their career along a path of high-quality jobs. Well-targeted labour market policies that invest in young people and improve the job quality of present and future cohorts of young workers are crucial. Such policies include modern apprenticeship systems, skill development that matches better the (short- and long-term) needs of the labour market, and guidance. From this perspective, it is imperative to ensure that all young people, whether registered with

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(72) Such as working in a post that does not correspond with the level of qualification.

employment services or not, receive an offer of employment, an apprenticeship, a traineeship or the chance to continue their education or training within four months of becoming unemployed or leaving formal education — as has been stipulated in the Youth Guarantee (73).

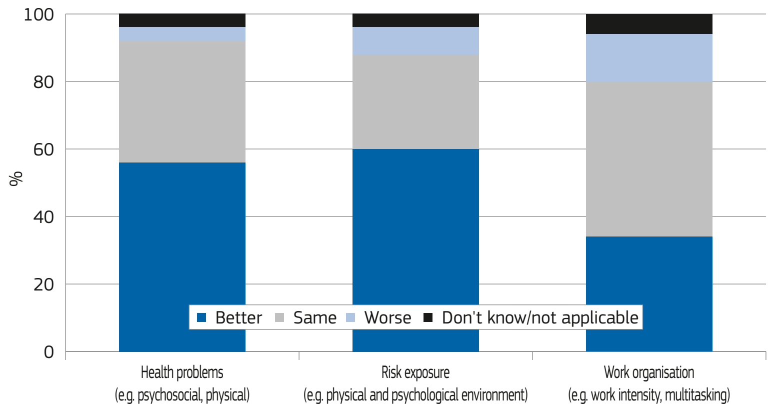
In support of this, there is a need to strengthen the capacity of the public employment services, reform education and training systems, and strengthen partnerships to reach out to inactive young people who are not registered with the employment services. In addition, the first experiences should offer quality learning content and satisfactory working conditions — as will be promoted by the European Alliance for Apprenticeships (74). Furthermore, the European social partners' Framework of Actions on Youth Employment is addressing several of the challenges related to bringing more youth into employment. Also, as the single market becomes more open and integrated, there will be an increasing need for a regular, low-cost and real-time flow of information on jobs across the EU, for young (as well as all) workers, as is envisaged under the European Jobs Network (EURES) (75).

Finally, persistent scarring effects affecting the current cohort of young workers will require attention to improve their job quality in coming years.

4.3.3. Tackling persistent gender discrimination

Women's job quality continues to be adversely affected by persistent forms of discrimination. In addition to lower participation and employment rates and shorter careers, Section 3 shows significant gender differences in earnings in the EU: on average women earn 16% less than men per hour of work. They also participate less in decision-making: women account for an average of 18% of the members of the board of directors in the largest publicly-listed companies (far from the 40% target for 2020) and 3% of CEOs (76).

Chart 21: **Effects of greening on health and well-being of employees**



Source: Gaušas et al. (2012).

Note: Survey with a total of 145 responses from companies (12% of respondents), employer organisations (21%), trade unions (41%), national, regional and local authorities (5%), European and international organisations (5.5%), other EU and national-level stakeholders (10%) and others (7%).

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As labour market participation, employment and retirement age are positively linked to education levels, an increasing share of women receiving a higher education is expected to result in better labour market outcomes. Nevertheless, along with appropriate legislation and social policies (e.g. European Commission, 2014c), addressing discrimination in general also calls for labour market policies that focus on the further strengthening of occupational and geographical mobility at the European level, through strengthening job search facilities, improving the portability of social security rights (such as pensions, medical care, unemployment benefits, etc.), and the recognition of skills and education certificates. Increased labour mobility decreases the bargaining power of employers and as a consequence also their scope to discriminate (77).

4.4. The jobs potential of the green economy

The greening of the economy can be a source of employment growth, as by increasing the efficiency of production processes, adopting innovative solutions to save resources and reduce pollution, developing new business models, or offering more sustainable products and services, companies can expand their markets and create new jobs, while transforming existing ones. In a knowledge economy, higher resource productivity can augment employment and allow wage increases without reducing the profit rate on the reduced capital stock (78). It is estimated that reducing the total material requirement of the EU economy by 24% could boost GDP by up to 3.3%, while creating 2.8 million jobs (79).

There has been considerable job creation in the environmental goods and services sector (EGSS) even during the economic crisis. Employment in the EU increased from 3 to 4.2 million between 2002 and 2011, including by 20% during the recession years (Eurostat). This trend is expected to continue as the EGSS sector supports the overall greening of the economy. Take the example of recycling. Many everyday goods are made out of materials that can be recycled. Recycling has introduced new production processes to treat used materials and to make new products out of old ones. This can generate new jobs of different levels of skills. ILO and OECD (2012) in turn provide a review of studies pointing to a significant job-creation potential in renewable energy sectors and associated with energy-efficient buildings.

Workers expect that further greening will have a positive impact on job quality, especially on their health (Gaušas et al., 2012) (Chart 21). Nevertheless, in a successful transition towards a greener economy, several downward risks for job quality in all its dimensions may have to be considered, as highlighted below.

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(73) For more details, see Council Recommendation of 22 April 2013 on establishing a Youth Guarantee, available at http://eur-lex.europa.eu/legal-content/EN/ALL/;ELX_SESSIONID=lNQSTntdhQbGNl1z7P6hZOYHvy8dS2lKN2wkn8lfRx9RnXTFLmTL!-60128961?uri=CELEX:32013H0426(01)

(74) More details available at http://ec.europa.eu/education/policy/vocational-policy/alliance_en.htm

(75) For more details, see https://ec.europa.eu/eures/page/homepage?lang=en

(76) See for instance http://ec.europa.eu/justice/gender-equality/files/documents/140303_factsheet_progress_en.pdf

(77) In perfect competition and perfect information, wage differences reflect differences in productivity and job quality, and lower job quality should give rise to a positive wage premium and discrimination cannot persist (e.g. Becker, 1957; Rosen, 1986). However, once perfect labour mobility does not hold and employers have an inclination to discriminate or stigmatise, then lower wages may be paid to the victims of discrimination (e.g. Black, 1995). The stronger the barriers to all forms of job mobility, the more likely low job quality will be associated with low pay, as employers can use their bargaining position.

(78) http://www.unido.org/fileadmin/user_media_upgrade/Media_center/2013/GREENBOOK.pdf

(79) http://ec.europa.eu/environment/enveco/studies_modelling/pdf/report_macroeconomic.pdf

4.4.1. Skills and training needs in the green economy

The introduction of new products and processes associated with greening (e.g. improving resource efficiency, recycling waste or preserving biodiversity) are due to entail changes in skills requirements and occupational profiles. Traditional skills remain important but new tasks are required, with increased demand for a skilled workforce in growing eco-industries, up-skilling of workers across all sectors, and re-skilling of workers in sectors vulnerable to restructuring. Workers may not be fully prepared for such tasks, or they may pose new safety and health risks (see below). For example, electricians are not trained to work at extreme heights and construction workers may not know how to deal with new material or electrical hazards.

Opportunities to move to green jobs of better quality will depend largely on workers' ability to upgrade their skills. This, in turn, will require enough flexibility in educational and training schemes to keep pace with green products and process innovations.

Education and training systems (vocational training, life-long learning programmes, on-the-job training) can be effective tools for coping with the demand for new skills and preventing skill bottlenecks. Targeted bridging programmes which put low-skilled workers on a sustainable long-term career path (e.g. pre-vocational training schemes providing basic skills to enter technical training) could temper emerging inequalities in job quality. E-learning throughout the career supported by instruments such as online libraries and interactive tools also constitute interesting options (e.g. Cedefop, 2010; EU-OSHA, 2013). Anticipating future skill needs and supporting the dissemination of new training opportunities, as outlined in the New Skills for New Jobs agenda and the European Quality Framework for anticipation of change and restructuring (80), in close cooperation with public employment services (European Commission, 2010a and European Commission, 2014e), are another policy priority.

4.4.2. Anticipating change, securing transitions and considering new health and safety risks

As stated, the greening of the economy can bring along many occupational risks. Some new tasks (e.g. accessing the exterior peak of windmills (AEE, 2012)) or products (e.g. the use of microorganisms in the production of biofuels (Driscoll et al., 2005)), the use of nanomaterials) may involve risks in terms of workers' health and safety (e.g. falls or respiratory illnesses). These uncertain risks are often without monetary compensation: for example, intensive manual workers in waste management face strong health and safety risks and often receive low pay (e.g. Antonsson, 2014; EU-OSHA, 2013).

Monitoring the impact of new technologies on job quality may pose challenges, in particular to SMEs, which may not have the necessary resources to make adequate assessments of new processes and products vis-à-vis larger firms. These have better access to financial resources and technologies, better access to information, internal human resources and access to skills programmes.

These developments raise several important challenges (which go beyond labour market policies), including: filling the gaps in our knowledge to make more reliable risk assessments; promoting technologies that reduce health and safety hazards of intensive manual work such as in waste management and recycling (including collection, transport, and disposal and processing); promoting product designs that cover the whole life cycle of products, including their recycling at the end of their use; and integrating in the production process an independent assessment of the health and safety risks associated with the introduction of new green products or processes (e.g. EU-OHSA, 2013).

Awareness-raising activities informing workers of their employment rights and obligations and upgrading their skills to include the new "greener" forms of materials and production methods can substantially improve working conditions and decrease safety and health hazards. Promoting social dialogue at industry and sector levels will be key in this respect (e.g. European Commission, 2014e). Further strengthening international cooperation and health and safety more generally, via for instance, the Green Growth Knowledge Forum (81), can also provide innovative solutions.

4.4.3. Addressing gender stereotyping

Women are more often employed in occupations that are seen as less closely related to the greening of the economy (e.g. health and social work, education and retail), while men are more likely to be employed in research, engineering, manufacturing and construction of energy- and resource-saving technologies (82), requiring STEM skills. Such activities are also often characterised by a lack of managerial positions held by women. While the greening of the economy is likely to affect all sectors (for instance via the integration of environmental considerations in education and training, or adding skill sets in retail to advise customers on the environmental performance), there is a risk that it may be perceived as primarily creating more and better jobs for men.

4.5. Strengthening job quality to foster future productivity growth in the face of significant structural changes

Ongoing structural changes are expected to have a significant impact on job quality and workers' performance. They can bring along a host of opportunities for job creation and improving job quality. This may happen through: widening the opportunities to exploit countries' comparative advantages through new production processes, new products and new markets; mitigating physical or psychosocial barriers to labour market participation, notably of more vulnerable workers (e.g. older and disabled workers); and generating greater (occupational and geographical) labour mobility and thus a larger choice of jobs and the opportunity to perform tasks that best fit workers' abilities and preferences. This may reinforce overall productivity growth and earnings potential.

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(80) See, for example, http://ec.europa.eu/social/main.jsp?langId=en&catId=89&newsId=2012&furtherNews=yes

(81) See the Green Growth Knowledge Forum launched by the Green Growth Institute, the OECD, the United Nations Environment Programme and the World Bank, see http://www.greengrowthknowledge.org

(82) For example, Blanco and Rodrigues (2011) report that 78 % of the workforce in wind energy is male.

However, technological change, globalisation, demographic ageing and the greening of the economy can have significant negative implications for job quality, including: rendering jobs obsolete (just below 50 % according to some authors), skill erosion, stronger job insecurity, longer or uncertain (e.g. zero hour jobs) working hours, lower wages, new and unknown health and safety risks, and polarisation (i.e. non-equitable distribution of the gains in job quality with low to middle skills losing out and larger gender imbalances). These may in turn have adverse feedback on productivity and labour market participation.

Therefore, to realise the full potential of the ongoing structural changes, allow workers to benefit from the opportunities generated and correct any adverse challenges will require relevant labour market reforms. These should allow workers to transit to jobs of better quality in a flexible but secure way, increasing workers' receptivity to innovations and changes in work organisation. Given the polarisation effects of skill-biased technological progress in combination with globalisation, ageing and greening, well-targeted policies will need to ensure that costs and benefits are more equitably distributed.

These policies include(83): implementing active labour market policies such as better profiling, job searching assistance and connection between employment services; improving access to life-long learning and on-the-job training; strengthening labour laws and social security provisions (including portability of benefits); eliminating gender and age stereotyping, discrimination and stigmatisation and reducing the informal economy; strengthening the capacity to anticipate and assess risks to job quality structural changes and strengthening health and safety at work legislation; promoting effective social dialogue at all levels and with non-EU partners and increasing employees' empowerment to identify improvements to job quality. These will strengthen labour allocation efficiency with a positive impact on productivity and labour market participation.

5. MODERNISING WORK ORGANISATION TO FOSTER PRODUCTIVITY GROWTH

This section looks at the distribution of different types of work organisations across sectors, occupations and Member States, and its evolution in recent years. It describes differences in job quality associated with different forms of work organisation in the EU. It then explores how work organisation(84) can be shaped to increase productivity and labour market participation under the continuous pressure of ongoing structural changes (technological progress, globalisation, demographic change and the greening of the economy). It looks at how stimulating creativity and fostering exchanges between workers can prevent stress and help maintain good physical and mental health, while at the same time improving productivity and innovation capacity. It sees how special arrangements can be implemented to accommodate older workers, workers with disabilities or certain diseases, and workers with family responsibilities. The section then discusses future challenges with respect to workplace learning. It ends by examining how expanding global values chains will affect work organisation, focusing on risks related to the global restructuring of value chains, the virtual collaboration across time zones and the absence of multi-layered social dialogue.

5.1. Work organisations differ across sectors, occupations and Member States

Analysis of EWCS 2010 data shows that work organisation varies across economic sectors and occupational categories, more than by company size or its age and gender composition. Chart 22 shows large differences in work organisation across sectors in 2010 (85). The Learning form is more prevalent in the financial intermediation and public utility sectors and the Lean form is less common in the wholesale and retail, transport and communication and hospitality sectors. Chart 23 shows large differences in work organisation across occupations in 2010. Learning forms are especially characteristic of the work of professionals, technicians and senior managers, but also of 31 % of craft workers, 20 % of plant and machine operators and 18 % of elementary occupations. The Lean form is more frequent for senior managers (41 %) and skilled blue-collar workers (38 %). A high proportion of blue-collar workers are employed in Tayloristic forms of work organisation. Service and sale workers, clerks and unskilled workers mainly work in Traditional or Simple work organisations.

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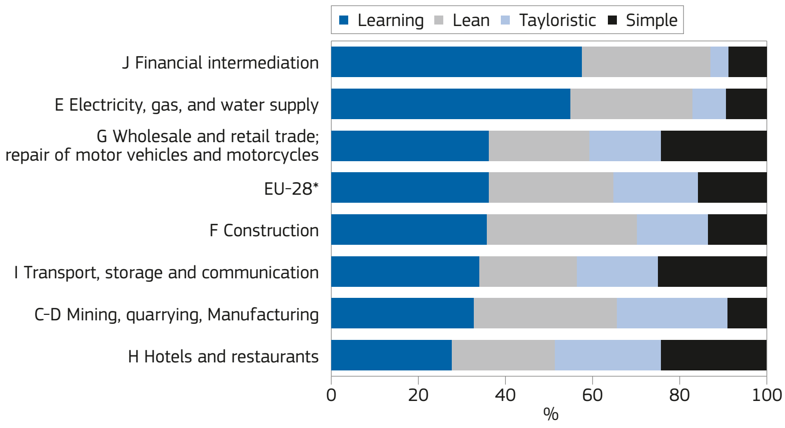
(83) Apart from other structural measures that are not directly related to labour markets, such as fragmentation of credit markets and access of SMEs, strengthening of single market and trans-European networks.

(84) In this chapter, work organisation refers to processes and relationships, including worker-worker as well as worker-management interactions and workplace learning.

(85) See section 2.2 for more details on different forms of work organisation.

Work organisation varies across Member States. Chart 24 shows that in the Netherlands, Denmark, Sweden and Malta, half or more of the workers in private companies with 10 or more employees are employed in Learning organisations. In contrast, Bulgaria, Romania, Greece, Ireland, the United Kingdom and the Czech Republic show a very low share of workers in this type of organisation. More than a third of workers work in Lean organisations in Finland, the United Kingdom, Ireland, Estonia, Romania, Malta and Austria. In contrast, Lean organisations are least common in the Netherlands and Greece. Tayloristic organisations account for at least 30 % of employees in Hungary and Greece, and less than 10 % of workers in Denmark, Finland and Malta. Simple organisations are most common in Bulgaria, Greece and Cyprus, where they involve more than a quarter of workers, and are least common in Sweden, Estonia, Austria and Hungary.

Chart 22: Differences in work organisation across sectors



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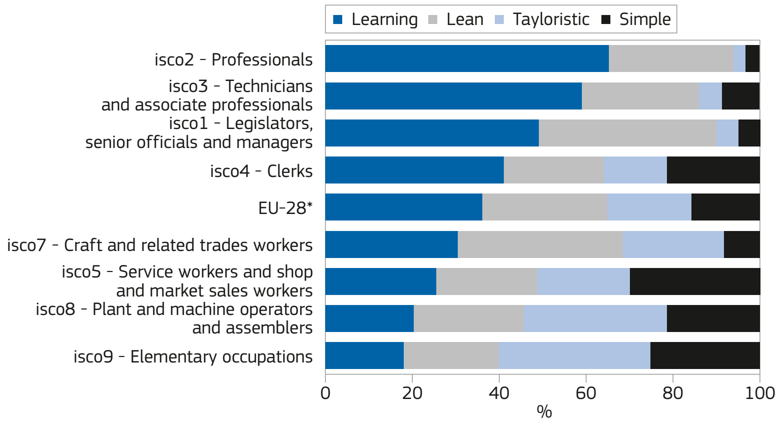
Source: Eurofound estimates based on EWCS 2010 data.

Chart 23: Differences in work organisation across occupations



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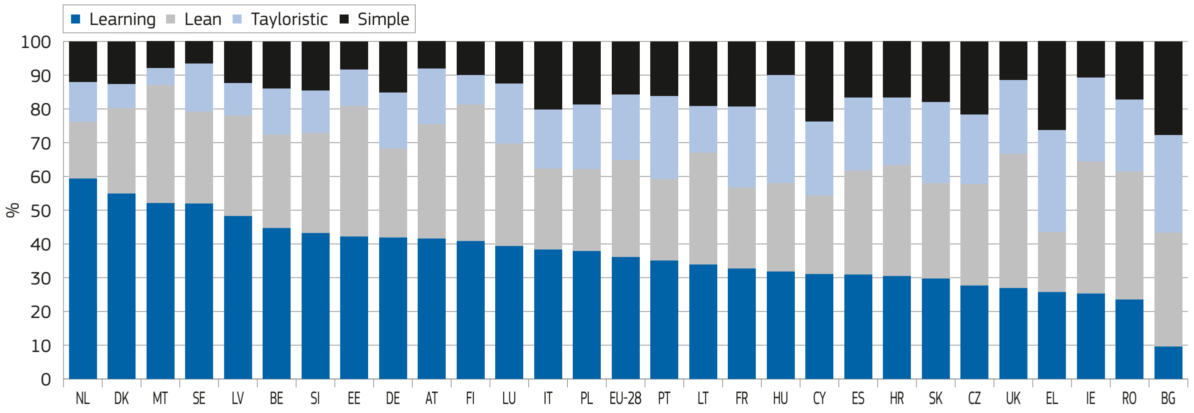
Source: Eurofound estimates based on EWCS.

5.2. The interaction between work organisation and job quality: the importance of Learning and Lean Organisations

This subsection describes the interaction between job quality and work organisation as two important drivers of productivity growth (see Table 2).

Learning and Lean organisations are associated with relatively high job security ([86]) compared to Tayloristic organisations, which show the lowest levels of job security both in terms of higher chances of losing the current job and in terms of higher anticipated difficulties in finding another similar job. Learning organisations are associated with a higher level of employability compared to Lean organisations, probably due to the fact that training is less firm-specific and more general. The number of employees in Learning and Lean organisations with good career prospects is almost two times larger than those in Tayloristic and Simple organisations.

Chart 24: Differences in work organisation across Member States



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Source: Eurofound estimates based on EWCS 2010 data.

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(86) Longest seniority is also reported in Learning organisations.

Table 2: Job quality and work organisation: interactions

			Discretionary Learning	Lean production	Tayloristic	Simple
1. Socio-economic security	Earnings	I am well paid for the work I do	50.6 %	44.1 %	31.9 %	36.0 %
	Job/career security					
	Employment contract	Permanent	88.4 %	85.2 %	79.7 %	77.9 %
		Fixed term or TAW	8.3 %	11.0 %	16.2 %	15.1 %
	Career prospects	Strong career prospects	37.6 %	38.7 %	19.9 %	22.3 %
	- Job security	I might lose my job in the next 6 months	14.1 %	19.8 %	26.0 %	21.4 %
	- Transitions	It's easy for me to find an other job with a similar salary	33.0 %	29.1 %	24.4 %	31.7 %
2. Education	On the job training	On the job training	40.4 %	48.6 %	31.4 %	23.9 %
3. Working conditions	Health and safety					
	• Posture related risks	Repetitive hand or arm movements	44.8 %	62.3 %	74.3 %	55.3 %
		Tiring or painful positions	23.6 %	39.7 %	48.8 %	28.9 %
	• Ambient risks	Noise	16.9 %	34.5 %	43.0 %	16.7 %
		High temperature	9.0 %	23.4 %	26.6 %	11.1 %
	• Chemical risks	Breathing in smokes, dust	16.9 %	33.1 %	33.2 %	14.6 %
	• Stress	Direct reporting	25.5 %	33.9 %	30.4 %	22.0 %
	Work intensity	High speed work all or almost all of the time	20.7 %	36.4 %	45.0 %	21.3 %
		Tight deadlines	26.5 %	45.6 %	39.2 %	21.2 %
	Work authonomy	A say in choice of working partners	23.8 %	25.5 %	8.6 %	8.2 %
		Able to apply your own ideas at work	57.8 %	45.9 %	16.1 %	24.4 %
	Employee consultation	You are involved in improving the work organization or work processes of your department / organisation	48.9 %	44.5 %	19.0 %	16.8 %
		You can influence decisions that are important for your work	40.6 %	33.0 %	10.9 %	11.3 %
4. Work-life balance	Work-life balance					
	• Asocial working hours	Night work	5.9 %	11.3 %	18.6 %	12.0 %
		Shift work	13.7 %	28.0 %	40.4 %	23.0 %
	• Flexible work hours	Not fixed starting and finishing times	33.5 %	30.5 %	23.5 %	25.0 %
		Easy to take time off to during working hours to take care of personal or family matters	72.8 %	63.5 %	48.9 %	52.5 %
	Discrimination	Nationality	0.8 %	2.2 %	2.8 %	0.9 %
		Gender	1.0 %	1.2 %	2.3 %	1.4 %

Source: Eurofound estimates based on EWCS 2010 data.

The long-term investment in employees of Learning organisations is supported by compensation systems based on the overall performance of the company (26 % of workers versus 22 % in Lean and 12 % and 10 % in Tayloristic and Simple forms) and profit-sharing schemes (6.4 % of workers in Learning organisations). Payments for bad or dangerous working conditions are highest in Lean organisations (around 13 % of workers). Piece rate and productivity payments are most frequent for employees in Lean and Tayloristic organisations (around 19 % of workers).

Learning and Lean organisations both report relatively high levels of training (49 % in Lean and 40 % in Learning organisations) (87). Nevertheless, employees in Learning and Lean organisations also report more frequently that the skills demands put on them are too high.

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(87) They also report most that the training has helped them to improve the way they work.

Employees in Tayloristic but also in Lean organisations report the highest exposure to physical risk factors (environmental, posture-related risks, chemical risks, ambient risks, dangerous substances). Employees in Tayloristic organisations also report the highest levels of exposure to psychosocial risks factors (violence, fear, discrimination, stress, emotional demands, poor leadership [88]). Interestingly, about 90 % of employees report being ‘very well’ or ‘well’ informed about the health and safety risks associated with their work with only small differences between organisations.

Work intensity is highest in Tayloristic and Lean organisations and lowest in Learning organisations. Workers in Learning and Lean organisations report the highest level of autonomy in terms of choosing partners and in terms of applying their own ideas. Learning organisations are more likely to offer more sustainable jobs in that workers are able and willing to keep and successfully manage their jobs until the age of 60.

There are few differences in exposure to long working hours across organisations. Workers in Learning and Lean organisations most often report having to work in their free time (around 11 %), but they also report the highest level of employee-led short-term working time flexibility (56 % of workers in Learning and 40 % in Lean organisations). **Workers in Learning organisations report the highest level of work-life balance and satisfaction with working conditions** (85 % and 90 % respectively).

The data show a decrease in the number of workers undergoing employer-paid training in Learning organisations, and a slight increase in employer-paid training among Lean, Tayloristic and Simple organisations compared to 2000 (Annex 4, Table A4.9). Nevertheless, in 2010 workers in both Learning and Lean organisations were making greater use of self-paid training than in 2000. **Workers in Simple and Tayloristic work organisations were less likely to have any form of training in 2010 than in 2000.**

Table 3: Organisational forms across EWCS waves (2000–10)

	EWCS survey wave			Total
	2000	2005	2010	
Learning	39.1 %a	40.1 %a	36.8 %b	38.6 %
Lean	25.7 %a	27.2 %b	28.6 %c	27.2 %
Tayloristic	18.6 %a	18.8 %a	18.3 %a	18.5 %
Simple	16.6 %a	13.9 %b	16.3 %a	15.8 %

Source: Eurofound estimates based on EWCS 2010 dataset.

Note: Subscripts denote whether difference between values across columns (from different EWCS waves) are statistically significant at the 0.05 level. In particular, values having the same subscripts do not differ significantly while values with different subscripts are significantly different.

5.3. Declining Learning organisations and the move towards Leaner forms

Table 3 shows that the proportion of employees involved in Learning organisations has been decreasing between 2005 and 2010 (down from 40.1 % in 2005 to 36.8 % in 2010). At the same time, and probably as a consequence of the decline of the number of Learning organisations, the proportion of employees in Lean production forms of work organisation has been increasing significantly first between 2000 and 2005, and then also between 2005 and 2010. Tayloristic organisations remain stable over time: 1 in 5 organisations in Europe are structured in Tayloristic forms of work organisation. The proportion of Simple organisations has been decreasing between 2000 and 2005, then increasing back to 2000 levels. Such trend developments carry downward risks in terms of job quality and human capital resilience — as discussed in the previous subsection.

5.3.1. Different trends across Member States between 2000 and 2010

Perhaps surprisingly, the overall proportion of workers in Learning organisations appears to have decreased significantly between 2005 and 2010 (from 40.1 % to 36.8 %), replaced by an increasing number of Lean organisations, while the number of Tayloristic organisations was stable (1 in 5 EU organisations). However, this general trend does not apply to each individual Member State (Annex 4, Tables A4.1–A4.4). Countries can be grouped in four groups according to the developments in work organisation observed between 2000 and 2010.

In the first group (Annex 4, Table A4.1), Learning organisations increased either constantly between 2000 and 2010 or since 2005. In Latvia, Portugal and Malta this type of organisation increased between 12 % and almost 20 % over the 10-year period. Somewhat smaller increases are seen in Romania, Lithuania and Poland. In the Netherlands, Denmark, Cyprus and Estonia an initial decrease in the number of Learning organisations between 2000 and 2005 was followed by an increase in the following five years, bringing most of these countries back to the levels of 2000. In the case of the Netherlands and Denmark, these are among the highest in Europe: 60 % of employees in private companies with 10 and more employees work in Learning organisations.

In the second group (Annex 4, Table A4.2), Learning organisations are decreasing while Lean organisations are increasing, and these two trends are likely to be related. This development is most prominent in Germany, Luxembourg, Belgium and Austria. In Germany, for example, the difference in the proportion of Learning and Lean organisations was 31.5 percentage points in 2000, dropping to 15.8 percentage points in 2010. A somewhat smaller drop in the proportion of workers employed in Learning organisations occurred in Slovenia, Italy and Finland. A more complex trend is present in Sweden and Ireland: they saw a steep increase in Learning organisations from 2000 to 2005, then followed by a decrease in the later five years. Yet, Sweden is still the EU country with the highest proportion of employees working in Learning organisations — two out of three private organisations with more than 10 employees.

In the third group (Annex 4, Table A4.3), the general decrease in the number of

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[88] Supportive leadership is most frequently reported by employees in Learning and Lean organisations, contrasting lightly the rather negative picture of exposure to physical and psychosocial risks in both Tayloristic organisations.

Learning organisations is mostly coupled with an increase in Tayloristic organisations. In France and the Czech Republic Learning organisations decreased, replaced by an increasing proportion of Tayloristic and Simple organisations. On the other hand, Learning and Simple forms of work organisation are replaced by Lean and Tayloristic in Hungary and Bulgaria. In Greece, Simple types of organisations are replaced by Tayloristic.

Finally, in Slovakia, Spain and the United Kingdom there were no substantial changes in the proportion of the four types of organisations between 2000 and 2010 (Annex 4, Table A4.4).

5.3.2. Different trends across economic sectors between 2000 and 2010

Trends are also different across sectors (Annex 4, Table A4.5). In the public utilities, financial intermediation, transport and communication and hospitality sectors there was a marked increase in the number of Learning organisations and a decrease of Lean organisations between 2000 and 2005, followed by the exact opposite trend over the next five years. For example, from 2000 to 2005, the share of Learning organisations in public utilities increased by more than 5 pps and the share of Lean organisations decreased by almost 10 pps. In the following five years, the share of Learning organisations decreased by over 7 pps, compensated by a 5 pps increase in the proportion of Lean organisations. The retail industry changed work organisation from Learning to mostly Lean and Tayloristic organisations, with the share of the latter increasing by almost 5 pps. In the construction sector there was a shift towards Lean and Tayloristic work organisations, especially in the first five years, though this trend appears to have halted now. In mining and manufacturing, a slight shift towards Lean organisations forms can be seen.

5.3.3. Different trends across occupations between 2000 and 2010

Trend developments in work organisation across occupations are also different (Annex 4, Table A4.6). Among high-skilled clerical workers such as legislators, managers, senior officials and professionals, the relatively high share of Learning organisations decreased substantially between 2000 and 2005, with some reverse trend in the case of professionals between 2005 and 2010. In contrast, Lean organisations have become more prominent. From 2000 to 2005, an increasing share of clerks and service and sale workers worked in Learning organisations, but this trend was reversed in 2005 and the share of Lean and Tayloristic work organisations increased. This is not the case for technicians and associate professionals, for whom nothing much changed over the period, except perhaps for some decrease in the proportion of Tayloristic organisations. By 2010, a higher share of low-skilled manual workers, those working in plants, assemblers, machine operators and those in elementary occupations were working in Simple organisations than in 2000. High-skilled manual workers, such as craft and related trade workers are primarily in Lean organisations (38 % in 2010). The share has consistently increased since 2000.

5.3.4. A decrease in Learning organisations in smaller establishments

The biggest decrease (3 pps) in the share of workers in of Learning organisations between 2000 and 2010 occurred in smaller establishments, which switched to Lean organisations and to a certain extent also to Tayloristic organisations (Annex 4, Table A4.7). The strongest increase in the share of Lean organisations (6 pps) occurs in the biggest companies, though in this case the increase in the number of Lean organisations is due to a shift from Simple (down by 5 pps) rather than from Learning organisations.

5.3.5. Trends across different levels of seniority

In 2010, new workers (one year or less in a company) were less likely to find employment in Learning organisations and more likely to find employment in Lean organisations, and to a smaller extent Tayloristic organisations, compared to 2005 and 2000 (Annex 4, Table A4.8), although Learning organisations still represent the highest share. In contrast, the shares across the four different types of organisations did not change over the period for workers with two or more years of experience.

5.4. Complementing technological innovation with workplace innovation

Section 4 indicated how the ongoing technology change can create new opportunities for jobs and growth. The interaction between knowledge, innovation and education is seen to be a key driver of productivity growth in a knowledge-based economy (89). However, for the knowledge-based potential to materialise, the knowledge triangle has to be complemented by forms of work organisation that use workers' human capital to their fullest (e.g. Totterdill, 2014).

Section 4 also indicated how structural changes can pose challenges since the nature of knowledge work differs markedly from routine work. In modern knowledge-based tasks, existing working arrangements that were functional in the manufacturing industry or clerical organisation such as vertical decision structures, Tayloristic division of tasks, repetition of work items, low level of autonomy, strict time management and high levels of intrusive control, may no longer result in higher productivity. Success in modern knowledge-based tasks is likely to rely more on the possibility of choosing to do what one is best at, a lack of interruptions and strong personal motivation.

Future developments in ICT and KETs are likely to affect work organisation internally (e.g. generating virtual worker-worker interactions) and externally (e.g. greater outsourcing of tasks), while the production of new KETs-based products and services may pose new occupational hazards (e.g. through the use of microorganisms), all with a potential impact on productivity and labour market participation (e.g. EU-OHSA, 2013).

Finally, the impact of changes in work organisation on earnings distribution will also be affected by firms' human resource policies. Indeed, if firms encourage training they could promote their workers at the bottom end of the occupational or skill structure up to higher levels, rather than hiring new already-trained workers (e.g. Aghion et al., 1999).

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(89) I.e. the so-called 'knowledge triangle' (see also http://ec.europa.eu/education/policy/higher-education/knowledge-innovation-triangle_en.htm).

Box 5: Work organisation and earnings distribution

Work organisation, including worker-worker and worker-employer interactions as well as workplace learning, is also an important driver of enterprises' productivity and distribution of factor income (e.g. Aghion et al., 1999). As further technological progress strengthens communication and information flows, a less hierarchical (more organic) structure of work organisation will likely emerge. This may give rise to fewer specialised tasks supervised by middle management, and to more multitasking within teams. Such team work may then give rise to knowledge and learning externalities that give an extra boost to productivity from which all team players may benefit via higher earnings (if profits are not extracted by 'team leaders').

However, as transaction costs decrease facilitating outsourcing, a stronger skill-segregation between enterprises may emerge (e.g., low-skilled employment in McDonald's Inc. versus high-skilled employment in Google Inc.), leading to stronger earnings parity among workers within enterprises but to stronger earnings dispersion between workers of different enterprises.

5.4.1. More autonomy and responsibility for workers may strengthen the EU's innovation capacity but also increase polarisation

Technology change will provide opportunities to strengthen firms' innovation capacity. Future developments in ICT (e.g. an expansion of cloud computing) will increase the potential for virtual workplaces with workers who are physically located in different places (including their own home) interacting in real time. Such developments may give workers more autonomy and responsibility and allow for better reconciliation of work and family life. As such, these changes in work organisation may strengthen the opportunities to make full use of existing knowledge, with the potential to generate new knowledge with new products and processes, or new applications of existing knowledge. Such developments may also strengthen labour market participation, notably of older workers and workers with disabilities or family responsibilities, and may become the primary driver of productivity growth for the resource-poor, skills-rich EU.

Appelbaum et al. (2011) estimate that a positive workplace environment and practices that develop employees' knowledge and ability to create value may increase productivity by 15% to 30% (taking account of specific characteristics of industries and occupations). Therefore, it will be important actively to engage employees in identifying and developing solutions, while allowing them to participate in the implementation of work innovations so that they become more receptive to change (e.g. Totterdill, 2014; Dhondt and Totterdill, 2014).

In this context, an important policy would be to facilitate the creation of EU-wide platforms that allow employees and employers to exchange experiences in developing and implementing solutions related to production and work organisation. The specific characteristics of such platforms will vary between production entities and may take place at European or national level. They can promote the exchange of experiences, help identify best practices, monitor their implementation, assess their impact on productivity and identify social implications.

Continuous change in work organisation may discourage individuals from staying in employment, especially older workers and workers with disabilities notably if low-skilled, and may adversely affect the commitment of the other workers. Moreover, greater flexibility may lead to further polarisation in the labour market with core workers remaining/being employed under attractive contractual arrangements (albeit with increased work intensity (90), and with other workers (such as temporary contract workers, hired self-employed or other forms of flexible contracts) acting as a buffer to accommodate the increased flexibility.

As stated, innovation may render tasks obsolete and skills obsolescence may accelerate to the extent that access to learning opportunities is not equitably distributed, thus reinforcing ongoing polarisation. Technology may also make task outsourcing easier, reducing job security, especially for low-skilled workers. In addition, virtual workplaces are expected to lead to more fragmented task organisation, which may have an adverse impact on the team spirit of the workforce. The impact of this on productivity is unclear.

While future technological developments will create important opportunities to improve the EU's innovation capacity, realising and benefiting from this potential calls for workplace innovations that depend on the consensual effort of employees and employers. In this context, future workplace change should foster workers' engagement, promote social dialogue helping to align employers' and employees' objectives and motivation, address new challenges in office and workflow design such as information overload and distractions, and give workers more responsibilities and autonomy. As knowledge and autonomy become more important, more attention should be paid to the challenges faced by Learning organisation (as described in Section 5.3).

5.5. Fostering workers' engagement

It is often said that 'an organisation's greatest asset is its people'. But this is only likely to be true if and when they are committed to their job. Studies on the current shape of modern workplaces, such as Gallup's 'Q12' survey (91) (which, it should be noted, covers only United States workers), suggest that as little as one third of workers show high engagement at work and a further third of workers are 'not engaged', while another third are 'actively disengaged'.

Gallup's employee engagement index is based on worker responses to 12 policy-relevant workplace elements with proven linkages to performance outcomes, including: productivity; customer service; quality; retention; safety; and profit (Gallup 2013). Workplaces where workers score low in that survey suffer from lower productivity, are

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(90) Which is not necessarily related to a decrease of job quality, as discussed in section 3.

(91) The questions are:
1. Do you know what is expected of you at work?
2. Do you have the materials and equipment you need to do your work right?
3. At work, do you have the opportunity to do what you do best every day?
4. In the last seven days, have you received recognition or praise for doing good work?
5. Does your supervisor, or someone at work, seem to care about you as a person?
6. Is there someone at work who encourages your development?
7. At work, do your opinions seem to count?
8. Does the purpose of your organisation make you feel your job is important?
9. Are your colleagues committed to doing quality work?
10. Do you have a best friend at work?
11. In the last six months, has someone at work talked to you about your progress?
12. In the last year, have you had opportunities at work to learn and grow?

less likely to create new jobs, are more likely to be reducing their workforce and are more likely to see employees leave.

The 'not engaged' are passive and less productive; they are, in Gallup's words, 'sleepwalking through their workday, putting time but not energy or passion in their work'. Actively disengaged employees 'are not just unhappy at work; they are busy acting out their unhappiness. Every day, actively disengaged workers undermine what their engaged co-workers accomplish' (Gallup 2013) and are a liability to the company. They spread frustration and demotivate colleagues. Gallup argues that management typically responds to low engagement with extrinsic motivation, e.g. by offering fringe benefits. However, these cannot address the fundamental needs of workers such as: sense of purpose; perceived relevance of their work; opportunity to use one's skills and learn new skills.

Similarly, engagement tends to diminish with educational attainment, with a 6 percentage point difference found between those with less than a high school diploma (34 % feel engaged at work) and college graduates (28 % engaged). This may reflect graduates having higher expectations that are harder to meet following their investment in education.

Workers' engagement seems to be sensitive to the organisation's size, with Gallup's research suggesting that there is something unique and beneficial about working in a small, tightly-knit environment.

Their research suggests that workers of all generations are most engaged when they have the opportunity to do what they do best every day. While those born between 1981 and 2000 are particularly prone to job-hopping compared to previous generations, this characteristic is clearly dependent on engagement levels. Nearly half of those who actively disengage want to change jobs, while only 17 % of engaged ones do.

Findings by experimental psychologists (Pink, 2010) offer surprising insights into the mechanisms of motivation. Laboratory experiments highlight the limitations of external rewards (such as gifts or money) as incentives for creative problem-solving (92). However, studies also show that such extrinsic motivators work when it comes to routine tasks. In other words it appears that it is the worker's intrinsic motivation, curiosity and emotional engagement that drive performance when it comes to solving problems and carrying out non-routine tasks. The consequences for future work organisation are potentially very significant. If success in the future economy relies on innovation and solving complex problems, then employers will need to foster genuine personal interest in the work of their employees. Annex 5 provides examples that illustrate the positive link between the mental state of knowledge workers and productivity.

5.6. Management strategies for organisational efficiency: supervision and control versus common values

In the traditional bureaucratic industrial model, management has typically focused on designing and supervising work processes to minimise the (intellectual) effort and skill necessary for workers to carry out their work. Taylorism summarises this managerial ethos as the focus on constructing work procedures constrained to the point where workers can only do the correct thing in an economic way (McIntyre, 1984; Jackall, 1988). It features vertical division of labour, hierarchy, and formalised and standardised work processes (Mintzberg, 1983; Wright, 1996). Traditional management theorises that work can be divided between those who work and those who: plan; organise; coordinate; and control work.

However, management methods have evolved since changing patterns of work organisation require other forms of managerial intervention. Many modern professional organisations operate in conditions where it would anyway be difficult or even counterproductive to organise and control behaviour. Management in modern organisations turn to targeting behaviour indirectly, through norms and values (e.g. Etzioni, 1964). This is accomplished through managerial practices such as normative control: 'the attempt to elicit and direct the required efforts of members by controlling the underlying experience, thoughts, and feelings that guide their actions' (Kunda, 1992). Employees then accept and adopt as their own a corporate culture: the norms of behaviour preferred by the corporate organisation.

5.7. Office and workflow design for optimum efficiency

Efficiency in a typical modern office is prone to the risk of distraction, information overload and lack of control over one's personal space. Companies may overlook these risks as they strive to encourage team work through faster work pace via heavy IT use, multitasking and office design, as well as greater control over employees.

5.7.1. The strain of multitasking in intellectual work

Many contemporary employers require staff to engage in multitasking. Yet studies have demonstrated that this may be counterproductive. Clifford Nass, who carried out seminal studies on how people interact with communication technology, concluded that modern life is overloaded with information and that this is not conducive to remaining focused and analytical thinking (Ophir et al., 2009). His studies have shown that people who frequently engaged in multitasking actually score worse in performing parallel tasks.

Since the brain has very specialised modules for different tasks, like language processing and spatial recognition, it stands to reason that it is much harder to perform two similar tasks simultaneously. Driving and talking do not use the same bits of brain but answering an e-mail while talking on the phone does — creating information bottlenecks. Studies by Gloria Mark, professor of informatics at the University of California, have found that when people are continually distracted from one task, they work faster but produce (Mark et al. 2008) less. New computer and media 'advances' can thus be seen as placing new demands on cognitive processing and particularly on attention allocation. Experiments have demonstrated

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(92) A classic psychological experiment from 1969 by Edward Deci (echoing pioneering experiments on rhesus macaques by Harry F. Harrow from 1949) showed that extrinsic motivators (gifts) are counter-productive in puzzle-solving tasks. The gifts distract the subject from the task and undermine the intrinsic motivation and the pleasure of performing the task itself.

that students solving a maths puzzle took 40 % longer — and suffered more stress — when they were made to multitask (Ophir et al., 2009).

Such a working environment saturated with media and the resulting information and task overload is a recent phenomenon. Multitasking is still perceived as a target that is often actively encouraged in the corporate environment, but there is a case for serious analysis into how progressive employers could shape communication policies in order to minimise the psychological burden and productivity losses stemming from multitasking.

5.7.2. The pace of work and efficient time use in knowledge occupations

Ergonomics of work reflect the cyclical balance of intense effort and focus with recovery and rest. Sensible time management should take a long time perspective. Like a long-distance runner, cognitive workers tend to pace themselves in order to achieve optimum results. Productivity should then be assessed not over a day or week but over years or even a worker's entire productive life. What may appear to be high productivity, from the employer's point of view, can mask hidden costs. If a worker achieves high output in the short term but, as a result, suffers burnout or illness and exits early from the labour market, many of the costs are ultimately borne by society at large through the welfare system.

Knowledge work that requires intense mental focus has been found (Hobson and Pace-Schott., 2002) to follow a particular cycle of 90 minutes with corresponding performance benefiting from short breaks. In cognitive activities such as assembly-line production, the break or rest does not follow the same pattern. Adding variety, changing the subject of work, off-time, freedom from meetings and rapid reaction to external demands, being given time to reflect and think are all factors that can help achieve a balanced working day.

The need for the body and mind to recover is clearly recognised in legislation covering occupations such as pilots and truck drivers, since the consequences of human error due to overwork in such areas are obvious. A Directive also sets for all EU workers minimum standards in terms of rest periods and limits to working time (93). Numerous studies have linked excessive working hours with health risks, including mental illnesses. Common mental disorders, such as depression, are an important public health concern (Mathers, 2006; Eaton, 2008). According to projections by the World Health Organisation, depressive disorders will be the leading cause of disease burden in high-income countries by 2030 (Mathers, (2006). In addition to human misery, mental disorders often result in substantial work impairment and lost work days (Eaton, 2008; Adler, 2006; Wang, 2004; Demyttenaere et al., 2004).

As mentioned above, the unrestrained and ever-increasing use of information technology can be seen as a mixed blessing. Solutions to avoid productivity-killing interruptions could include reducing the number of alerts to a manageable level and creating periods of a digital down-time, devoted to deep thinking and concentration.

Finally, productivity assessment needs to be seen in relation to the type of job. Jackson (2012) argues that seeking higher productivity in a conventional way may be counterproductive in occupations that rely on allocating one's time to the service recipient. For example, chasing productivity growth in caring professions, social work, medicine and education according to the manufacturing paradigm leads to degradation of the service provided.

Finally, looking at successful companies at the forefront of workplace innovation suggests that taking a holistic approach to office design can be an important driver of productivity growth, as in the example, albeit somewhat exceptional, described in Box 7 in the annex.

5.8. Addressing future challenges in the Learning organisation

Section 5.3 suggests that Lean organisations are increasing mostly at the expense of Learning organisations, and that these two forms of work organisation are becoming increasingly divergent. The shift to Lean forms of work organisation may risk eroding the performance and job quality of European workers. Indeed, such a move is happening when technology and globalisation emphasise the importance of knowledge and the speed at which knowledge and skills may become obsolete. Learning rather than Lean organisations appear better placed to exploit the opportunities brought about by structural changes..

As a consequence, there is a need for firms to engage in organisational learning and for workers to engage in acquiring new competencies to strengthen the EU's comparative advantages in world markets. In this context, policies should develop the framework conditions to increase the number of Learning organisations and support the change process. Box 6 provides some considerations on how to revert the shift from Learning to Lean forms of work organisation.

A coherent and holistic policy approach, integrating policy objectives from various policy domains such as employment, social policy and enterprises' competitiveness policies may be necessary. In addition, these processes would have to be implemented across different levels — EU, national, local, individual companies — and will involve a number of actors — various governmental bodies, social partners, management, workers of private and public companies acting in Europe. The number of actors and fields of actions will require an organised effort to create a comprehensive and consistent framework of policy recommendations and initiatives at the EU and national levels. These would then be used for guiding and supporting the process of change of local workplaces by ensuring coherence of actions between different actors and different levels to find the optimal form of work organisation for each (locally specific) circumstances.

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(93) 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.

Box 6: Promoting Learning forms of work organisation

Labour market policies aimed at reducing, halting and reversing the decline in Learning organisations should:

- Promote mutual learning and exchange of good practices in the design of programmes: e.g. Denmark, the Netherlands and Sweden have been developing national initiatives and research programmes to support innovations in organisations.
- Provide staff training and development, with emphasis on learning a broader skill set that enables workers to engage with a wider range of problems, to be more able to respond to unforeseen events and to support processes of workplace innovation.
- Involve social partners (when social partners are involved in work organisation) in the initiation and streamlining of the process of organisational change, thereby adding to its legitimacy and increasing acceptance.
- Provide innovative policy instruments that help to initiate, streamline and guide the process of change and the introduction of new, more innovative work practices. Aside from various forms of direct or indirect financial support, this could include consultancy helpdesks or information databases with (locally relevant) good and bad examples. These would be especially relevant to SMEs that may lack the resources for such activities compared to bigger companies.
- Emphasise the synergies between workers' well-being and companies' performance, which may increase workers' involvement and intrinsic motivation, improving their learning and problem-solving abilities and benefiting their physical and psychosocial state.
- Assist individual workers in developing their abilities throughout their working life, via, inter alia, the provision of necessary information and facilities, certain types of training or (subsidised) access to various forms of education and life-long learning, and encouraging workers to take a more active approach to the development of their skills and abilities.

5.9. Further globalisation brings changes to work organisation with job quality implications

5.9.1. Global restructuring of value chains

Globalisation and the expansion of global value chains is expected to have a deep impact on work organisation, giving rise to a stronger division of tasks (including conception, design, production, advertising and marketing) spread across the world (Newhouse, 2007; Dedrick et al., 2008). For workers, this means increasing the need for specialisation in specific tasks at the local level and the acquisition of skills (e.g. foreign languages and ICT skills) related to global collaboration. As global value chains expand, workers have the opportunity to specialise in those activities in which they have a comparative advantage while gaining more international experience and interacting in multicultural environments. Further specialisation and participation in networks may lead to increased overall productivity which in turn may increase job quality, including earnings and learning ability (e.g. Grossman and Rossi-Hansberg, 2006).

As global value chains expand and European enterprises want to remain at the cutting-edge of innovation, employees and their representatives may get more involved in participative and empowering forms of work to use their knowledge and experience to the fullest extent. Nevertheless, further opening to international markets creates stronger opportunities to off-shore activities and may increase pressures to deregulate, which can weaken the bargaining power of employees (as employers can use, for example, the threat of offshoring) (94).

5.9.2. The risk of further polarisation

Such changes in work organisation associated with the expansion of global value chains will also pose risks to workers, adding to polarisation and inequality among workers just as seen with technology. The restructuring of global value chains may place stronger emphasis on unit labour costs competition. This may lead to either lower wages or job losses due to firm relocation to exploit differences in unit labour costs, notably in areas with fewer job alternatives. While this may be (partly) off-set by taking up new activities, the risk exists that the patterns of specialisation built up in the past will no longer meet the requirements of the new tasks. This may be of especial concern in the case of older workers and workers with limited learning capabilities.

Furthermore, in anticipation of a further restructuring of the global value chain, local employers may be inclined to hire temporary contract workers to act as a buffer against unexpected developments further down or up the chain (e.g. Lehndorff and Voss-Dahm, 2005). Consequently, while workers in core activities may gain favourable working conditions, workers in non-core activities may see their job insecurity increase. This may in turn affect adversely the motivation and effort of workers who are most affected and perpetuate their unfavourable position.

In other words, future developments in global value chains may imply job losses or lower job quality (lower wages, job insecurity), affecting primarily the 'weakest' workers including the low-skilled or those on temporary contracts (e.g. OECD, 2006).

In addition, the resilience of a global chain is largely determined by the resilience of all of its components. In that sense, job security may be adversely affected by events beyond the control of local management and employees, such as geopolitical tensions or natural disasters.

5.9.3. Working across time zones

Expanding global value chains will also intensify real-time collaboration across different time zones (e.g. Stanoevska-Slabeva, 2009). Alongside the gains in productivity and earnings mentioned,

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(94) See, for instance, ILO at http://www.ilo.org/global/research/topics/labour-standards-and-socially-inclusive-globalisation/lang--en/index.htm

such international workplaces pose work organisational challenges. Local working time will have to be aligned with working time in other time zones (i.e. 24-hour reachability), resulting in more flexible and longer working times to participate in digital teamwork spread across different time zones. They can also increase stress from differences in work cultures, mediated communication and language barriers and the fragmentation of work organisation, which may generate faltering team dynamics and erode trust between workers, potentially reducing workers' motivation and effort. Nevertheless, at the same time, they can also reduce longer work hours or shift work, as workers in another time zone can take over the task.

5.10. Conclusion: stronger employee empowerment matters for productivity growth

The restructuring of global supply chains combined with technology may benefit the resource-poor, skills-rich European Union as its skills structure may have a comparative advantage in world markets. Ongoing structural changes may bring changes to work organisation that can improve job opportunities, through greater mobility and skill matching. These can in turn improve job quality (e.g. greater autonomy, responsibility and flexibility in the workplace, more flexible working arrangements, which may entice/maintain older workers, workers with disabilities and those with family responsibilities in the workplace; higher earnings).

However, changes in organisation due to technology and globalisation can render skills, tasks and jobs obsolete at a high speed (through automation and relocation) and reduce job quality (more flexitime and longer working hours to fit diverse time zones). They will also require specific skills to act in international environments (e.g. languages and ICT). In addition, the gains and losses may be unequally distributed between employees and employers (as it changes the bargaining position) and between different groups of workers (low- versus high-skilled workers) resulting in further polarisation and inequity.

Unless such challenges are addressed, changes in work organisation due to technology and globalisation may carry a severe and persistent socioeconomic cost for individual workers and for society as a whole (e.g. lower production capacity, dependence on social assistance). Such adverse outcomes can be counteracted by adequate labour market policies and improvements in work organisation that benefit both employees and employers and facilitate labour reallocation in a flexible but secure way.

Active labour market policies, life-long learning (including investing in the skills relevant to knowledge occupations and new tasks more generally) and modern labour laws, complemented by an increased forecasting capacity to anticipate, 'locate' the challenges and adapt to change are important. Improving the link between education and the needs of enterprises that operate in different time zones, through linguistic education and enhanced cultural awareness, may prove useful. The links between labour market policies and other policies will need to be strengthened, including in areas such as the trans-European and international networks for communication and collaboration, and international cooperation on security (including internet transactions).

Given the ambiguous impact of expanding global value chains on industrial relations, promoting productivity and inclusive growth may require the promotion of a global social dialogue and through it the negotiation of topics that are of direct interest for employees' working conditions, such as training, health and safety and restructuring (95). This will contribute to ensuring a greater acceptance of changes and that due attention is paid to the most vulnerable workers (the low-skilled, older workers and workers with family responsibilities).

Under the ongoing structural changes, strengthening the EU's productivity growth and labour market resilience calls for work organisations that make full use of workers' knowledge potential and that increase the quality of their jobs. In this context, work organisations, and notably managerial structures, should be reformed to promote higher well-being and engagement of workers. Greater focus should be placed on intrinsic motivation of workers that feeds on the ability of using one's skills on the job, sense of purpose, autonomy in managing one's time and control over the substance and methods of work tasks.

More participative and empowering forms of work organisation should be developed to strengthen employees' involvement in innovation implementation (and therefore understanding and acceptance of tasks changes) and enable workers (especially the low-skilled) to gain the abilities that enhance their employability through life-long learning (e.g. Totterdill, 2014). Loyalty and incentives to acquire firm-specific skills should not be adversely affected as workers will have to show more flexibility within and between enterprises. Otherwise, workplace innovations may have a negative impact on productivity, labour market participation and job quality. Workplace innovations should also avoid perpetuating or sharpening the existing gender segregation in the workplace (96).

Learning organisations have the potential to foster intrinsic motivation, support workers' involvement and skill use/development, and therefore improve companies' performance. Worryingly, recent years have seen a reduction in the number of Learning organisations and a move towards Lean organisations. A coherent and comprehensive policy response to support changes in work organisation towards more effective and beneficial forms of work organisation would be in the mutual interest of EU companies and their workers.

6. CONCLUSIONS

Job quality and work organisation are high on the EU policy agenda

Since the Lisbon Growth and Jobs Strategy launched in 2000, the European Employment Strategy's overarching objectives have encompassed not only full employment, but also the promotion of quality and productivity at work. In 2001, the Laeken European Summit agreed to a comprehensive framework on job quality, and appropriate quality indicators were included in the 2002 Employment Guidelines. With the Europe 2020 Strategy, launched in 2010, it also became a priority to

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(95) See, for instance the case of GDF Suez launching an international social dialogue in 2011 at http://www.eurofound.europa.eu/eiro/2011/01/articles/eu1101011i.htm

(96) See, for instance, http://www.genderportal.eu/ and http://www.eurofound.europa.eu/areas/industrialrelations/dictionary/definitions/horizontalsegregation.htm

support workplace innovation aimed at improving staff motivation and working conditions with a view to enhancing the EU's innovation capability, labour productivity and organisational performance. In 2013, the Employment Committee Indicators Group agreed upon a four-dimensional concept of job quality reflecting the complexity of the concept of job quality (1. socioeconomic security, 2. education and training, 3. working conditions, and 4. work-life and gender balance).

The level of earnings, job security, the level of education and access to life-long training, a safe and healthy workplace, an appropriate balance between work intensity and job autonomy, employee participation and empowerment and an adequate balance between work and private and social responsibilities, are all job quality dimensions that can foster commitment, motivation and higher effort and reduce absenteeism with a direct impact on labour productivity and labour market resilience.

Some Member States, such as Italy, Spain, Greece, Cyprus or Portugal have a higher share of involuntary temporary contracts and lower transition rates to permanent employment compared to Austria, Germany or the Netherlands. Denmark, Sweden and Finland have high participation rates in life-long learning of more than 50 % or 60 %, while Greece, Spain, Italy, Romania and Bulgaria have participation rates that are half or less than half of the Nordic ones. High work intensity and low autonomy leads to high levels of stress in Germany and Austria, for example. Inactivity rates due to family responsibilities are higher in Ireland and the United Kingdom where the availability of child care facilities is low and/or costs are high.

In addition, strong differences in job quality across population groups persist, especially across skills level, gender and age. Such heterogeneity in job quality may not only have an adverse impact on social cohesion, but it may also have a negative feedback on the overall performance of the labour force. For example, persistent gender stereotyping in certain types of work continues to prevent an optimal labour allocation while at the same time reducing job and earnings opportunities of a significant part of the labour force.

The crisis has seen the deterioration of some dimensions of job quality and in work organisation

The crisis may have led to the deterioration of some of the job quality dimensions in several or most EU Member States. For example, participation in life-long learning went down in recent years in about one third of the Member States. In recent years, there has been a downward trend from Learning to Lean forms of work organisation. Learning work organisations represent the newer type of work organisation that have the potential to foster intrinsic motivation, support job quality including workers' involvement and skill development and use, and therefore improve companies' performance.

... while ongoing structural changes bring along opportunities for job creation and productivity growth ...

Further innovations in ICT and KETs broaden the scope for job creation in industrial activities which are often associated with jobs of high quality and value added and therefore earnings. Technology change allows for more flexible working arrangements and has the potential to mitigate some physical or psychosocial barriers which reduce the labour market participation of certain groups such as older workers, workers with disabilities and those with family responsibilities and entice them to remain in the workplace. Technology is also likely to change the job landscape of the future by putting a premium on creative and knowledge occupations and allowing for greater autonomy, responsibility and flexibility in the workplace.

Globalisation also has the potential to create new quality jobs reinforcing overall productivity growth and earnings potential. Expanding global value chains can allow further task specialisation and higher mobility, giving workers a larger choice of jobs and the opportunity to perform those tasks that best fit their abilities and preferences. The restructuring of global chains combined with technology may benefit the resource-poor, skills-rich European Union, as its skills structure may have a comparative advantage in world markets.

The greening of the economy through recycling and reusing, together with the call for energy efficiency and biotechnology, is generating new production processes, new products and new markets. This has the potential to generate new jobs at all levels of skills. As such, structural changes can generate jobs, increase motivation and effort and therefore productivity growth.

... but also pose important challenges such as polarisation ...

Technology change, globalisation, demographic ageing and the greening of economy can have significant negative implications. Technology change may render an important share of tasks and jobs obsolete at a high speed. Globalisation requires specific skills to act in international environments (e.g. languages and ICT) which some workers lack. It may also lead to task relocation, notably of low-skilled routine tasks (or lower wages as a result of the threat of relocation). Green jobs may bring along new and unknown health and safety risks. The combination of technology change and globalisation emphasises the importance of knowledge and creativity and the need to adjust quickly to new and complex tasks, skills that some groups of workers lack. Therefore, low to middle skills may see stronger job insecurity or a worsening of their job quality: longer working hours and higher occupational risks but lower wages.

Therefore, in the absence of policy action, the gains in job quality from ongoing structural changes may be distributed in a non-equitable way, generating polarisation and in turn adverse feedback on productivity and labour market participation.

...calling for adequate policy responses to improve job quality and ensure a more equal distribution of the benefit potential associated with structural changes...

The analysis suggests that in addition to correcting the current unfavourable developments, policy makers will have to gear up to the opportunities and face up to the challenges posed by ongoing structural changes in technology, international trade and foreign direct investment, demographic change and the greening of the economy. To reap the full potential of ongoing structural changes, priorities for labour market policies include:

- **strengthen the tools to anticipate and assess risks** to job quality from ongoing structural changes (via stronger partnerships between governments, social partners and academic researchers with a special focus on SMEs);
- **promote health and safety in the workplace** in general and notably in relation to new technologies and products (through legislation, awareness-raising activities and monitoring);
- **remove institutional barriers to labour mobility** (e.g. by strengthening cross-border portability of social security benefits);
- **combat gender and age stereotyping, discrimination and stigmatisation** (via among others, legislation and awareness-raising activities and an adequate provision of enabling and support services);
- **green mainstream** education policies, training and skill formation (e.g. by promoting STEM careers [97] for women and to increase the number of women in the green economy);
- **reduce the informal sector**;
- **increase participation in life-long learning and on-the-job training**, potentially considering stronger and dedicated public support to SMEs;
- **improve job profiling, job search assistance and the connection between employment services**, together with removing fiscal incentives that hinder further labour market participation;
- **target the most vulnerable** (e.g. by focusing on the low-skilled trapped in poor working conditions);
- **promote social dialogue** at all relevant levels (company, sector, national and EU).

...to promote work organisation innovation that supports the knowledge-based economy of the future

For the resource-poor, skills-rich European Union, the strengthening of its innovation capacity will be crucial in order to be able to exploit its comparative advantages in world markets to the fullest extent. The analysis underlines the need to:

- promote **employee empowerment** (e.g. employees creating their own team structure, employees involved in the identification of problems and solutions in production);
- promote the **exchange of experiences** in work organisation innovation to help identify best practices;
- **monitor** the implementation and support the assessment of the impact of the changes in work organisation on productivity and social cohesion;
- strengthen employee's **capacity to learn including through education and life-long learning** (e.g. meeting the needs of knowledge-intensive work process with rapid technical change);
- strengthen **social skills** for digital workplaces spread around the world (e.g. languages and cultural awareness);
- develop benchmarks with a view to promoting the full exploitation of the complementarity of educational systems and employee in-work training to the fullest extent, especially in SMEs;
- promote **social dialogue** adapted to expanding global value chains (e.g. involving counterparts in other countries to discuss minimum standards and conditions);
- target the most **vulnerable workers** (e.g. strengthening skill formation of workers with limited learning capacity).

Finally, it is important to recognise that the impact of job quality and work organisation on productivity and social cohesion is conditioned by worker, firm and country specific conditions. Therefore, designing and implementing measures to correct adverse developments and to promote positive developments will be a complex task taking account of country, sector and firm specificities.

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(97) STEM: Science, Technology, Engineering and Mathematics.

Annex 1: Definitions of job quality

EMCO indicators

Table A1.1: EMCO indicators for job quality

Dimension	Sub-dimension	Indicators and source	Source
1. Socio-economic security	1.1 Adequate earnings	Mean monthly earnings in PPS, companies with 10 employees or more	SES 2010
		In-work at-risk-of-poverty rate	SILC
		Transitions by pay level - Fraction of individuals with at least the same pay level as in the previous year	SILC
		Am well paid for the work I do	EWCS 2010, Q77b
	1.2 Job and career security	Involuntary temporary employment	LFS
		Labour transition - employment security	SILC
		Labour transition temporary to permanent	SILC
		Job offers good prospects for career advancement	EWCS Q77c
2. Education and training	2.1 Skills development	CVT-hours per participating person	CVTS 2005
		CVT participation	CVTS 2005
		Main paid job involves learning new things	EWCS Q49f.
		Tasks do require different skills	EWCS Q54.
		On-the-job training over last 12 months	EWCS Q61c.
		Present skills correspond well with my duties	EWCS Q60.
	2.2 Employability	Participation LLL, employed	LFS
		Participation LLL, unemployed	LFS
		Early leavers from education and training (% of population)	LFS
		Percentage of the population aged 25–64 having completed at least upper secondary education	LFS
		E-skills of adults - Computer skills. Persons at least medium computer skills	Questionnaire on ICT

Dimension	Sub-dimension	Indicators and source	Source
3. Working conditions	3.1 Health and safety at work	Serious accidents at work per 100 000 persons in employment	ESAW
		FACTOR indicating non-exposure to unhealty environment	Questions 23a - 23 i EWCS
		FACTOR indicating healthy physical conditions	Questions 24a - 24e EWCS
		Well infomed on health and safety risks	Q30 EWCS
		Think that health or safety is NOT at risk because of your work	Q66 EWCS
		Work does NOT affect health	Q67 EWCS
		FACTOR indicating non-exposure to harassment, humiliation etc.	Questions 70 and 71 EWCS
	3.2 Work intensity	No work when sick over last 12 months/not sick	Q74a EWCS
		NOT working at very high speed	Q45a EWCS
		NOT working to tight deadlines	Q45b EWCS
		Enough time to get the job done	Q51g EWCS
		No experiencing of stress in your work	Q51n EWCS
	3.3 Autonomy	Workpace NOT dependent on automatic speed of a machine or movement of a product	Q46d EWCS
		Workpace NOT dependent on the direct control of your boss	Q46e EWCS
		“Occasionally/never” interrupt a task in order to take on an unforeseen task	Q47 EWCS
		FACTOR indicating self-responsibility	Questions 49–51 EWCS
		“Team members decide by themselves on the division of tasks”	Q57a EWCS
		“Team members decide by themselves the timetable of the work”	Q57c EWCS
	3.4 Collective Interest Representation	Union density	ICTWSS database
		Collective pay agreement, share any	SES 2010
		“Have raised work-related problems with an employee representative over last 12 months”	Q62b EWCS
		“Employee is acting as an employee representative”	Q63 EWCS
		“Management holds meetings in which you can express your views about what is happening in the organisation”	Q64 EWCS
4. Work-life and gender balance	4.1 Work-life balance	Inactivity due to family or personal responsibilities	LFS
		Part-time work due to family or personal responsibilities	LFS
		Lacking formal care for small children: % of children <3 years not formally cared for	SILC
		Employment impact of parenthood - men	LFS
		Employment impact of parenthood - women	LFS
		Certain possibilities to adapt working time	Q39 EWCS
		Taking hour or two off to take care of personal or family matters is NOT (too) difficult … ?	Q43 EWCS
		FACTOR indicating no long working hours	Questions 32–36 EWCS
		Working hours fit with family or social commitments outside work very well or well	Q41 EWCS
		“Less often/never” worked in free time in order to meet work demands	Q42 EWCS
	4.2 Gender balance	Gender pay gap	SES 2010
		Gender employment gap	LFS
		“Immediate boss a woman”	Q59 EWCS

Laeken Indicators of Job Quality

The Laeken indicators of job quality include 10 dimensions, categorised into two themes: characteristics of the job/worker (e.g. skills, working conditions, reconciliation between working and non-working life, health and safety at work, job satisfaction) and the wider socioeconomic and labour market context (e.g. employment rates, growth in aggregate labour demand)(98).

The Laeken indicators constitute the biggest attempt at that time to construct an EU system of job quality indicators. Nevertheless, there have been some critiques. For example, both the European Commission (2008) and the European Parliament (2009) recognise that this set of indicators covers economy-wide areas not directly related to job quality while lacking very relevant indicators such as wages, work intensity and some more qualitative aspects of human capital formation(99).

Another issue is the inclusion of gaps (gender and age gaps). The European Parliament (2009) considers that in order to reflect differences in job quality for specific groups, the way to do this is to compute the variables of job quality for each of the subgroups and then compare the overall results between them(100).

The Laeken indicators represent a system of indicators with no aggregation between the different dimensions. While this does not require any pre-judgement on the relative importance of the different attributes, each observer may use their own subjective system of weighing, emphasising the features they consider most important.

Several other organisations, such as Eurofound, OECD, ILO and UNECE, have also made efforts to assess and quantify the quality of work as reviewed in the following paragraphs.

Eurofound: Quality of Work and Employment

The European Foundation for the Improvement of Living and Working Conditions, Eurofound, has been working on the measurement of the concept since 1991 in the European Working Conditions Surveys (EWCS). The questionnaire covers all major areas of job quality identified in the social sciences literature.

The survey is carried out every five years (1991, 1995, 2000, 2005, 2010). The scope of the questionnaire as well as the country coverage has widened substantially since the first edition(101).

The Eurofound's concept of work and employment quality (see Eurofound, 2002) has four main dimensions: career and employment security, health and well-being, skills development, reconciliation of working and non-working life.

Historically, the EWCS has not come up with an index of job quality, but rather with a 'system' of indicators on job quality. In a study based on the 5th EWCS(102), Eurofound presented, however, four composite indices of job quality: an Earnings index, a Working Time Index, a Career Prospects Index, and an Intrinsic Job Quality Index(103)(104). To illustrate the complexity, the index of intrinsic job quality, for example, is composed of a whole set of indicators measuring skills and discretion; good social environment; good physical environment; and work intensity(105).

An advantage of the EWCS is that it is well documented and harmonised. The same questionnaire is used in all countries, which allows cross-country comparisons. However, because of important changes in the questionnaire, comparisons over time are possible only for a core of key questions which were retained unchanged since 1991.

One issue with the EWCS is its periodicity: it is conducted every five years. Also worth mentioning is the sample size, which does not allow for too many levels of breakdowns. Nevertheless, gender mainstreaming has been an important concern for recent reviews of the questionnaire, and the most recent addition allows for breakdowns by age, gender and occupation.

The EWCS has also been used as a basis for development of other job quality indices/systems of indicators by other organisations, for example, the EMCO indicators list or the European Trade Union Institute Job quality index (see below).

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(98) The EU defined several specific indicators for evaluating each dimension, except in the case of social dialogue where no agreement was reached. The 10 dimensions of job quality are: intrinsic job quality; skills, life-long learning and career development; gender equality; health and safety at work; flexibility and security; work organisation and the work-life balance; inclusion and access to the labour market; social dialogue and worker involvement; diversity and non-discrimination; overall work performance. All available sources at EU level were used (e.g. LFS, ECHS, etc.). For more details, see http://ec.europa.eu/social/BlobServlet?docId=2134&langId=en and European Commission (2008).

(99) According to the EP, a good job quality index should not include any information that does not relate directly to the well-being of workers because it tends to skew the results. The European Parliament refers to several such dimensions in the Laeken Indicators such as access to the labour market, overall performance and productivity and variables measuring the quantity of jobs. While important because it gives the general context, according to the EP this type of information can form part of another index on the socioeconomic context, for example.

(100) In fact, this problem stems from the fact that the indicators are measured only at the aggregate level, and to deal with distributional aspects some indicators are measured as gaps. This problem is overcome in the EWCS, which will be reviewed next, which allows to compute the various dimensions separately for men and women (alternatively allows for breakdowns by age, occupation).

(101) The latest, 5th EWCS is available at: http://www.eurofound.europa.eu/surveys/ewcs/2010/. For more details about the different extensions by waves, see Eurofound (2010), p. 141.

(102) Eurofound (2012b)

(103) Regarding the methodology of composing the indices, based on statistical correlations similar items were identified and normalised, and then grouped in a summative index. When multiple indices are aggregated together they were accorded equal weights, except where it was found that the indices had considerably different associations with subjective well-being. The weighting assumptions are accompanied by a sensitivity analysis. More methodological details are available in Chapter 2 of Eurofound (2012b).

(104) Eurofound discusses the pros and cons of producing a single job quality index. This might be justified from a rather pure theoretical perspective, whereby it is assumed to be a utility associated with each job, i.e. the index is seen as measuring that utility. One feature that makes a single index very appealing is its tractability, ease of presentation, and ease of cross-country comparisons. However, this argument is firstly not very persuasive since job quality, as discussed above, is a multi-faceted concept. Secondly, it risks being interpreted differently by different users. For example, economists will tend to think about wages, social scientists about non-wage aspects, etc. Last but not least, to compute such an index would require very strong assumptions about how individuals trade off job quality features against each other. The choice of four indices presented by Eurofound is something of a middle solution: they are smaller in number and allow country rankings in a meaningful way; yet, they sufficiently well portray the different aspects of job quality without mixing them up.

(105) Table 1 in Eurofound (2012b), p. 20, gives a brief description of the content of each index and survey questions on which it is based.

OECD Job quality indicator

A recent ongoing project, 'Defining, measuring and assessing job quality and its links to labour market performance and well-being' within the OECD, co-funded by the European Union, started in September 2013 and will run for two years. It starts from the insights provided by the EU flagship initiative *New Skills and Jobs in Europe*, the OECD *Re-assessed Jobs Strategy* and the OECD *Better Life Initiative* (106).

The new OECD framework for measuring and assessing job quality considers three dimensions of job quality that are both important for worker well-being and relevant for policy, and together allow for a comprehensive assessment of job quality.

- Earnings quality refers to the extent to which employment contributes to the material living standards of workers and their families. While the average level of earnings provides a key benchmark for assessing the degree to which having a job ensures good living conditions, the way earnings are distributed across the workforce also matters for well-being. Therefore, the OECD measures earnings quality by a synthetic index that accounts for both the level of earnings and their distribution across the workforce.

- Labour market security captures those aspects of economic security that are related to the risk of job loss and its consequences for workers and their families. For OECD countries, labour market insecurity is defined in terms of the risk of becoming unemployed and its expected cost. The latter depends both on the expected duration of unemployment and the degree of public unemployment insurance. Labour market security is therefore defined in terms of the risk of unemployment, which encompasses both the risk of becoming unemployed and the expected duration of unemployment, and unemployment insurance, which takes into account both benefit coverage among the unemployed and benefit generosity.

- Quality of the working environment captures non-economic aspects of job quality and includes factors that relate to the nature and content of work performed, working-time arrangements and workplace relationships. Jobs that are characterised by a high level of job demands such as time pressure or physical health risk factors, combined with insufficient job resources to accomplish job duties, such as work autonomy and good workplace relationships, constitute a major health risk factor for workers. Therefore, the OECD measures the quality of the working environment by incidence of job strain, which is a combination of high job demands and few job resources.

While the three dimensions of job quality are key elements of the new framework, their actual measurement is flexible and can be adapted according to the purpose for which they are being used, data availability and different choices for weighting together the different sub-components. In order to ensure that indicators of job quality are conceptually sound and relevant for policy, the framework provides three guiding principles. These are to: i) focus on outcomes experienced by workers as opposed to drivers of job quality; ii) emphasise the objective features of job quality; and iii) derive indicators from data on individuals to allow going beyond average tendencies.

Chart A1.1, Chart A1.2 and Chart A1.3 report the values of the three job quality measures (earnings quality, labour market insecurity and job strain) for each country in the dataset.

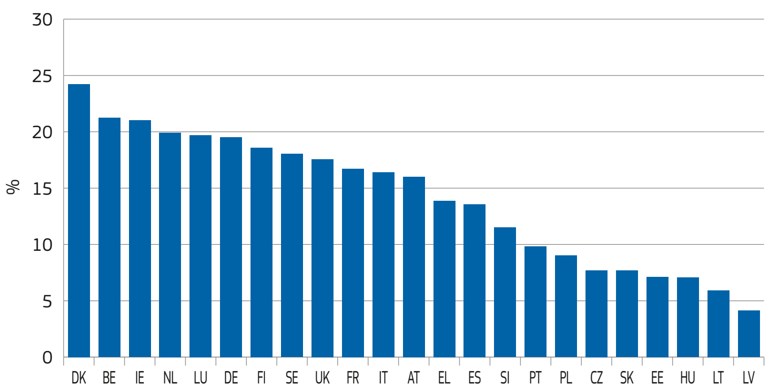
Chart A1.4 plots the cross-country averages of different measures of job quality for different worker characteristics. For more details, see OECD 2014.

Overall, job quality outcomes vary substantially across OECD countries across each of the three dimensions:

- Denmark, Finland, Germany, Luxembourg, the Netherlands, New Zealand, Norway, Sweden and Switzerland are among the best performers. These countries do relatively well along at least two of the three main dimensions of job quality, without any outcomes in the bottom-10 of the ranking across OECD countries.

- Australia, Austria, Belgium, Canada, the Czech Republic, France, Ireland, Israel, Italy, Japan, Korea, Mexico, Slovenia, the United Kingdom and the United States display average performance. Over the three main dimensions of job quality, these countries display no more than one outcome in either the top-10 or the bottom-10 of the ranking across OECD countries, except for Ireland and Korea where the picture is more mixed.

Chart A1.1: Earnings quality (1) (PPP-adjusted gross hourly earnings in USD, 2010)



Source: OECD, Employment Outlook 2014.

Note: Moderate inequality aversion; see OECD 2014.

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(1) Earnings Quality is measured as the Harmonic Mean of the earnings distribution in each country. Like other types of 'general means', the harmonic mean can be expressed as a function of the simple arithmetic mean and of a measure of earnings inequality. As such, it lends itself to being an encompassing measure of earnings quality, since it captures both the average of earnings and their distribution. See Section 2.1 in Chapter 3 of Employment Outlook 2014 for a detailed discussion.

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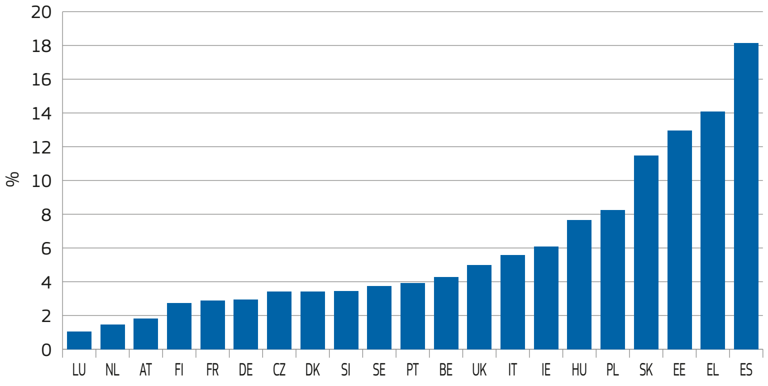
(106) The project is structured into seven work packages: 1. Job quality: what does it mean and how can it be measured? 2. Measuring work-related economic security and its determinants. 3. Measuring quality of working life and its determinants. 4. Reassessing labour market performance when accounting for job quality. 5. Maintenance of a permanent database on job quality. 6. The role of policies and institutions for job quality and employment performance. 7. Job quality in emerging economies.

- Estonia, Greece, Hungary, Poland, Portugal, the Slovak Republic, Spain and Turkey do relatively badly in two or all of the three main dimensions of job quality. In addition, none of these countries perform very well along at least one of these dimensions.

Looking at job quality outcomes across socio-economic groups provides new insights into labour market inequalities by shedding further light on the nature and depth of the disadvantages faced by some population groups.

- Youth and the unskilled face the worst outcomes with respect to job quality. By contrast, high-skilled workers perform well in all dimensions. For women, the picture is mixed. While men tend to enjoy higher earnings, women tend to enjoy a better quality working environment. The degree of labour market security is similar between men and women.
- Temporary work is strongly associated with poor job quality in all three dimensions. Part-time work, on the other hand, is associated with weaker outcomes in terms of earnings and labour market security, however, the risk of job strain tends to be lower among workers on part-time contracts compared to the full-time workers.

Chart A1.2: Labour market insecurity (1) (Share of previous earnings, 2010)



Source: OECD, Employment Outlook 2014.

Note: Labour market insecurity: unemployment risk times one minus unemployment insurance which may be interpreted as the expected earnings loss associated with unemployment as a share of previous earnings.

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(1) Labour market insecurity is defined as uninsured labour market risk. More specifically, it is calculated as the ratio of the probability of becoming unemployed over the probability of finding employment, times one minus the effective rate of risk-absorption through the tax and benefits system. The latter can be viewed as the rate at which the tax and benefits system is able to 'replace' workers' earnings when they lose their job. See Section 2.2 in Chapter 3 of Employment Outlook 2014 for details.

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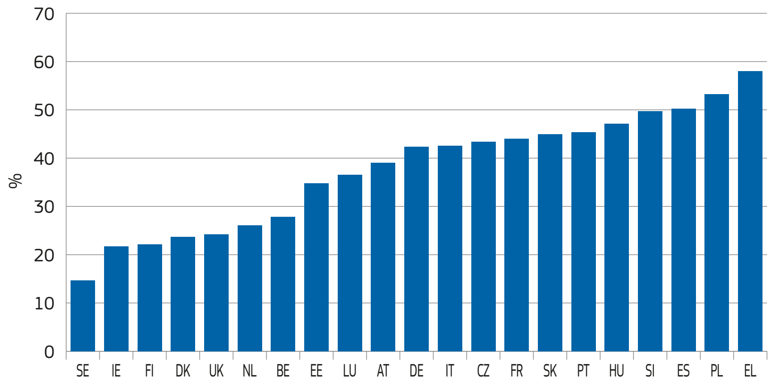
Chart A1.3: Job strain (1) (percentage of employees in strained jobs)



Source: OECD, Employment Outlook 2014.

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(1) Job strain is produced by the interaction of high job demands and limited job resources. Job demands require sustained physical, cognitive and emotional effort. Resources include work autonomy, appropriate feedback, opportunities to learn and support from colleagues and managers. In the OECD Employment Outlook 2014, job strain is characterised by a set of combinations of job demands and resources that are most likely to have detrimental effects on workers' health (see Section 2.3 for exact definition of such combinations).

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ILO Decent Work Agenda

The ILO Declaration on Social Justice for a Fair Globalization, adopted in 2008, endorses the Agenda for Decent Work, which includes four equally important strategic objectives: creating jobs, guaranteeing rights at work, extending social protection and promoting social dialogue, with gender equality as a cross-cutting objective.

The same year, the ILO adopted a comprehensive framework of Decent Work Indicators to monitor progress. The framework contains no country rankings and no composite index, and covers all four dimensions of Decent Work. The information is derived from various sources: household and establishment surveys, administrative records, qualitative legal framework information, among others.

The framework is based on both *statistical indicators* and qualitative information on the rights at work and the legal framework (107) to take cognisance of the contextual environment in which the progress occurs. Progress of countries is recorded in the Decent Work Country Profiles. The ILO Manual on Decent Work Indicators: concepts and definitions was launched in 2012 (108).

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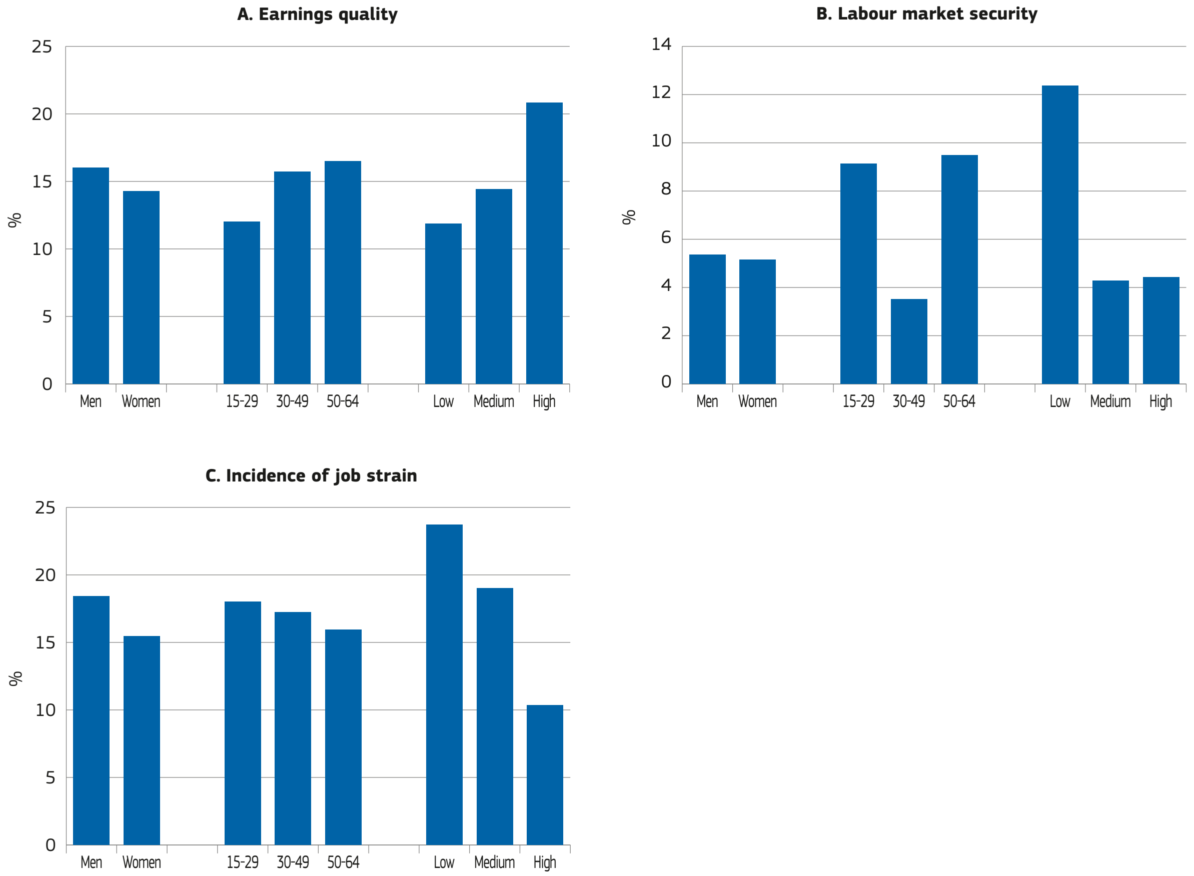
(107) The statistical indicators cover the broader economic and social context as well as 10 thematic areas (employment opportunities, adequate earnings, working time, combining work and family life, child and forced labour, stability and security of work, equal opportunities, safe work environment, social security, social dialogue). The legal framework indicators are divided into 21 groups, some of which are labour administration, minimum wage, unemployment insurance, leave (paid annual leave, maternity and parental leave), child and forced labour, termination of employment, employment injury benefits, pension, incapacity due to sickness/invalidity, freedom of association, collective bargaining, tripartite consultation. More information is available at http://www.ilo.org/integration/themes/mdw/lang--en/index.htm, which gives access also to the specific Decent Work Factsheets and Country Profiles as well as the Manual on Decent Work Indicators, see next footnote.

(108) The link to the manual is: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---integration/documents/publication/wcms_229374.pdf. It presents a description of the statistical indicators and legal framework indicators related to the 10 substantive elements of decent work.

Chart A1.4: Measures of job quality by works characteristics (1)



Source: European Union Survey on Income and Living Conditions (EU-SILC), European Working Conditions Survey (Eurofound, 2010), OECD Employment Database.

Note: Country coverage: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovenia, Slovak Republic, Spain, Sweden, Turkey and United Kingdom (24 countries, 23 countries excluding Iceland in Panel C).

(1) Earnings quality and labour market insecurity data show an average for 2005–10, while job strain refers to 2010.

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The ILO provides support through integrated Decent Work Country Programmes developed in coordination with its constituencies. These programmes define the priorities and the targets within national development frameworks and aim to tackle major Decent Work deficits towards each of the strategic objectives. The country profiles provide an input for the Country Programmes and help spell out the targets.

There emerged synergies between the EU and the ILO's job quality strategies. Implemented by the ILO with funding from the European Union, the project 'Monitoring and Assessing Progress on Decent Work (MAP)' (2009 to 2013) involves joint work with government agencies, Statistical Offices, workers' and employers' organisations and research institutions to strengthen national capacity, particularly of developing and transition countries, to self-monitor and self-assess progress towards decent work. The project further facilitates the identification of decent work indicators that are relevant at the national level, supports data collection, and uses the collected data for an integrated policy analysis of decent work.

The ILO Key Indicators of the Labour Market (KILM)

Published every two years since 1999, the KILM is a collection of 20 key indicators of the labour market, ranging from employment and variables relating to employment (status, sector, hours, etc.) to education, wages and compensation costs, labour productivity and working poverty. These indicators are relatively broad, capturing the economic and labour market situation in a country, but provide less insight into the quality of employment/jobs.

UNECE Task Force on measuring quality of employment

Since 2000, UNECE, Eurostat, the OECD and ILO organise joint seminars on quality of employment to share information between international experts and to develop a quality of employment framework. The new framework does not seek to reconcile the existing frameworks used in the different policy contexts: the ILO's Decent Work Indicators Measurement Framework, the EU Quality of Work Indicators, and the Eurofound's quality of work and employment framework. Rather, it aims to provide a 'toolbox' of indicators to be used for international and national initiatives to study quality of employment.

In 2007, under the auspices of the Conference of European Statisticians, a Task Force (109) was set up to develop a concept for statistical measurement of quality of employment unifying the elements in the existing approaches.

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(109) The Task Force was composed of representatives from national statistical offices of Canada, France, Finland, Hungary, Israel, Italy, Poland, ESTAT, Eurofound, ILO, UNECE and the NGO Women in Informal Employment (WIEGO).

The 2007 Task Force created an initial framework for measuring quality of employment with seven dimensions and over 50 indicators (110). The framework was implemented by nine countries by the end of the Task Force's term, leading to nine pilot country reports (111).

The ILO decent work concept and the UNECE Task Force-proposed set of indicators are designed to capture aspects of labour markets in both developing and developed countries, and thus they put more emphasis on labour rights (including no child and forced labour) and social protection aspects in their definitions than the European Commission's and Eurofound frameworks.

In 2012, with a time frame of 2012–15, an Expert Group on Measuring the Quality of Employment was established within the framework of the Conference of European Statisticians, with the main objective to revise the conceptual structure and the set of indicators of the quality of employment.

European Trade Union Institute's (ETUI) Job Quality index (112)

The ETUI started work on this issue in 2008. The job quality index (JQI) comprises six dimensions based on 16 indicators, which in turn are drawn from individual variables taken from different sources (113). The six dimensions are: wages, non-standard forms of employment, working conditions, working time and work-life balance, access to training and career advancement, and collective interest representation and participation.

This index is focused on job quality from the perspective of workers; it captures most of the areas of job quality from the social sciences literature.

Although the variables refer to information measured at the level of individual workers, job quality is computed and reported only at national level based on averages (114). Apart from a readily available gender breakdown, it is not possible to break it down in order to analyse specific groups of workers (e.g. by occupation, type of contract).

The results are consistent with most of the results from other indices: best performers are the Northern countries, and lowest values are found for Eastern and Southern European countries. The JQI also allows comparisons over time for the EU-15 countries. However, caution needs to be taken as the index is based on various data sources, not all of which are updated with the same periodicity.

European Job Quality Indicator: European Parliament

The European Parliament (2009) came up with an outline for the development of a European Job Quality Index. The authors suggest that the new indicator should be based only on variables that directly affect the quality of work and employment. Ideally, it should be constructed from individual data. They suggest as a leading source the EWCS. The future indicator should include the following dimensions: work, employment, and a joint dimension for work and employment (see European Parliament 2009).

EU Seventh Framework Programme

Working conditions and job quality have been a prominent feature under the socio-economic research programmes of the EU's Research Framework Programmes. Below, the two most recent and relevant European research projects on this theme are briefly presented. For a more exhaustive overview of recent comparative research in Europe, see Chapter 4 'Toward better job quality and working conditions: increasing productivity and work-related well-being' in the European Commission Policy Review, 'New skills and jobs in Europe: Pathways towards full employment' (115).

NEUJOBS project

NEUJOBS is a research project financed by the European Commission under the Seventh Framework Programme (FP7-SSH). Its objective is to analyse likely future developments in the European labour market(s), in view of four major transitions that are expected to impact employment and European societies in general (116).

The WP 2 (work package) called 'Good jobs-bad jobs, cultural attributes of decent work in Europe' looks at issues of job quality. The package considers the conceptualisation of job quality from both the labour law perspective and the perspective of employees through case studies and in-depth face-to-face interviews (117). In contrast to previous approaches, the NEUJOBS project does not seek to measure job quality nor come up with particular

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(110) 1) safety and ethics of employment (safety at work, child and forced labour, fair treatment in employment); 2) income and benefits from employment, including also non-wage pecuniary benefits; 3) working hours and balancing work and non-working life (working hours, working time arrangements); 4) security of employment and social protection; 5) social dialogue; 6) skills development and training; 7) workplace relationships and work motivation. For more information see UNECE (2009).

(111) Canada, Mexico, Finland, France, Germany, Israel, Italy, Republic of Moldova, Ukraine. See UNECE (2010).

(112) ETUI is the research arm of the European Trade Union Confederation (ETUC), the most important representative body of workers at EU level and a major player as a social partner in the EU policy area of work and employment.

(113) The index is based on five sources: LFS, SILC, AMECO, EWCS and ICTWSS (the latter stands for Database on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts).

(114) It is constructed by first normalising the indicators for each dimension, then weighting the normalised indicators within each dimension, and then summing up the dimensions (i.e. each dimension is equally weighted or equally important for the overall result of the index). As for each composite index this method involves some discretion in choosing the weights. The sensitivity analysis shows however that the results are quite stable to changing the weights (Leschke, Watt and Finn, 2008). The indicators are normalised by rescaling each value to the proportion they represent with respect to the difference between the maximum and minimum values for the base year, which is set to 2000 for EU-15 and 2007 for EU-27. This system of normalization is a widely used method for comparing countries' performance (for example, in the construction of the Human Development Index) and has the advantage of putting each value in relation to the best and worst cases. For more methodological details see Leschke, Watt and Finn, and 2012.

(115) Publications Office of the European Union, Luxembourg, 2012. http://ec.europa.eu/research/social-sciences/pdf/new-skils-and-jobs-in-europe_en.pdf

(116) These transitions are: 1. socio-ecological transition (a change in the patterns of social organisation and culture, production and consumption beyond the current industrial model towards a more sustainable future); 2. societal transition produced by a combination of factors like population ageing, low fertility rates, changing family structures, urbanisation and growing female employment; 3. new territorial dynamics and the balance between agglomeration and dispersion forces; and, 4. skills (upgrading) transition and its likely consequences for employment and (in)equality.

(117) The interviews are semi-structured qualitative interviews, with many open questions. However, they give additional valuable information and allow taking into account cultural aspects. There are five groups of actors interviewed: social partners, governments and parties, civil society organisations, research communities, and separately, employees.

indicators/dimensions thereof. On one hand, it concentrates on what is found in the labour codes, employment laws/guidelines, government plans, trade union strategies, NGO agendas and academic works with regard to job quality. Additionally, it tries to understand the attitudes of employees towards work and explain cleavages between 'collective' views expressed in the employment programmes/labour law and those expressed by the employees themselves.

The project has already published a state-of-the-art report on job quality (118). The countries covered are Spain, Hungary, Slovakia and the United Kingdom (two 'old' and two 'new' Member States). More recently, the project finished its comparative qualitative ('quasi-anthropological') research (119), in which it finds the mainstream 'postmaterialist' academic discourses on good jobs (mainly obtained from quantitative surveys) quite distant from the preoccupations of the workers interviewed in these four countries. Researchers appeared to observe a 'retraditionalisation' of employment preferences (security-oriented: full-time work with permanent contracts and appropriate wages) and found sectoral and company type features to be more defining for job quality than the national contexts.

WALQING project: Work and Life Quality in New and Growing Jobs (120)

Funded by the European Union's Seventh Framework Programme (FP7-SSH) from 2009–2012 and involving 11 European partners, the Walqing project investigated the linkages between new and expanding jobs, the conditions of work and employment in these jobs, and the outcomes for employees' quality of work and life. It did so by integrating several analytical levels and research paradigms. In particular, research in Walqing is divided into three pillars: 1. Data analysis — Employment growth, quality of work and quality of life in Europe; 2. Stakeholder involvement — Comparative institutional analysis and action research; and 3. Qualitative research — Organisational strategies, vulnerability and individual agency.

Under the first pillar, in-depth analyses of the most important European data sources, such as EU-LFS, EWCS, EU-SILC and ESQL were used to identify 'new and growing' jobs and to assess the quality of jobs and life in these growth areas, particularly with regard to jobs with problematic working conditions in the service and manufacturing industries (121). Pillar 2 performed institutional analysis and action research to disseminate good-practice examples aimed at improving working conditions beyond their national, company-specific or sectoral contexts. In particular, the approach involves interviews with representatives of key stakeholders about the emergence of low-quality jobs and vulnerable groups in the selected sectors and policy documents reviewed. It developed and disseminated strategies for improving unhealthy or dysfunctional working conditions to foster mutual learning and dialogue among stakeholders (122). Pillar 3 explored the practices of work organisation, HRM strategies, contractual relations and working conditions, by means of 53 in-depth case studies in companies.

The research focused on five sectors with substantial growth potential in quantity & quality of jobs: Commercial Cleaning, Contract Catering, Green Construction, Mobile Elderly Care and Waste Management. Moreover, these sectors address basic human needs and are difficult to delocalise. The main findings and recommendations were summarised in five sectoral brochures on good working practices and social dialogue issues (123). This included an analysis of particularly vulnerable groups, such as young workers, older workers, migrants and some groups of women (124).

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(118) Kovacs with Hilbert, Veselkova and Virag (2012)

(119) 'Travelling back in time? Job Quality in Europe as seen from below', Kovacs with Hilbert, Veselkova and Virag (2014) — http://www.neujobs.eu/

(120) http://www.walqing.eu/index.php?id=2

(121) Key final reports include: 'Comparative analysis of employment expansion and of job characteristics in selected business functions', 'Comparative analyses of job quality in new growth jobs', and 'Secondary analysis on working conditions and quality of life' (all available at http://www.walqing.eu/index.php?id=29).

(122) See for example 'Synthesis report on sector specifics in stakeholder policies and quality of work and life', available at http://www.walqing.eu/index.php?id=32

(123) Available at: http://ww.walqing.eu/webresource

(124) See for example 'Integrated report on organisational case studies', available at: http://www.walqing.eu/index.php?id=34

ANNEX 2: ORGANISATION OF WORK — TECHNICAL DETAILS

Criteria for classification

Classification of work organisation is established on the basis of 15 dimensions that describe relevant and discriminating aspects of work organisation:

- Two binary variables measuring autonomy in work:
  - Autonomy in choosing methods of work;
  - Autonomy in pace or rate at which work is carried out.
- Two binary variables measuring the way quality is controlled:
  - Use of precise quality standards;
  - Self-assessment of the quality of work.
- Three binary variables measuring the cognitive dimensions of work:
  - Complexity of tasks;
  - Learning new things in work;
  - Work requires problem-solving.
- Four binary variables measuring constraints of the pace or rate of work:
  - Constraints linked to the equipment speed or movement of a product in production flow;
  - Constraints relating to numerical production or performance targets;
  - Constraints due to direct control by worker's immediate supervisors;
  - Constraints resulting from dependency on the work done by worker's colleagues.
- Three binary variables measuring degree of novelty in job tasks:
  - Perceived monotony of tasks;
  - Repetitiveness of tasks of less than one minute.
  - Task rotation between colleagues
- A three-level variable measuring of the use of teamwork, with categories of autonomous teamwork (team members decide the division of tasks), non-autonomous teamwork (managers/supervisors decide the division of tasks) and no teamwork(125).

Different models of work organisation

The typology initially developed by Lorenz and Valeyre builds on a review of the literature on work organisation covering High Performance Work systems (HPWS) (Appelbaum and Batt, 1993, 1994; Pfeffer, 1998; Osterman, 1994), the lean production model (MacDuffie and Pil, 1997), the socio-technical system (Emery and Trist, 1960), learning organisations (Zarifian, 2003), Tayloristic organisations and adhocracies (Mintzberg, 1979). This review led to the identification of 15 dimensions that describe relevant and discriminating aspects of work organisation covering autonomy in work, quality control, cognitive dimensions of work, constraints of the pace or rate of work, novelty in job tasks and teamwork, and can be measured by the EWCS. In the 2010 survey, the same 15 dimensions to determine the presence and size of the four types of work organisations is used.

Traditional forms of work organisation are based on the principles of labour division, hierarchical and centralised authority and control. They are designed as static structures, optimised for a fixed set of external economic, social and cultural conditions. However, the emergence of new and uncertain environments has put these traditional work structures under increasing pressure. As a response, new forms of work organisation have emerged that are more flexible and more responsive to changing internal or external circumstances. Many of these 'new' forms are often grouped together under the label 'High Performance workplaces' (HPWP), but this group is far from being homogeneous and covers some of the defining characteristics of different organisational forms such as the socio-technical systems (STS), the learning organisations, lean production, high performance work systems and the adhocracy (Mintzberg).

Combs et al (2006), in a meta-analysis of 92 recent studies on HPWS and performance, found evidence that HPWS enhance organisational performance. An increase in one standard deviation in the use of HPWS is associated with a 4.6% increase in gross return on assets and a 4.4 percentage-point decrease in turnover from 18.4 to 14.0%. The effect is stronger when bundles of measures are considered together rather than individual practices. Effects sizes are larger in manufacturing industries than in service industries. Common to these HPWP forms are attention to knowledge as a competitive factor, decentralisation of decision-making and self-managed teams, performance-based compensation structures and rather extensive training and strong problem-solving opportunities. However, lean and learning forms of work organisation differ on a number of points such as:

- A higher level of individual autonomy granted to workers (higher in learning organisations as well as in the socio-technical models but lower in lean production models);
- A higher level of standardisation in lean forms of work organisation (tasks, quality standards, etc.);
- A higher interdependent work structure as well as higher dependence on technologies to set the pace of workers and reliance on team work in lean production forms;
- An emphasis on workers' autonomy in organising and controlling the products of their work, decreased interdependency of work process in learning organisations;
- Attention to quality of working life is a key driver for example in the case of STS;
- While learning in lean production forms of organisation is mostly used to improve the work processes and increase productivity, learning activities in the case of learning organisations are seen as a critical activity for responding to unforeseen events and for the introduction of important innovations.

In contrast to Tayloristic organisations, which have been abundantly criticised for their physically demanding work, repetitive tasks and low learning opportunities, because conception is distinct from execution, lean production is designed to improve the overall performance of the organisation by assigning more autonomy to workers and their immediate managers, but with continued emphasis on the strict quality standards, standardisation of work and procedures and with reliance on individual performance-based pay structures. Lean forms of work organisation differ in a number of ways from the STS in that they promote development of more specialised, contextualised skills, organise work into wider production systems (greater interdependency) and provide feedback and support that are based on the degree to which strict performance criteria are satisfied.

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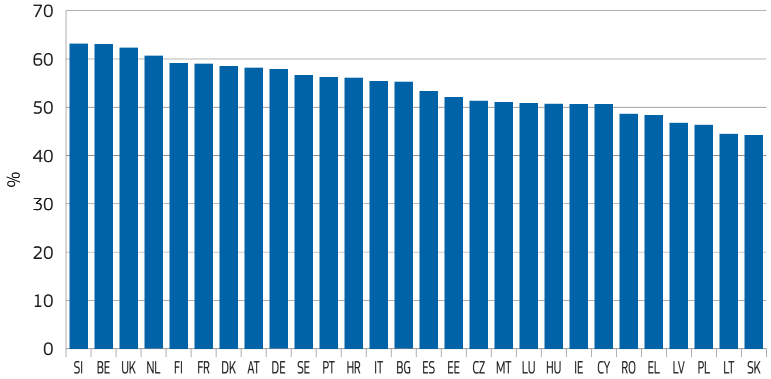
(125) In the analyses of trend data a binary variable measuring presence of teamwork was used, since a three-level variable was not available in the 2000 EWCS dataset.

ANNEX 3: ADDITIONAL INDICATORS RELATING TO JOB QUALITY

Socioeconomic security

Chart A3.1: **Real wage level adjusted for productivity, 2013**



Source: AMECO database.

Note: Real compensation per employee adjusted for productivity.

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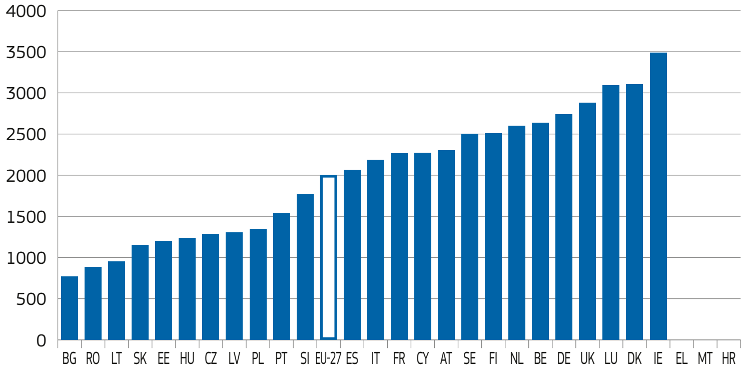
Chart A3.2: **Mean monthly earnings, PPS(¹), 2010**



Source: SES, 2010.

Note: No observation available for EL, MT and HR.

(¹) The indicator of adequate earnings that has been chosen by the EMCO Indicators Group was mean monthly earnings in purchasing power standard. It should be noted however that there are ongoing discussions, for example within the OECD, as to whether gross or net earnings are relevant for measuring job quality, or whether earnings should be taken on an hourly or monthly basis (see chapter 3 in the 2014 OECD Employment Outlook). Furthermore, the EMCO indicator does not consider 'increments' to job earnings such as health insurance, employer's contribution to the pension scheme, etc. which increase the socio-economic security of job holders and improve the quality of jobs.

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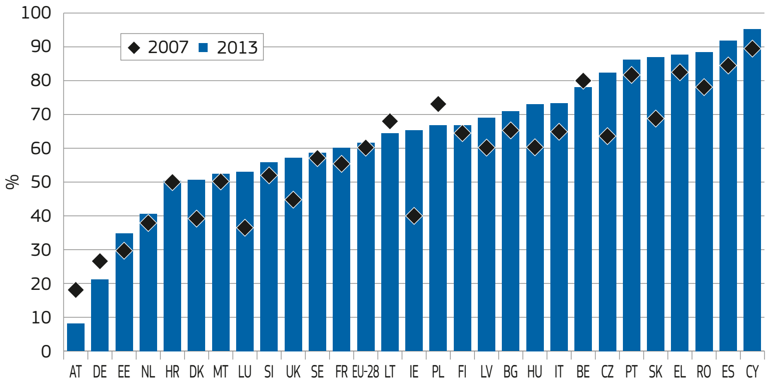
Job insecurity

During the crisis involuntary temporary work increased in a number of Member States, more significantly in Ireland, the United Kingdom, Luxembourg, Denmark and some New Member States (Slovakia, the Czech Republic, Hungary) (Chart A3.3), while transitions to permanent contracts worsened (Chart A3.4), most significantly in Slovakia (29 pps) and Spain (15 pps)(¹²⁶).

(¹²⁶) Transitions improved notably in Finland (21 pps), Germany (14 pps) and Portugal (11 pps).

Chart A3.3: Involuntary temporary employment, 2007–13



Source: Eurostat LFS, table lfsa_etgar.

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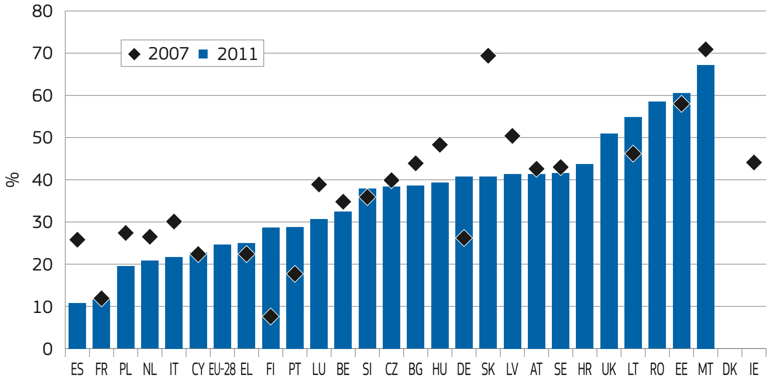
Chart A3.4: Transitions from temporary to permanent contract, 2007–13



Source: Eurostat, ilc_lvhl32.

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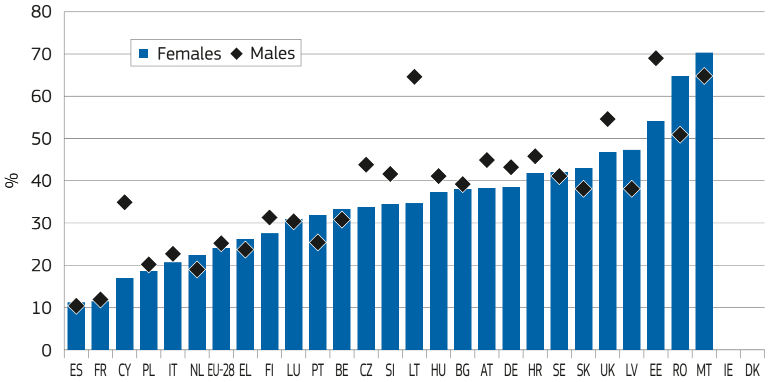
Chart A3.5: Labour transitions temporary to permanent, by gender, 2011



Source: Eurostat, ilc_lvhl32

Note: No observation available for IE and DK.

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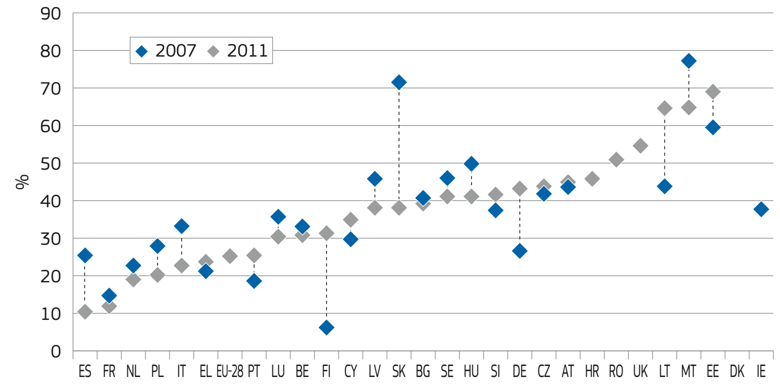
Chart A3.6: **Labour transitions temporary to permanent, males, 2007–11**



Source: Eurostat, ilc_lvhl32.

Notes: 2011 observation not available for IE and DK. 2007 observation not available for EU-28, HR, RO, UK and DK.

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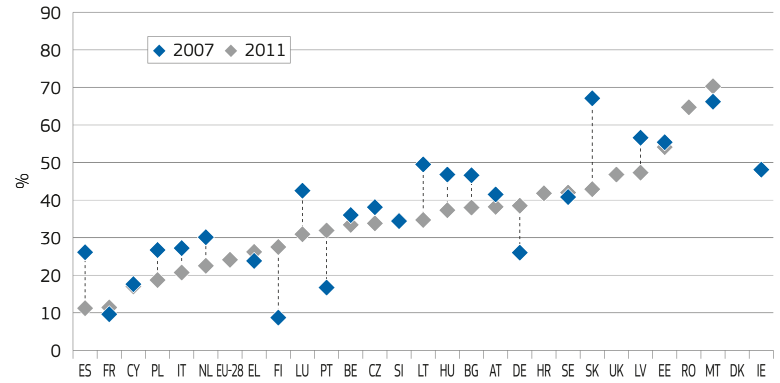
Chart A3.7: **Labour transitions temporary to permanent, females, 2007–11**



Source: Eurostat, ilc_lvhl32.

Notes: 2011 observation not available for IE and DK. 2007 observation not available for EU-28, HR, RO, UK and DK.

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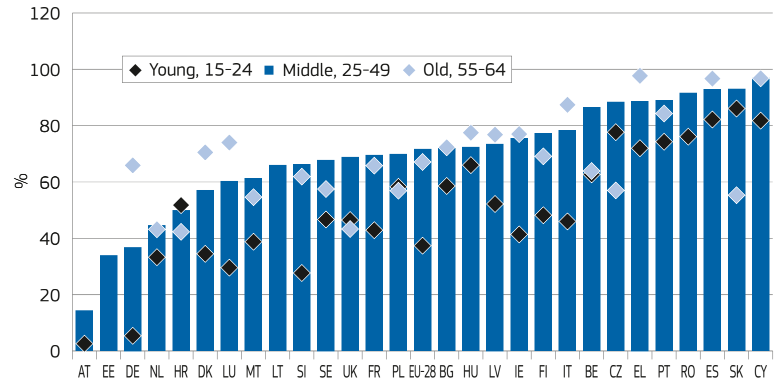
Chart A3.8: **Involuntary temporary employment, by age, 2013**



Source: Eurostat, lfsa_etgar.

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Prospects for career advancement

In some Member States job insecurity goes together with lower perceptions for career advancement, e.g. Romania, Slovakia, Italy, but the relationship is far from clear (Chart A3.9). The perceptions are also low in Member States like Germany and Austria where involuntary temporary work is the lowest (127). In fact, career advancement prospects seem to be higher in countries where jobs involve more training and learning new things (128).

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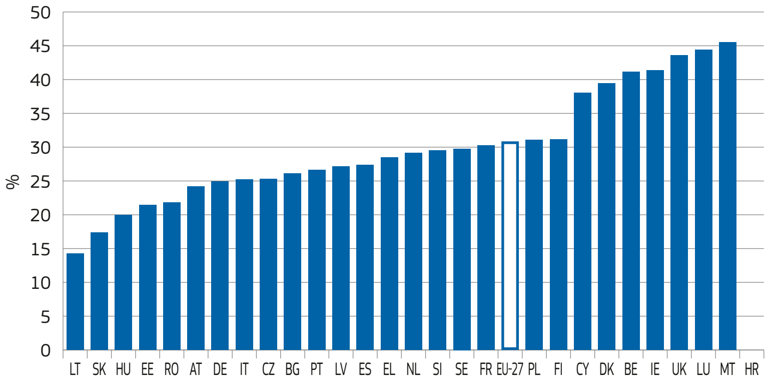
(127) In fact the correlation between job security and perceptions about career advancement (as measured by EWCS question 77c) is negative but close to zero.

(128) The correlation coefficient between the two Eurofound indicators ('Job offers good prospects for career advancement', on one hand, and 'Job involves learning new things', on the other) is 0.5 significant at the 1 % level.

Chart A3.9: Job offers good prospects for career advancement?



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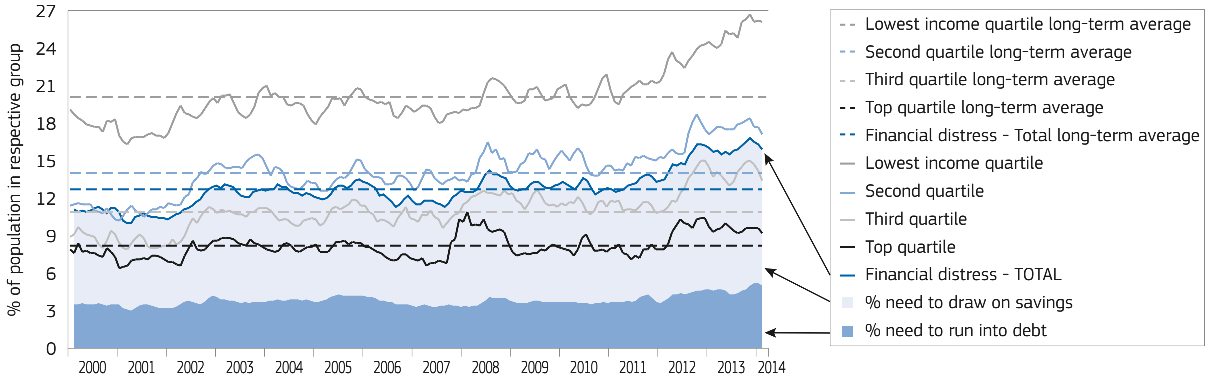
Source: Eurofound, EWCS 2010, question 77c.

Work-life balance

Chart A3.10: Financial distress in the EU, total and by income quartiles



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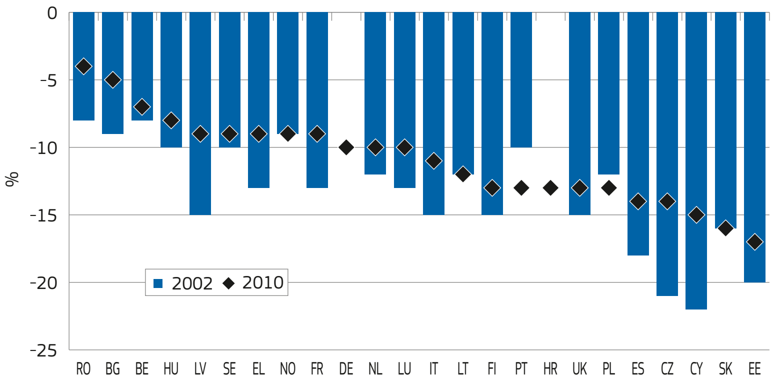
Source: European Commission DG ECFIN, Business and Consumer Surveys (DG EMPL estimation), data non-seasonally adjusted.

Notes: Three-months moving averages. Horizontal lines reflect long-term averages of financial distress for total and four income quartile households. For total households, the share of adults reporting needing to draw on savings and needing to run into debt are stacked in the grey Chart area which adds to total financial distress.

Gender balance

Chart A3.11: Adjusted gender earnings differences



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Sources: WiiW (2014, Tables A1 to A3) based on EU Structure of Earnings Survey data, release 2002, 2006 and 2010.

Notes: The coefficients are taken from the full Mincer regressions estimated separately for each country. Countries are ranked according to gender wage gap in 2010. No information on career breaks available in the dataset. Since women are more likely to take career breaks, which may negatively impact upon their wages, a failure to control for career breaks will bias the estimates of the wage gap slightly upwards.

ANNEX 4: TREND DEVELOPMENTS IN LEARNING ORGANISATION

Table A4.1: **Trend developments across Member States — increased learning**

Country		EWCS survey wave			Total
		2000	2005	2010	
Malta	Learning	38.2%$_{a}$	48.6%$_{a, b}$	57.6%$_{b}$	51.1%
	Lean	40.9%$_{a}$	35.6%$_{a, b}$	29.7%$_{b}$	33.6%
	Taylorist	7.3%$_{a, b}$	8.2%$_{b}$	3.6%$_{a}$	5.6%
	Simple	13.6%$_{a}$	7.5%$_{a}$	9.1%$_{a}$	9.6%
Latvia	Learning	29.8%$_{a}$	28.5%$_{a}$	44.0%$_{b}$	34.4%
	Lean	27.1%$_{a}$	38.3%$_{b}$	32.4%$_{a, b}$	33.2%
	Taylorist	14.9%$_{a}$	15.6%$_{a}$	10.0%$_{a}$	13.4%
	Simple	28.2%$_{a}$	17.6%$_{b}$	13.7%$_{b}$	19.0%
Portugal	Learning	23.8%$_{a}$	26.7%$_{a}$	35.2%$_{b}$	27.7%
	Lean	21.7%$_{a}$	33.3%$_{b}$	22.9%$_{a}$	25.4%
	Taylorist	30.7%$_{a}$	26.0%$_{a}$	26.7%$_{a}$	28.3%
	Simple	23.8%$_{a}$	14.0%$_{b}$	15.3%$_{b}$	18.6%
Romania	Learning	17.3%$_{a}$	23.6%$_{a}$	25.2%$_{a}$	22.5%
	Lean	39.1%$_{a}$	40.1%$_{a}$	38.8%$_{a}$	39.3%
	Taylorist	30.2%$_{a}$	25.7%$_{a, b}$	19.6%$_{b}$	24.6%
	Simple	13.4%$_{a}$	10.5%$_{a}$	16.4%$_{a}$	13.5%
Netherlands	Learning	59.6%$_{a, b}$	54.3%$_{b}$	63.5%$_{a}$	59.3%
	Lean	20.5%$_{a}$	22.9%$_{a}$	13.8%$_{b}$	19.4%
	Taylorist	8.3%$_{a}$	11.4%$_{a}$	9.6%$_{a}$	9.4%
	Simple	11.6%$_{a}$	11.4%$_{a}$	13.1%$_{a}$	11.9%
Denmark	Learning	64.7%$_{a}$	58.4%$_{a}$	61.1%$_{a}$	62.1%
	Lean	18.9%$_{a}$	29.8%$_{b}$	23.2%$_{a, b}$	22.9%
	Taylorist	10.7%$_{a}$	5.0%$_{b}$	6.1%$_{b}$	8.0%
	Simple	5.7%$_{a}$	6.9%$_{a, b}$	9.6%$_{b}$	7.1%
Cyprus	Learning	40.5%$_{a}$	25.6%$_{b}$	33.3%$_{a, b}$	32.7%
	Lean	20.6%$_{a, b}$	30.1%$_{b}$	20.6%$_{a}$	23.5%
	Taylorist	15.9%$_{a}$	14.7%$_{a}$	22.4%$_{a}$	18.4%
	Simple	23.0%$_{a}$	29.5%$_{a}$	23.7%$_{a}$	25.3%
Estonia	Learning	40.5%$_{a}$	36.0%$_{a}$	38.4%$_{a}$	38.6%
	Lean	38.6%$_{a}$	40.9%$_{a}$	39.6%$_{a}$	39.6%
	Taylorist	9.8%$_{a}$	9.7%$_{a}$	11.0%$_{a}$	10.2%
	Simple	11.0%$_{a}$	13.4%$_{a}$	11.0%$_{a}$	11.6%
Poland	Learning	36.7%$_{a}$	36.2%$_{a}$	39.1%$_{a}$	37.6%
	Lean	25.4%$_{a, b}$	33.3%$_{b}$	20.9%$_{a}$	25.8%
	Taylorist	14.2%$_{a}$	15.0%$_{a}$	19.6%$_{a}$	16.7%
	Simple	23.8%$_{a}$	15.4%$_{b}$	20.4%$_{a, b}$	19.9%
Lithuania	Learning	24.2%$_{a}$	27.0%$_{a}$	28.1%$_{a}$	26.6%
	Lean	19.6%$_{a}$	29.6%$_{b}$	30.9%$_{b}$	27.1%
	Taylorist	19.6%$_{a}$	19.4%$_{a}$	18.5%$_{a}$	19.2%
	Simple	36.6%$_{a}$	24.0%$_{b}$	22.5%$_{b}$	27.1%

Source: Eurofound estimates based on EWCS.

Notes: Subscripts denote whether difference between values across columns (from different EWCS waves) are statistically significant at the 0.05 level. In particular, values having the same subscripts do not differ significantly while values with different subscripts are significantly different.

Table A4.2: Trend developments across Member States — decreasing learning, but increasing lean forms

Country		EWCS survey wave			Total
		2000	2005	2010	
Germany	Learning	47.6%$_{a}$	45.2%$_{a,b}$	41.6%$_{b}$	44.4%
	Lean	16.1%$_{a}$	19.1%$_{a}$	25.8%$_{b}$	21.2%
	Taylorist	16.6%$_{a}$	16.2%$_{a}$	15.5%$_{a}$	16.0%
	Simple	19.7%$_{a}$	19.4%$_{a}$	17.0%$_{a}$	18.4%
Luxembourg	Learning	41.6%$_{a,b}$	49.3%$_{b}$	34.7%$_{a}$	41.2%
	Lean	22.9%$_{a}$	28.4%$_{a,b}$	33.6%$_{b}$	29.1%
	Taylorist	12.7%$_{a,b}$	10.9%$_{b}$	19.1%$_{a}$	14.8%
	Simple	22.9%$_{a}$	11.4%$_{b}$	12.6%$_{b}$	14.9%
Belgium	Learning	44.9%$_{a}$	48.4%$_{a}$	42.6%$_{a}$	44.0%
	Lean	18.4%$_{a}$	25.1%$_{b}$	29.2%$_{b}$	25.7%
	Taylorist	17.0%$_{a}$	11.2%$_{b}$	13.3%$_{a,b}$	14.0%
	Simple	19.7%$_{a}$	15.2%$_{a,b}$	14.9%$_{b}$	16.3%
Austria	Learning	51.8%$_{a}$	44.7%$_{a}$	44.5%$_{a}$	47.6%
	Lean	24.7%$_{a}$	25.3%$_{a}$	30.4%$_{a}$	26.7%
	Taylorist	13.5%$_{a}$	20.3%$_{b}$	14.7%$_{a,b}$	15.6%
	Simple	9.9%$_{a}$	9.7%$_{a}$	10.4%$_{a}$	10.0%
Slovenia	Learning	45.0%$_{a}$	42.7%$_{a}$	42.2%$_{a}$	43.1%
	Lean	21.2%$_{a}$	31.8%$_{b}$	30.5%$_{b}$	28.1%
	Taylorist	17.3%$_{a}$	12.8%$_{a}$	13.0%$_{a}$	14.2%
	Simple	16.5%$_{a}$	12.8%$_{a}$	14.3%$_{a}$	14.6%
Italy	Learning	41.7%$_{a}$	42.5%$_{a}$	40.4%$_{a}$	41.4%
	Lean	17.8%$_{a}$	20.4%$_{a}$	23.7%$_{a}$	20.5%
	Taylorist	20.1%$_{a}$	21.0%$_{a}$	14.8%$_{a}$	18.4%
	Simple	20.4%$_{a}$	16.1%$_{a}$	21.1%$_{a}$	19.6%
Finland	Learning	44.1%$_{a}$	40.9%$_{a}$	43.8%$_{a}$	43.0%
	Lean	30.2%$_{a}$	32.7%$_{a,b}$	38.6%$_{b}$	33.3%
	Taylorist	15.5%$_{a}$	13.9%$_{a,b}$	8.8%$_{b}$	13.2%
	Simple	10.1%$_{a}$	12.5%$_{a}$	8.8%$_{a}$	10.5%
Ireland	Learning	22.7%$_{a}$	41.2%$_{b}$	22.6%$_{a}$	27.7%
	Lean	32.9%$_{a,b}$	27.7%$_{b}$	37.4%$_{a}$	32.7%
	Taylorist	23.0%$_{a}$	12.4%$_{b}$	24.4%$_{a}$	20.5%
	Simple	21.4%$_{a}$	18.7%$_{a}$	15.6%$_{a}$	19.1%
Sweden	Learning	57.0%$_{a}$	73.2%$_{b}$	66.5%$_{b}$	64.1%
	Lean	18.9%$_{a}$	14.5%$_{a}$	19.7%$_{a}$	17.8%
	Taylorist	9.3%$_{a}$	6.2%$_{a}$	7.3%$_{a}$	7.9%
	Simple	14.7%$_{a}$	6.2%$_{b}$	6.4%$_{b}$	10.2%

Source: Eurofound estimates based on EWCS.

Notes: Subscripts denote whether difference between values across columns (from different EWCS waves) are statistically significant at the 0.05 level. In particular, values having the same subscripts do not differ significantly while values with different subscripts are significantly different.

Table A4.3: Trend developments across Member States — decreasing learning, but increasing Taylorist organisation

Country		EWCS survey wave			Total
		2000	2005	2010	
France	Learning	38.0%$_{a}$	43.4%$_{a}$	30.6%$_{b}$	35.7%
	Lean	31.4%$_{a}$	26.0%$_{a, b}$	24.8%$_{b}$	27.2%
	Taylorist	16.8%$_{a}$	20.9%$_{a, b}$	23.5%$_{b}$	20.8%
	Simple	13.8%$_{a}$	9.6%$_{a}$	21.1%$_{b}$	16.3%
Greece	Learning	23.3%$_{a}$	25.7%$_{a}$	23.4%$_{a}$	24.1%
	Lean	20.7%$_{a}$	30.1%$_{b}$	21.1%$_{a, b}$	23.7%
	Taylorist	20.7%$_{a}$	21.9%$_{a}$	28.6%$_{a}$	23.4%
	Simple	35.3%$_{a}$	22.4%$_{b}$	26.9%$_{a, b}$	28.8%
Hungary	Learning	41.4%$_{a}$	44.2%$_{a}$	32.8%$_{b}$	39.4%
	Lean	13.3%$_{a}$	17.2%$_{a, b}$	22.0%$_{b}$	17.5%
	Taylorist	23.3%$_{a}$	18.5%$_{a}$	31.8%$_{b}$	24.6%
	Simple	22.0%$_{a}$	20.1%$_{a}$	13.4%$_{b}$	18.5%
Bulgaria	Learning	23.2%$_{a}$	25.5%$_{a}$	11.9%$_{b}$	20.6%
	Lean	25.6%$_{a}$	28.7%$_{a}$	31.0%$_{a}$	28.5%
	Taylorist	22.3%$_{a}$	25.9%$_{a}$	27.4%$_{a}$	25.3%
	Simple	28.9%$_{a}$	19.9%$_{b}$	29.6%$_{a}$	25.6%
Czech Republic	Learning	39.3%$_{a}$	30.4%$_{b}$	28.6%$_{b}$	33.1%
	Lean	26.2%$_{a}$	28.3%$_{a}$	27.8%$_{a}$	27.4%
	Taylorist	19.9%$_{a}$	23.5%$_{a}$	23.1%$_{a}$	22.0%
	Simple	14.6%$_{a}$	17.8%$_{a}$	20.5%$_{a}$	17.5%

Source: Eurofound estimates based on EWCS.

Notes: Subscripts denote whether difference between values across columns (from different EWCS waves) are statistically significant at the 0.05 level. In particular, values having the same subscripts do not differ significantly while values with different subscripts are significantly different.

Table A4.4: Trend developments across Member States — No substantial changes between 2000 and 2010

Country		EWCS survey wave			Total
		2000	2005	2010	
Slovakia	Learning	24.2%$_{a}$	32.8%$_{b}$	28.7%$_{a, b}$	28.8%
	Lean	31.2%$_{a}$	25.4%$_{a}$	26.9%$_{a}$	27.7%
	Taylorist	28.1%$_{a}$	25.8%$_{a}$	25.1%$_{a}$	26.3%
	Simple	16.5%$_{a}$	16.1%$_{a}$	19.3%$_{a}$	17.3%
Spain	Learning	25.6%$_{a}$	26.9%$_{a}$	27.2%$_{a}$	26.4%
	Lean	28.6%$_{a}$	24.6%$_{a}$	31.9%$_{a}$	28.6%
	Taylorist	28.3%$_{a}$	22.9%$_{a}$	21.1%$_{a}$	24.7%
	Simple	17.5%$_{a}$	25.7%$_{b}$	19.7%$_{a, b}$	20.3%
United Kingdom	Learning	25.9%$_{a}$	29.7%$_{a}$	27.3%$_{a}$	27.4%
	Lean	40.9%$_{a}$	34.1%$_{a}$	37.8%$_{a}$	38.0%
	Taylorist	19.0%$_{a}$	19.4%$_{a}$	20.5%$_{a}$	19.6%
	Simple	14.2%$_{a}$	16.9%$_{a}$	14.5%$_{a}$	15.0%

Source: Eurofound estimates based on EWCS.

Notes: Subscripts denote whether difference between values across columns (from different EWCS waves) are statistically significant at the 0.05 level. In particular, values having the same subscripts do not differ significantly while values with different subscripts are significantly different.

Table A4.5: Trend developments across sectors

		EWCS survey wave			Total
		2000	2005	2010	
Electricity, gas, and water supply	Learning	$47.8\%_{a}$	$62.4\%_{b}$	$55.0\%_{a, b}$	55.9 %
	Lean	$32.7\%_{a}$	$23.5\%_{b}$	$28.7\%_{a, b}$	27.8 %
	Taylorist	$3.4\%_{a}$	$5.7\%_{a}$	$5.9\%_{a}$	5.2 %
	Simple	$16.1\%_{a}$	$8.4\%_{b}$	$10.4\%_{a, b}$	11.1 %
Financial intermediation	Learning	$54.9\%_{a}$	$66.4\%_{b}$	$59.1\%_{a}$	60.0 %
	Lean	$21.5\%_{a}$	$18.8\%_{a}$	$28.0\%_{b}$	23.1 %
	Taylorist	$6.6\%_{a}$	$3.1\%_{b}$	$3.9\%_{b}$	4.5 %
	Simple	$16.9\%_{a}$	$11.8\%_{b}$	$9.0\%_{b}$	12.3 %
Transport, storage and communication	Learning	$36.9\%_{a}$	$42.1\%_{b}$	$33.8\%_{a}$	37.1 %
	Lean	$21.7\%_{a}$	$19.9\%_{a}$	$23.1\%_{a}$	21.8 %
	Taylorist	$13.7\%_{a}$	$17.1\%_{b}$	$16.2\%_{a, b}$	15.6 %
	Simple	$27.7\%_{a}$	$20.9\%_{b}$	$26.8\%_{a}$	25.5 %
Hotels and restaurants	Learning	$34.4\%_{a}$	$37.4\%_{a}$	$30.9\%_{a}$	33.7 %
	Lean	$25.6\%_{a}$	$17.9\%_{b}$	$21.9\%_{a, b}$	21.9 %
	Taylorist	$12.8\%_{a}$	$24.0\%_{b}$	$22.1\%_{b}$	19.8 %
	Simple	$27.3\%_{a}$	$20.8\%_{a}$	$25.0\%_{a}$	24.5 %
Wholesale and retail trade; repair of motor vehicles and motorcycles	Learning	$47.9\%_{a}$	$45.5\%_{a}$	$37.8\%_{b}$	43.3 %
	Lean	$17.2\%_{a}$	$21.3\%_{b}$	$22.4\%_{b}$	20.4 %
	Taylorist	$10.1\%_{a}$	$10.1\%_{a}$	$14.7\%_{b}$	11.9 %
	Simple	$24.8\%_{a}$	$23.0\%_{a}$	$25.1\%_{a}$	24.4 %
Construction	Learning	$43.0\%_{a}$	$32.6\%_{b}$	$36.6\%_{b}$	37.7 %
	Lean	$31.3\%_{a}$	$37.2\%_{b}$	$33.3\%_{a, b}$	33.7 %
	Taylorist	$13.0\%_{a}$	$19.9\%_{b}$	$16.2\%_{c}$	16.1 %
	Simple	$12.7\%_{a, b}$	$10.4\%_{b}$	$13.9\%_{a}$	12.5 %
Mining, quarrying, Manufacturing	Learning	$33.7\%_{a}$	$32.8\%_{a}$	$32.9\%_{a}$	33.2 %
	Lean	$28.6\%_{a}$	$32.1\%_{b}$	$33.5\%_{b}$	31.1 %
	Taylorist	$26.8\%_{a}$	$26.4\%_{a, b}$	$24.7\%_{b}$	26.0 %
	Simple	$10.9\%_{a}$	$8.7\%_{b}$	$8.9\%_{b}$	9.7 %

Source: Eurofound estimates based on EWCS, Nace rev1.

Notes: Subscripts denote whether difference between values across columns (from different EWCS waves) are statistically significant at the 0.05 level. In particular, values having the same subscripts do not differ significantly while values with different subscripts are significantly different.

Table A4.6: Trend developments across occupations

Occupation: 1st-level ISCO codes			EWCS survey wave			Total
			2000	2005	2010	
Legislators, senior officials and managers	High-skilled clerical	Learning	68.5%$_{a}$	55.6%$_{b}$	54.3%$_{b}$	59.1%
		Lean	26.5%$_{a}$	36.3%$_{b}$	36.0%$_{b}$	33.1%
		Taylorist	2.3%$_{a}$	3.4%$_{a, b}$	4.4%$_{b}$	3.5%
		Simple	2.7%$_{a}$	4.7%$_{a, b}$	5.4%$_{b}$	4.3%
Professionals	High-skilled clerical	Learning	72.5%$_{a}$	61.8%$_{b}$	68.4%$_{a}$	66.7%
		Lean	17.0%$_{a}$	32.1%$_{b}$	26.0%$_{c}$	26.0%
		Taylorist	7.1%$_{a}$	2.9%$_{b}$	2.2%$_{b}$	3.9%
		Simple	3.4%$_{a}$	3.2%$_{a}$	3.4%$_{a}$	3.3%
Technicians and associate professionals	Low-skilled clerical	Learning	58.9%$_{a}$	57.1%$_{a}$	60.8%$_{a}$	59.3%
		Lean	23.9%$_{a}$	26.5%$_{a}$	26.1%$_{a}$	25.4%
		Taylorist	8.0%$_{a}$	10.0%$_{a}$	3.9%$_{b}$	6.8%
		Simple	9.2%$_{a}$	6.4%$_{b}$	9.2%$_{a}$	8.5%
Clerks	Low-skilled clerical	Learning	46.5%$_{a}$	50.3%$_{a}$	41.9%$_{b}$	46.0%
		Lean	19.5%$_{a}$	18.3%$_{a}$	22.8%$_{b}$	20.3%
		Taylorist	8.6%$_{a}$	9.6%$_{a}$	13.3%$_{b}$	10.6%
		Simple	25.4%$_{a}$	21.8%$_{b}$	22.0%$_{b}$	23.1%
Service workers and shop and market sales workers	Low-skilled clerical	Learning	35.7%$_{a}$	43.5%$_{b}$	26.4%$_{c}$	34.6%
		Lean	18.1%$_{a}$	14.7%$_{a}$	23.9%$_{b}$	19.2%
		Taylorist	12.0%$_{a}$	10.4%$_{a}$	19.0%$_{b}$	14.1%
		Simple	34.3%$_{a}$	31.4%$_{a}$	30.7%$_{a}$	32.1%
Craft and related trades workers	High-skilled manual	Learning	33.1%$_{a}$	31.2%$_{a, b}$	30.2%$_{b}$	31.6%
		Lean	34.1%$_{a}$	36.3%$_{a, b}$	38.1%$_{b}$	36.0%
		Taylorist	22.4%$_{a}$	25.6%$_{b}$	23.0%$_{a, b}$	23.5%
		Simple	10.4%$_{a}$	6.8%$_{b}$	8.7%$_{a}$	8.9%
Plant and machine operators and assemblers	Low-skilled manual	Learning	21.3%$_{a}$	17.3%$_{b}$	18.9%$_{a, b}$	19.4%
		Lean	29.2%$_{a}$	25.8%$_{b}$	27.2%$_{a, b}$	27.7%
		Taylorist	32.7%$_{a}$	39.8%$_{b}$	31.2%$_{a}$	33.9%
		Simple	16.8%$_{a}$	17.0%$_{a}$	22.7%$_{b}$	19.0%
Elementary occupations	Low-skilled manual	Learning	19.6%$_{a}$	26.4%$_{b}$	18.2%$_{a}$	21.4%
		Lean	18.9%$_{a}$	23.3%$_{b}$	23.5%$_{b}$	21.9%
		Taylorist	31.7%$_{a}$	29.4%$_{a}$	33.9%$_{a}$	31.6%
		Simple	29.8%$_{a}$	21.0%$_{b}$	24.4%$_{b}$	25.1%

Source: Eurofound estimates based on EWCS.

Notes: Subscripts denote whether difference between values across columns (from different EWCS waves) are statistically significant at the 0.05 level. In particular, values having the same subscripts do not differ significantly while values with different subscripts are significantly different.

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Table A4.7: Trend developments across firm size

Number of paid workers in local establishment		EWCS survey wave			Total
		2000	2005	2010	
10–49	Learning	41.5 %$_{a}$	39.5 %$_{a, b}$	38.3 %$_{b}$	39.8 %
	Lean	23.0 %$_{a}$	24.1 %$_{a, b}$	25.8 %$_{b}$	24.4 %
	Taylorist	15.3 %$_{a}$	17.7 %$_{b}$	16.1 %$_{a, b}$	16.3 %
	Simple	20.2 %$_{a}$	18.6 %$_{a}$	19.8 %$_{a}$	19.6 %
50–499	Learning	36.8 %$_{a}$	40.1 %$_{b}$	34.6 %$_{c}$	37.0 %
	Lean	27.1 %$_{a}$	28.7 %$_{a, b}$	29.9 %$_{b}$	28.6 %
	Taylorist	21.0 %$_{a}$	19.8 %$_{a}$	20.4 %$_{a}$	20.4 %
	Simple	15.1 %$_{a}$	11.3 %$_{b}$	15.2 %$_{a}$	14.0 %
500 or over	Learning	38.4 %$_{a}$	41.3 %$_{a}$	39.1 %$_{a}$	39.4 %
	Lean	28.6 %$_{a}$	31.2 %$_{a, b}$	34.7 %$_{b}$	31.1 %
	Taylorist	20.8 %$_{a}$	19.0 %$_{a}$	19.1 %$_{a}$	19.8 %
	Simple	12.2 %$_{a}$	8.5 %$_{b}$	7.1 %$_{b}$	9.7 %

Source: Eurofound estimates based on EWCS.

Note: Subscripts denote whether difference between values across columns (from different EWCS waves) are statistically significant at the 0.05 level. In particular, values having the same subscripts do not differ significantly while values with different subscripts are significantly different.

Table A4.8: Trend developments across different levels of seniority

Number of years working at the company		EWCS survey wave			Total
		2000	2005	2010	
1 year or less	Learning	35.0 %$_{a}$	35.3 %$_{a}$	27.8 %$_{b}$	32.9 %
	Lean	23.0 %$_{a}$	24.9 %$_{a, b}$	26.5 %$_{b}$	24.6 %
	Taylorist	21.7 %$_{a}$	23.0 %$_{a}$	24.4 %$_{a}$	22.9 %
	Simple	20.3 %$_{a}$	16.7 %$_{b}$	21.3 %$_{a}$	19.6 %
2–10 years	Learning	38.6 %$_{a}$	37.5 %$_{a}$	36.6 %$_{a}$	37.5 %
	Lean	25.9 %$_{a}$	28.4 %$_{b}$	28.4 %$_{b}$	27.6 %
	Taylorist	17.8 %$_{a}$	18.9 %$_{a}$	17.8 %$_{a}$	18.1 %
	Simple	17.7 %$_{a}$	15.2 %$_{b}$	17.2 %$_{a}$	16.8 %
More than 10 years	Learning	41.6 %$_{a}$	46.3 %$_{b}$	40.8 %$_{a}$	42.6 %
	Lean	26.8 %$_{a}$	26.9 %$_{a}$	29.9 %$_{b}$	27.9 %
	Taylorist	17.9 %$_{a}$	16.4 %$_{a}$	16.6 %$_{a}$	17.1 %
	Simple	13.6 %$_{a}$	10.4 %$_{b}$	12.7 %$_{a}$	12.4 %

Source: Eurofound estimates based on EWCS.

Notes: Subscripts denote whether difference between values across columns (from different EWCS waves) are statistically significant at the 0.05 level. In particular, values having the same subscripts do not differ significantly while values with different subscripts are significantly different.

Table A4.9: Trend developments across type of training

Training		EWCS survey wave			Total
		2000	2005	2010	
Training paid for or provided by your employer	Learning	50.4 %$_{a}$	49.7 %$_{a}$	44.2 %$_{b}$	47.7 %
	Lean	30.9 %$_{a}$	33.1 %$_{a, b}$	34.6 %$_{b}$	32.9 %
	Taylorist	9.6 %$_{a}$	10.3 %$_{a, b}$	11.6 %$_{b}$	10.6 %
	Simple	9.1 %$_{a}$	6.8 %$_{b}$	9.6 %$_{a}$	8.8 %
Training paid for by yourself	Learning	33.0 %$_{a}$	44.6 %$_{b}$	49.7 %$_{b}$	45.7 %
	Lean	18.0 %$_{a}$	30.8 %$_{b}$	32.9 %$_{b}$	30.2 %
	Taylorist	25.0 %$_{a}$	14.2 %$_{b}$	9.4 %$_{b}$	13.2 %
	Simple	24.0 %$_{a}$	10.4 %$_{b}$	7.9 %$_{b}$	10.9 %
On-the-job training	Learning	38.8 %$_{a}$	45.2 %$_{b}$	39.1 %$_{a}$	41.3 %
	Lean	26.7 %$_{a}$	32.4 %$_{b}$	35.8 %$_{c}$	34.0 %
	Taylorist	16.0 %$_{a}$	14.9 %$_{a}$	14.8 %$_{a}$	14.9 %
	Simple	18.5 %$_{a}$	7.5 %$_{b}$	10.3 %$_{c}$	9.8 %

Source: Eurofound estimates based on EWCS.

Notes: Subscripts denote whether difference between values across columns (from different EWCS waves) are statistically significant at the 0.05 level. In particular, values having the same subscripts do not differ significantly while values with different subscripts are significantly different.

Table A4.10: Second job profiles

Second job		EWCS survey wave			Total
		2000	2005	2010	
Yes	Learning	43.2 %$_{a}$	33.7 %$_{b}$	36.5 %$_{b}$	38.0 %
	Lean	29.1 %$_{a}$	28.1 %$_{a}$	23.7 %$_{a}$	26.7 %
	Taylorist	15.4 %$_{a}$	22.8 %$_{b}$	22.6 %$_{b}$	20.2 %
	Simple	12.3 %$_{a}$	15.4 %$_{a, b}$	17.3 %$_{b}$	15.1 %

Source: Eurofound estimates based on EWCS.

Notes: Subscripts denote whether difference between values across columns (from different EWCS waves) are statistically significant at the 0.05 level. In particular, values having the same subscripts do not differ significantly while values with different subscripts are significantly different

Annex 5: Companies' well-being policies — case studies

Many companies have recognised the link between positive mental states of workers and productivity on the job and have implemented specific well-being policies. The motivation of the these policies assumes that the benefits of having happier workers range from fewer interpersonal conflicts and less sick leave to stronger identification with the organisation or team and therefore more prevalent ethical behaviours, a better use of workers' skills for creative ideas and efficient problem-solving. Moreover, employers who have a reputation for caring for their people manage to attract and keep talent. These companies also manage to protect their quality workers from unnecessary stress, fatigue and frustration, assuring greater loyalty of workers and greater internalisation of corporate norms of behaviours.

AstraZeneca

AstraZeneca plc is a British-Swedish multinational pharmaceutical and biologics company headquartered in London.

The company launched a whole package of health and well-being initiatives ranging from a counselling and life-management programme, health promotion activities and ergonomic workspace design to fitness opportunities, healthy eating options and flexibility arrangements for a better work-life balance. The company reported savings in the range of GBP 500 000–700 000 through improved productivity after counselling. GBP 80 000 was saved on health insurance costs for psychological illness. Global accident and occupational illness rates went down by 61 %. The programme has also served company's image among its staff well. 84% of employees are proud to work for AstraZeneca and 82% would recommend the company as a good place to work, 80% of employees said they had enough flexibility in their job to be able to balance work and personal life, and 88% said AstraZeneca demonstrated commitment to the health and well-being of its employees.

British Gas Services

British Gas Services, Britain's largest energy and home services provider, needed to reduce the level of musculoskeletal disorders (MSDs), which accounted for one third of staff absences, to improve attendance and performance capability at work. To that effect, back-care workshops were introduced in 2005. 120 workshops were delivered over a two-year period with over 1200 participants. Back-related absence was reduced by 43 % in the 2005 cohort one year after the seminar participation. 73 % of the staff in the intervention group had no absence up to one year after participation. The company reported a solid return on investment: GBP 1660 per participating employee and GBP 31 on every pound invested.

The British Library

The British Library, a renowned research library based in London, developed a corporate well-being vision including personal development, diversity and a platform for dialogue and opinion survey to promote holistic health of employees. The employer guarantees free access to an employee assistance programme. This confidential service, run by an external contractor, offers support and advice on financial, legal and psychological issues for staff and their spouses, live-in partners and dependent children aged 16 to 23. Further, employees benefit from subsidised membership in gyms and discounted Tai Chi and yoga classes, osteopathy treatments and Shiatsu massages. The employees benefit from healthy on-site catering and nutritional guidance. The employer organises annual health events where employees can receive on-site lifestyle and health guidance and assessments, such as blood pressure and cholesterol tests, bone density scans and liver function tests. The Library tries to help staff and their families with health care costs. It facilitates access to medical diagnostic, surgical and medical support services via cheap flat-rate membership in the Beneden Healthcare Society and offers discounts with the HealthShield healthcare scheme. Staff also receive a 45 % discount for travel healthcare insurance from BUPA.

The Library reported numerous business benefits of the well-being scheme and reports that over a two-year period absence dropped from 10.2 to 7.5 days per year, cost of absence dropped 11 % (GBP 160 000 per year), staff turnover was halved from 12 % to 6 % and performance management results increased from 86 % to 98 %.

Digital Outlook Communications

Digital Outlook Communications is a London-based digital marketing and creative agency specialising in the entertainment and media sectors. The company sought to address the challenge of ensuring the intense, long hours culture of its industry did not become a barrier to building the business on a foundation of sound health and well-being principles.

The company conducted a Best Companies survey to obtain employees' feedback on their well-being and the perceived quality of leadership and management. A Well-being Team, supported by senior management, was established to gather suggestions for, and implement, initiatives which included:

Introduction of flexible working; Revamping the agency's charging system to ensure clients paid for work actually done, optimise profitability and enable employees to reduce working hours while still meeting financial targets; Improved promotion of the employee benefits system; Introduction of a mentoring and development scheme; Improving the ergonomic working environment; Establishing health and well-being as a KPI for all senior managers.

Health and well-being survey scores improved 11% to a score of 4.9, better than all other small media companies surveyed in 2008. Sickness absence rates improved 95% from 4 days per person in 2006 to 0.22 days per person in 2008. Staff turnover was reduced from 34% in 2007 to 9% in 2008, resulting in savings in recruitment, training and induction costs.

Google

Inspired by the Framingham Heart Study, Google developed a long-term study called gDNA. The aim of the study is to learn how to improve well-being, cultivate great leaders, better understand how happiness affects work, and how work affects happiness (Bock, 2014). One issue that became a matter of corporate policy at Google pertains to managing the work-life balance and protecting the privacy of employees after work. Google's Dublin office, for example, ran a programme called 'Dublin Goes Dark' which asked people to drop off their devices at the front desk before going home for the night. Googlers reported blissful, stressless evenings.

Box 7: Office design integrating work, team space, privacy, entertainment and relaxation

The following is an example of how a contemporary multinational may try to recreate the informal start-up working environment that, in the opinion of its proponents, unleashes creativity and, according to its adversaries, blurs the line between working and private lives. Google's Zurich office is a very special case that became famous for its innovative design (129) taking a radical step away from the norm. The design combines teamwork, privacy and individual work, entertainment, meditation and relaxation.

The (partially) open-plan office space is dotted with egg-shaped wigwams or arctic domes that serve as small meeting rooms. Some meeting rooms feature reclining chairs and sofas. Some people work with laptops while sitting in hammock-like facilities in tropical island-themed rooms. Some offices have a beach theme with sand, pebbles and lifebuoys. Some conference call rooms have a thematic design, e.g. ottoman-style sofas with a baldachin and other accessories. Some are styled as ski lifts or taxis, feature alpine designs or urban graffiti. The library is styled as a Victorian English parlour.

There is a quiet room where people go to relax or take a nap that features reclining chairs and a bathtub filled with foam in front of a fish tank. There are massage rooms. Google offers free breakfast, lunch and dinner all cooked by an in-house chef. There is a slide that drops employees into the eating area (a fun way to get to lunch). There are also poles allowing workers to drop down a floor. There are work-out spaces in the offices, as well as games: billiards, table football, ping pong, a basketball corner and a music stage.

How far this is replicated across the company or encouraged among its associates and suppliers is less clear, however. Also, time will show if this concept, in its current innovative yet very unusual form, will set a new trend in office design or remain an amusing yet unsuccessful path of corporate culture evolution.

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(129) See http://www.businessinsider.com/googles-zurich-office-2013-2?op=1

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Chapter 4

Restoring Convergence between Member States in the EU and EMU (1)

1. INTRODUCTION

Over the past two decades, significant convergence has occurred between European Member States in terms of employment and social outcomes. However, since the onset of the crisis, much of this progress has been reversed, posing serious new policy challenges for the countries concerned and the EU as a whole (2).

These recent developments suggest a need to refocus many current employment and social policy instruments at national and EU levels, and have intensified the pressures for further structural reform within the EMU. In November 2012, the Commission published the *Blueprint for a Deep and Genuine Economic and Monetary Union* (3), with a view to complementing the already ambitious reforms underway with the creation of a banking union, deepening the fiscal and economic union and strengthening its social dimension. The Blueprint underlined that the creation of an EMU-wide fiscal capacity should be considered as a longer-term step to improve the stabilisation of EMU economies, in particular in the case of asymmetric (temporary) shocks, as well as the need to proceed in parallel with a process of political integration. The means to set up such a fiscal capacity is the subject of quite some discussions (4), as intended by the Blueprint's subtitle 'Launching a European debate'.

This chapter reviews literature on the identification of relevant key channels and the developing theory that the current EMU-architecture can, in the face of (asymmetric) shocks, drive short-run divergence in socioeconomic performance and, in the long-run, increase the persistence of such adverse developments. In particular there is a growing awareness among policy makers that cross-border effects will increasingly affect domestic stabilisation and upward convergence, as European economies become more integrated, which calls for a markedly stronger coordination of structural reforms (see, for instance, Draghi 2014).

Stylised facts are first presented on socioeconomic convergence in Europe since the mid-1990s, including a comparison with the United States, with a focus not only on employment and productivity trends, but also on unemployment, household incomes, poverty and inequalities. Trends in nominal unit labour costs, human capital formation and indebtedness in the run-up to the crisis are also reviewed, as they are seen as potential drivers of the divergent socioeconomic performance observed since the onset of the crisis.

Two major concerns are then addressed: firstly, the extent to which cross-border effects arising from labour markets are likely to intensify in the future and how they are likely to impact upward convergence across the EU and, secondly, the potential for a fiscal capacity to not only stabilise economies hit by temporary asymmetric shocks, but also mitigate such cross-border effects. The analysis concludes by looking at the extent to which national and EU labour market and social policies can strengthen upward socioeconomic convergence and labour market resilience, in terms of:

- the routes available at national level to strengthen the contribution of employment and social policies, with a view to better stabilising the economy and reinforcing long-term growth;
- the European level routes that could contribute, such as strengthened labour mobility, targeted or reinforced cohesion funds, common benchmarks, and, in the longer term, the development of an EMU-level fiscal capacity.

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(1) By Olivier Bontout. With contributions from Guy Lejeune and Eric Meyermans.

(2) See European Commission (2012a, 2013a, 2014a).

(3) See European Commission (2012b)

(4) See for example Allard et al. (2013), Pisani et al. (2013) as well as CEPS (2014) and Dolls et al. (2014) both prepared for the European Parliament and Clayes et al. (2014).

2. PRODUCTIVITY AND EMPLOYMENT GROWTH: THE KEY TO LONG-TERM CONVERGENCE IN THE EU

How has convergence between EU Member States in key employment and social dimensions evolved over recent decades, and how does this compare with developments in the United States?

This section initially reviews trends in convergence of key socioeconomic variables, followed by a comparison with developments in the United States. Next, it reviews adverse developments in three key socioeconomic dimensions that can impact significantly on employment and productivity growth: i.e. trends in nominal unit labour costs (ULCs); human capital formation; private and public debt.

2.1. Convergence trends in the EU since the mid-1990s

How did the dispersion of labour market and social performance evolve over recent decades in Europe?

This section reviews trends in the dispersion of key employment and social variables, placing emphasis on overall economic development as reflected by: GDP per head or per capita; employment and unemployment (and activity) rates; gross household disposable income per capita; poverty and inequalities.

2.1.1. Key dimensions of convergence

Identifying key dimensions …

Five employment and social dimensions were selected for the analysis, reflecting the scoreboard for key employment and social indicators (see Joint Employment Report 2014). Emphasis is put on overall economic developments (as reflected by GDP per head), employment and unemployment rates, gross household disposable income (GHDI) per capita, poverty rates, and inequalities (S80/S20):

- GDP per head (GDPpc) provides a broad indication of economic development and relates to the various factors that contribute to economic growth or growth models, notably productivity and employment trends (see Box 1).
- Employment and unemployment developments, which are key contributors to economic growth (and indicate remaining unused potential) and a central dimension of the EU2020 strategy.
- Household income per capita (gross household disposable income GHDIpc), is a more direct indicator of the development of the populations' living standards than GDPpc trends.
- The rate of being at-risk-of-poverty-and-exclusion (AROPE), complemented by monetary poverty rates (at the 60 % of the median threshold).
- Inequality (measured by the S80/S20 ratio), which indicates the extent to which overall economic and social developments are inclusive and is another key dimension of the EU2020 strategy.

… and measuring convergence

The analysis covers 28 EU Member States and focuses, as far as possible, on the 1995–2013 period. Convergence can be analysed in two basic ways: in terms of levels (Beta-convergence) and in terms of variability (Sigma-convergence) as described in Box 1. In this chapter convergence is mainly measured in terms of variability, in order to provide an assessment of the trends relating to key variables, while convergence in terms of levels is more relevant to assessing the catching up process (for a review of Beta convergence, see, for instance, trends within EA-12 in ESDE 2013).

Trends in GDPpc and GHDIpc are measured in constant prices since the focus is on convergence of real economic and living conditions (5). The literature on growth initiated by Solow (1956) developed the concept of 'catching up' that is close to beta convergence. It should be noted that this type of 'absolute' convergence is not always easy to verify and a number of additional elements are taken into account, notably the possible endogeneity of total factor productivity (TFP) growth. Other analyses of convergence have been developed such as 'conditional growth' (Mankiw et al., 1992) and more generally the literature identifies a number of dimensions of convergence (6).

Since convergence can result from changes in the dispersion within zones as well as between zones, this chapter considers both overall convergence or divergence development in Europe (7) (as reflected by the coefficient of variation), as well as the contribution of trends within and between European zones to these overall developments (see Section 1.2.1 below). For this, a standard between-within decomposition of total variance is used, along with the decomposition of the Theil index (see Box 1 and Annex).

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(5) Furthermore, while entry into the euro is conditional on fulfilling the Maastricht criteria, the euro is intended to support real convergence, defined in terms of per capita GDP, by fostering economic integration (see European Commission, 2008).

(6) See, for instance, Islam (2003).

(7) As far as possible in the EU-28 (with the only exception being Section 1.2.1 which focuses on developments in nominal unit labour costs in the euro area).

Box 1: Economic convergence, growth models and measures of convergence

Economic convergence and growth models

Economic growth is conventionally attributed to the accumulation of human and physical capital and increased productivity following technological innovation. The most basic growth model, the Solow model (also called the neoclassical growth model) considers that technological innovations are exogenous and assumes that capital and labour have diminishing returns. Notably it implies that, in general, poor countries with less capital per person grow faster (because of diminishing returns to capital), leading to convergence in GDP per head over time.

In the Solow model, GDP depends on production factors (capital and labour) augmented by technology. Total factor productivity (TFP) is, by definition, that part of the increase in output that cannot be explained by changes in the other input factors. This residual is seen as a (proxy) measure of skills, knowledge and technical progress. In empirical analysis, capital and TFP are not easy to separate. This is due to the fact that technical progress is often embodied in new capital goods. One would underestimate the effect of TFP by assuming that growth is the result of capital accumulation. Differences in TFP are seen to be important in explaining differences in income and growth between countries, particularly in the long run when countries can overcome the steady state and grow by inventing new technology.

Decomposition of growth

Trends in GDPpc and GHDIpc are measured in constant prices, since the focus is on real economic and living conditions convergence (1). Furthermore, the use of GDP in real euros (deflated by the GDP deflator) is preferred to the PPS which are available in nominal values and are thus more appropriate for cross-section comparisons (since No specific price deflator of PPS values is available).

GDP and growth can be decomposed into several contributions. This section uses a standard simple decomposition of GDPpc trends in productivity (apparent employment productivity GDP/L), employment rate of the 15–64 population (share of employment in the active age population) and active age population rate (share of active age population in total population), as reflected below.

GDPpc = GDP /Population = (GDP / L) * (L / POP active age) * (POP active age / Population)

GDPpc = (Apparent productivity) * (Employment rate) * (Share of active age population)

Measures of convergence

Sigma-convergence refers to a reduction of disparities over time between countries, for instance, measured in terms of the standard deviation or coefficient of variation (the ratio of the standard deviation to the average). Beta-convergence refers to a situation where incomes in poorer countries grow faster than those in richer ones, usually measured in terms of change over time. The two concepts of convergence are closely related with Beta-convergence being necessary but not sufficient to achieve Sigma-convergence (see, for instance, Monfort, 2008).

Other indices exist (for instance, the Gini coefficient, the Atkinson index, the Theil index and the Mean Logarithmic Deviation). It is recommended that we ‘consider a variety of measures to draw firm conclusions about changes in the extent of disparities’ (see, for instance, Montfort, 2008), and the analysis in this chapter focuses on the coefficient of variation as a main measure of sigma-convergence, complemented as regards within zones and between zones dispersion by a standard between-within decomposition of total variance and a decomposition of the Theil index (see Annex 3). An emphasis in the main text is put on the decomposition of total variance which is closer to the measure of the coefficient of variation and, more specifically, on the share of total variance corresponding to the between zones component (as the level of variance per se can be misleading, since it is affected by homothetic changes which do not affect dispersion, the Annex provides additional elements on the level of the between zones contribution to total variance expressed as an index, based on the first year when data are available).

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(1) Furthermore, while entry into the euro is conditional on fulfilling the Maastricht criteria, the euro is intended to support real convergence, defined in terms of per capita GDP, by fostering economic integration (see European Commission, 2008).

2.1.2. Convergence in Europe, trends between and within zones

In order to provide an overview of employment and social convergence trends in Europe (EU-28) overall, it is useful to reflect not only on overall developments, but also on changes in dispersion both within and between zones. For this purpose, five groups of countries are considered, reflecting socioeconomic and geographical proximity criteria:

- EU-15 Centre (Belgium, Luxembourg, the Netherlands, Germany, Finland, France, Austria) (8), which represented 36 % of EU-28 population in 2013.
- EU-15 North (Denmark, Sweden, United Kingdom) (9), which represented 17 % of EU-28 population in 2013.
- EU-15 South and periphery (Greece, Ireland, Portugal, Spain, Italy) (10) which represented 26 % of EU-28 population in 2013.
- EU-13 Centre and North (Czech Republic, Hungary, Poland, Slovenia and Slovakia), which represented 13 % of EU-28 population in 2013.
- EU-13 South and periphery (Bulgaria, Cyprus, Estonia, Latvia, Lithuania, Malta, Croatia, Romania) which represented 8 % of EU-28 population in 2013.

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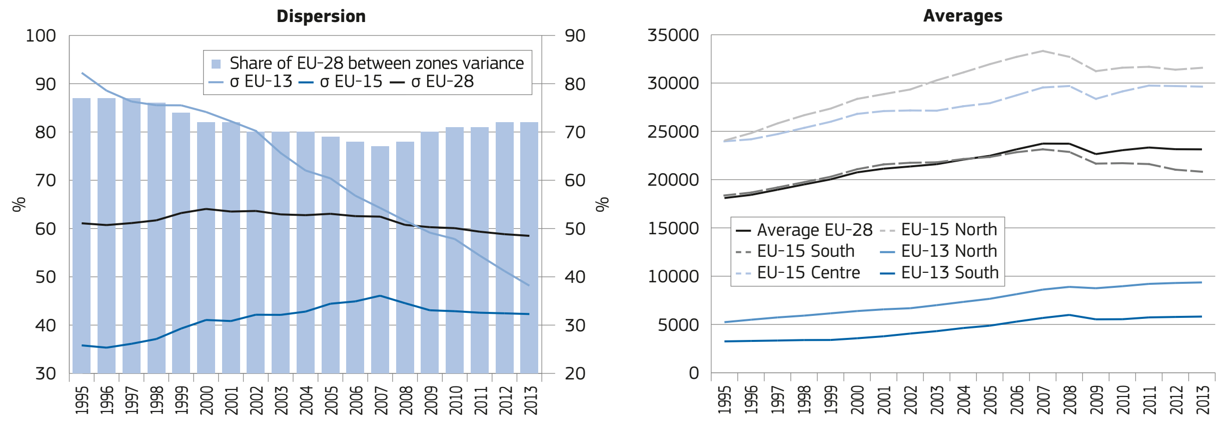
(8) Or in other terms EA-12 Northern countries, see European Commission (2014a).

(9) Which are actually EU non-EA countries.

(10) Which are actually EA-12 South and periphery countries, see European Commission (2014a).

Chart 1: Convergence and divergence of GDP per capita in the EU (1995–2013)



Reading note: σ values refer to the coefficient of variation (based on weighted averages) and are reported on the left scale. The share of between zones variance in total variance is reported on the right axis.

Source: Eurostat, calculations DG EMPL.

Notes: GDP in real terms (in euros); the share of inter groups variance is based on uneweithted averages by zone (see annex). Some missing values in the beginning of the period were kept constant for the calculation of dispersion and averages: BG, EE, HR, CY, MT (1995-99), LV (1995-98), EL, LT, SK (1995-97), PL, RO (1995-96), HU, SI (1995).

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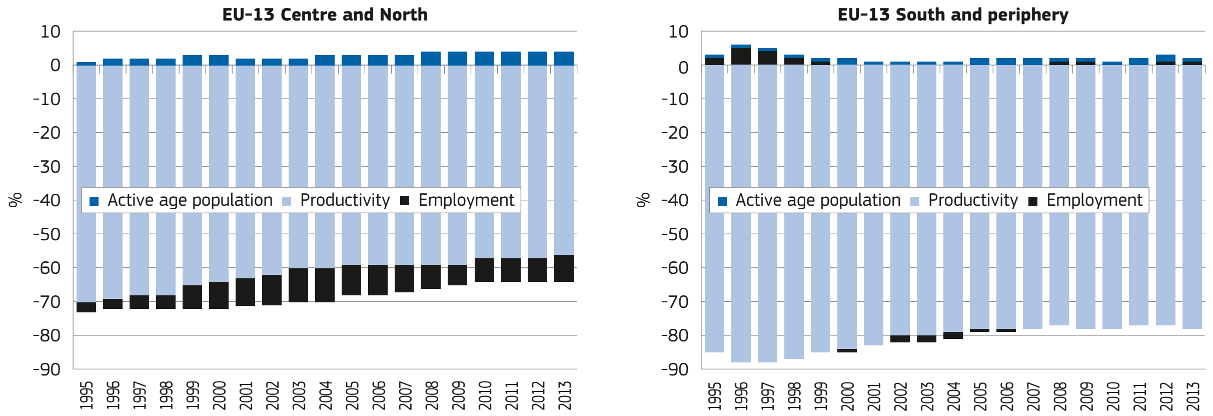
Chart 2: Decomposition of the GDP per capita gap to EU-28 average for two EU-13 zones (1995–2013)



Source: Eurostat, calculations DG EMPL.

Notes: Calculations based on GDP in real terms, in euros. Some missing values in the beginning of the period were kept constant for the calculation of averages: BG, EE, HR, CY, MT (1995-99), LV (1995-98), LT, SK (1995-97), PL, RO (1995-96), HU, SI (1995).

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Slow GDPpc convergence reflecting adverse developments in EU-15 South and periphery

The dispersion of GDP per head since 1995 in Europe has been fairly stable, with some strong convergence within EU-13 (reflecting the catching-up process) and some slightly divergent trends in EU-15. This overall stability in EU-28 reflected a pre-crisis decline in between-zones dispersion, which came to a halt when the 2008 crisis hit and reversed in relative terms (see Chart 1a).

More specifically, in EU-13 (both Centre and North, as well as South and periphery zones) a catching up since 1995 is observed (Chart 1b). In EU-15, developments of GDPpc have been more heterogeneous, with EU-15 South losing ground mainly since around 2005 (and to a lesser extent since the early 2000s). EU-15 Centre GDPpc levels remained broadly stable in comparison to EU-28 (and actually gained some ground in recent years) and EU-15 North GDPpc remained broadly stable (also reflecting potential changes in exchange rate against the Euro).

While the gradual catching up process of EU-13 appears consistent with that of previous decades (11), developments since the mid-2000s, particularly in EU-15 Southern and periphery zone, appear atypical.

The GDP per head developments can be split into three different effects (see Box 1), focusing on trends in: productivity (apparent employment productivity GDP); employment (share in employment of the active age population); and active age population (share of the active age population from the overall population).

Gradual catching up of GDPpc by the newer Member States, reflecting quicker productivity gains

Since 1995, the gap in GDP per head between EU-13 and EU-28 narrowed, mainly reflecting productivity gains. Over the period, this progressive catching up process actually impacted more on the decline in the gap to the EU-28 average GDPpc than employment rates and active population rates. However, the contribution from the share of the active age population remained positive over the period, and

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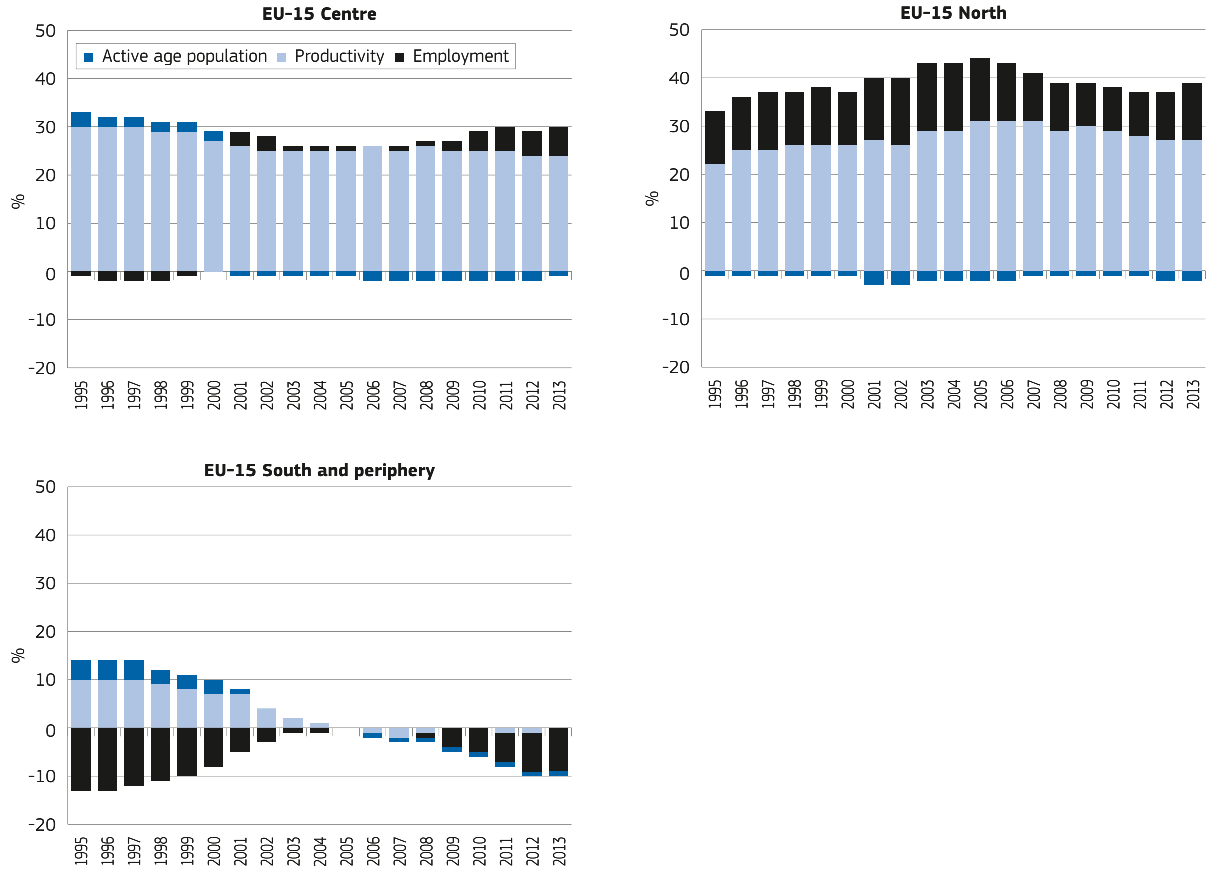
(11) See, for instance, Barro and Sala-i-Martin (1991) or Sala-i-Martin (1996).

Chart 3: Decomposition of the GDP per capita gap to EU-28 average for three EU-15 zones (1995–2013)



Source: Eurostat, calculations DG EMPL.

Notes: Calculations based on GDP in real terms, in euros. Some missing values in the beginning of the period were kept constant for the calculation of averages: EL (1995-97).

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even increased in EU-13 Centre and North. This partly compensated for the relatively weaker dynamics of employment rates until the mid-2000s, which have only partially reversed since then (12).

Overall stability of GDPpc in the core older Member States compared to the EU average, though with different employment dynamics

The relative stability in the gap in GDP per head between the EU-15 Centre and the EU North zones nevertheless masks different composition trends over the period. In both zones the relative advantage in terms of productivity levels remained broadly constant since the mid-1990s, though with some fluctuations and, notably, slight erosion in EU-15 Centre.

In EU-15 North, the relative advantage in terms of the contribution of employment rate levels was stable over the period, translating into an advantage of around 10 percentage points of average EU-28 GDP per head. In EU-15 Centre, employment rates used to be close to the EU-28 average but there has been a significant relative improvement over the period, notably since the beginning of the crisis.

Finally, while the contribution of the share of the working age population remained relatively small, it is noticeable that it was negative in these two zones and that the relative deterioration appears to have fallen since the beginning of the crisis in EU-15 Centre and has further developed in EU-15 North, probably reflecting trends in net migration.

A growing gap in GDPpc in the peripheral older Member States, compared to the EU average, linked to weakening productivity and employment

Developments in GDP per head in EU-15 South and periphery were more significant over the period. EU-15 South experienced losses in productivity over the 1995–2004 period (see, for instance, Balta and Mohl, 2014), which were initially compensated by an above average improvement in employment rates (see also European Commission, 2008). Since the crisis, however, developments in employment rates have been less favourable than in the EU overall and have also been combined with a slight reduction in the working age population. These adverse employment developments reflect a change in the composition of employment across sectors during the boom phase, which reversed with the crisis, notably in the construction sector (see ESDE 2013).

A move from convergence to divergence in employment and unemployment in the crisis, mostly driven by between-zones movements

The decade from the mid-1990s until the onset of the crisis was marked by some EU-wide convergence in terms of both employment and unemployment rates (see Charts 4 and 5). This convergence trend was particularly strong within EU-15. Since 2008, however, these converging trends reversed, mainly due to adverse developments within EU-15.

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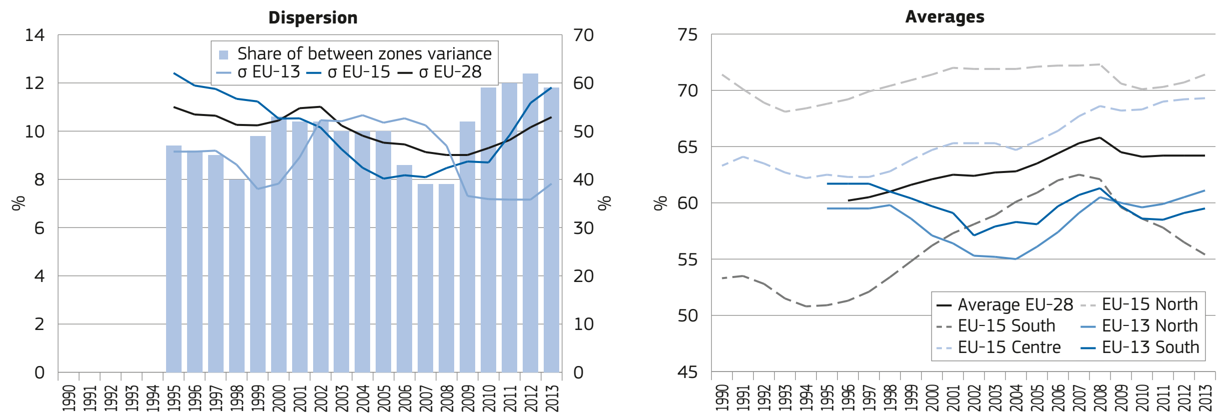
(12) See, for instance, European Commission (2009).

Chart 4: **Convergence and divergence of Employment rates in the EU (1995–2013)**



Reading note: σ values refer to the coefficient of variation (based on weighted averages) and are reported on the left scale. The share of between zones variance in total is reported on the right axis.

Source: Eurostat, employment rate 15–64 age bracket, calculations DG EMPL.

Notes: σ refers to the coefficient of variation (based on weighted averages); the share of inter groups variance is based on un-weighted averages by zone (see annex). Some missing values in the beginning of the period were kept constant for the calculation of dispersion and averages: s HR (1995-01), BG, MT (1995-99), CY (1995-98), LT, LV, SK (1995-97), CZ, EE, PL, RO (1995-96), HU, SI (1995), AT, FI, SE (1990-94).

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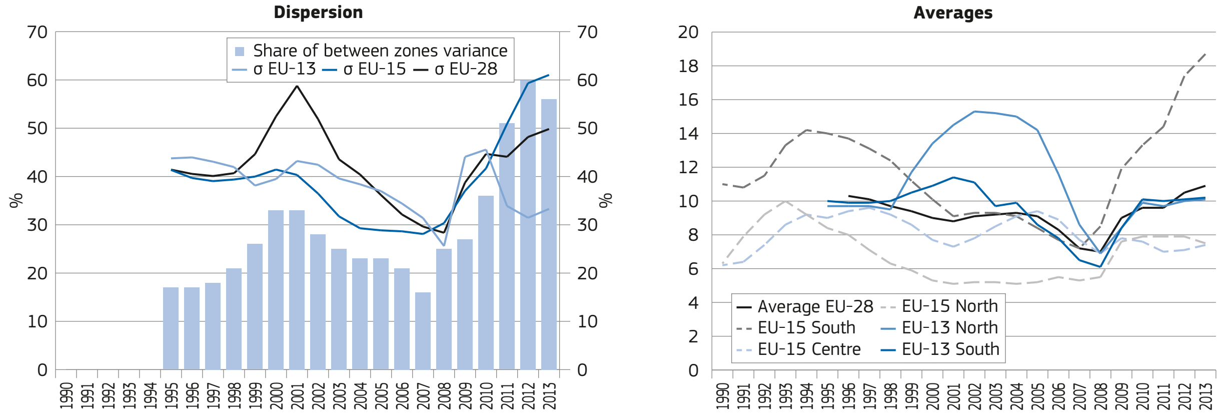
Chart 5: **Convergence and divergence of Unemployment rates in the EU (1995–2013)**



Reading note: σ values refer to the coefficient of variation (based on weighted averages) and are reported on the left scale. The share of between zones variance in total is reported on the right axis.

Source: Eurostat, calculations DG EMPL.

Notes: σ refers to the coefficient of variation (based on weighted averages); the share of inter groups variance is based on unweighted averages by zone (see annex). Some missing values in the beginning of the period were kept constant for the calculation of dispersion and averages: BG, CY, EE, HR, MT (1995-99), LV (1995-98), LT (1995-97), PL, RO (1995-96), HU, SI (1995), AT (1990-93), DE (1990), EL (1990-97).

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Trends in unemployment rate dispersion very closely reflect those of employment rates, with strong convergence before the crisis and strong divergence since, with, notably increased dispersion between zones. It should be noted, however, that both these adverse developments seem to have stabilised to some extent in 2013, and that the sharp changes observed in unemployment rates resulted in a relatively small fall in activity rates.

It is worth noting that the long-term convergence of activity rates continued during the crisis and that activity rates resisted well, even in the most affected regions (Chart 6), implying that there were No significant withdrawals from the active population during this crisis (see also Chapter 1).

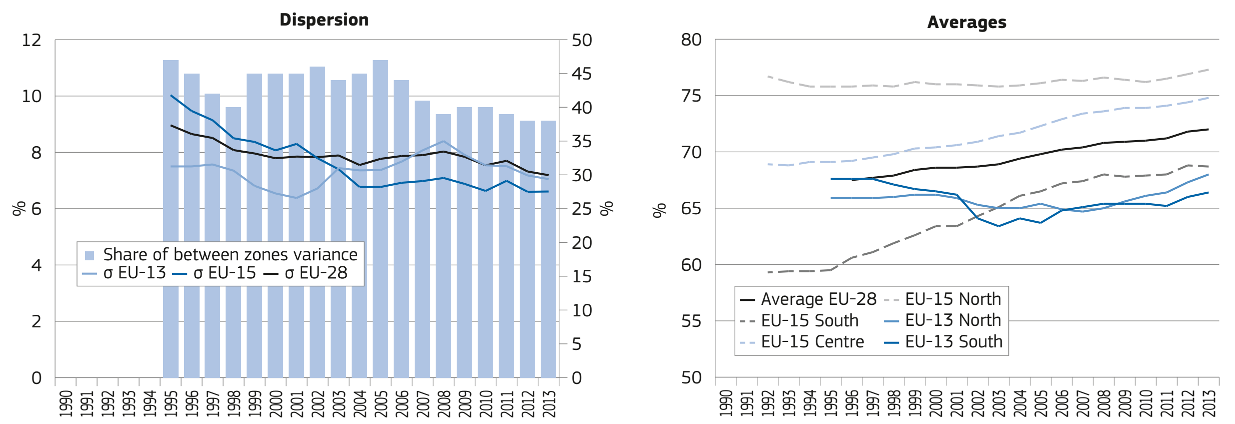
A slight reversal of converging trends in household incomes in the crisis

The degree of dispersion of EU household incomes over the last two decades appears to have been broadly stable but with some diverging trends since the crisis, linked to a slight increase in between-zone variance. This relative stability, notably during the first years of the crisis when some European countries were rather more strongly affected by the crisis, presumably reflects the strong stabilising impact of tax and benefit systems on household incomes (see Chapter 1). However, it can be noted that in 2012 there was a further increase in dispersion, both in EU-13 and EU-15, reflecting a slight additional increase in between-zone dispersion.

A halt in convergence of poverty rates in the crisis

Over the past decade or more, poverty and exclusion rates have tended to converge in Europe. However, this overall experience includes two different sub-periods. Before the crisis, convergence

Chart 6: Convergence and divergence of activity rates in the EU (1995–2013)



Reading note: σ values refer to the coefficient of variation (based on weighted averages) and are reported on the left scale. The share of between zones variance in total variance is reported on the right axis.

Source: Eurostat, employment rate 15–64 age bracket, calculations DG EMPL.

Note: σ refers to the coefficient of variation (based on weighted averages); the share of inter groups variance is based on unweighted averages by zone (see annex). Some missing values in the beginning of the period were kept constant for the calculation of dispersion and averages: HR (1995-01), BG, CY, MT (1995-99), CZ, EE, LV, LT, SK (1995-97), PL, RO (1995-96), HU, SI (1995), IT (1992), AT (1992-93).

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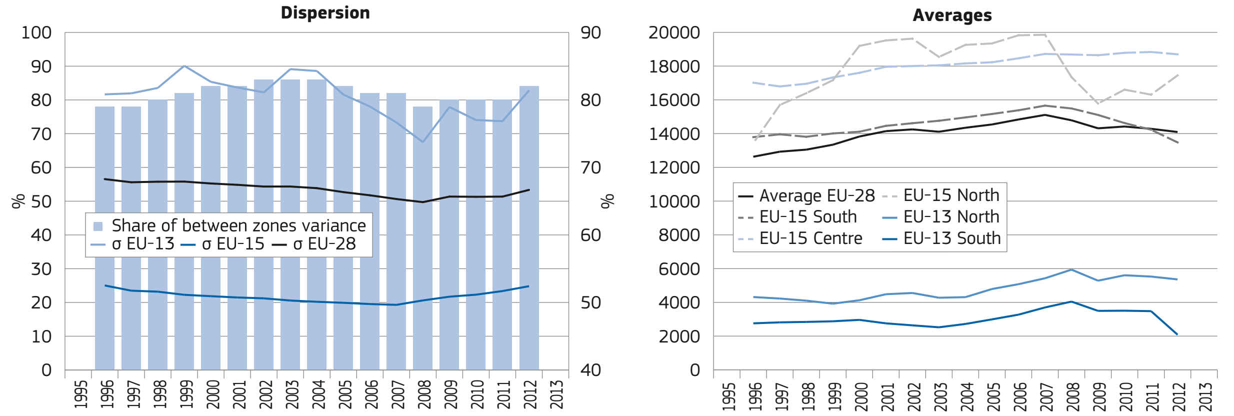
Chart 7: Convergence and divergence of GHDI per capita in the EU (1995–2013)



Reading note: σ values refer to the coefficient of variation (based on weighted averages) and are reported on the left scale. The share of between zones variance in total variance is reported on the right axis.

Source: Eurostat, calculations DG EMPL.

Notes: σ refers to the coefficient of variation (based on weighted averages); the share of inter groups variance is based on unweighted averages by zone (see annex). Values in real euros deflated by HICP. Missing data for MT, some missing values in the beginning of the period were kept constant for the calculation of dispersion and averages: LU (1996-2005), BG, HR, IE (1996-01), EL, ES, RO (1996-99).

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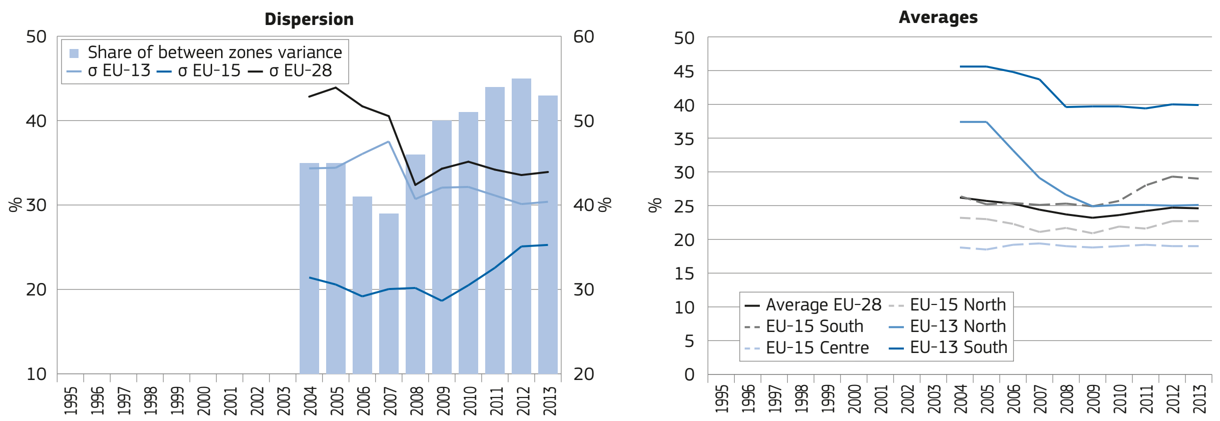
was mainly driven by developments in EU-13, accompanied by some stability in dispersion within EU-15 and some decline in between-zones variance. Since the onset of the crisis in 2008, however, convergence has come to a halt, with convergence within EU-13 paused, some increased divergence within EU-15, as well as a significant increase in between-zone dispersion in Europe (Chart 8).

Overall developments in monetary poverty have followed a similar pattern, with a stabilisation in the degree of dispersion since the crisis that reflects a reversal of dispersion trends by zones, with some convergence in EU-13 and some divergence in EU-15. While the convergence before the crisis in EU-15 was associated with some increase in poverty rates in the EU-15 Centre zone (where poverty rates are relatively low), this increase paused during the crisis and was accompanied by a decrease in the EU-15 Northern zone and an increase in the EU-15 Southern zone.

Chart 8: Convergence and divergence of AROPE in the EU (2004–12)



Reading note: σ values refer to the coefficient of variation (based on weighted averages) and are reported on the left scale. The share of between zones variance in total is reported on the right axis.

Source: Eurostat, calculations DG EMPL.

Notes: σ refers to the coefficient of variation (based on weighted averages); the share of inter groups variance is based on un-weighted averages by zone (see annex). Some missing values at the beginning of the period were kept constant for the calculation of dispersion and averages: HR (2004-09), RO (2004-06), BG (2004-05), CZ, DE, CY, LV, LT, HU, MT, NL, PL, SI, SK, UK (2004).

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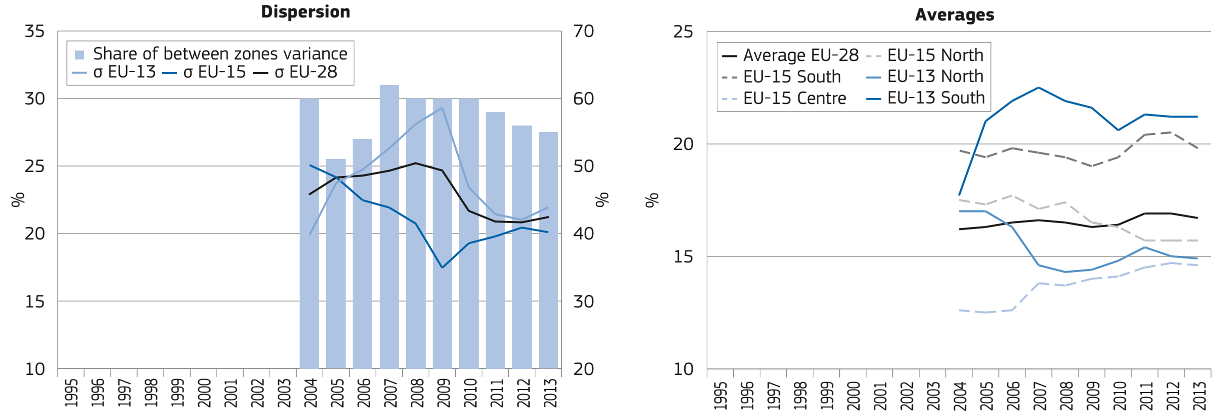
Chart 9: Convergence and divergence of AROP in the EU (2004–12)



Reading note: σ values refer to the coefficient of variation (based on weighted averages) and are reported on the left scale. The share of between zones in total variance is reported on the right axis. The dates correspond to the dates of the SILC waves which refer to households' incomes on the year before.

Source: Eurostat, calculations DG EMPL.

Notes: σ refers to the coefficient of variation (based on weighted averages); the share of inter groups variance is based on un-weighted averages by zone (see annex). Some missing values at the beginning of the period were kept constant for the calculation of dispersion and averages: RO (2005-06), CZ, DE, CY, LV, LT, HU, MT, NL, PL, SI, SK, UK (2004).

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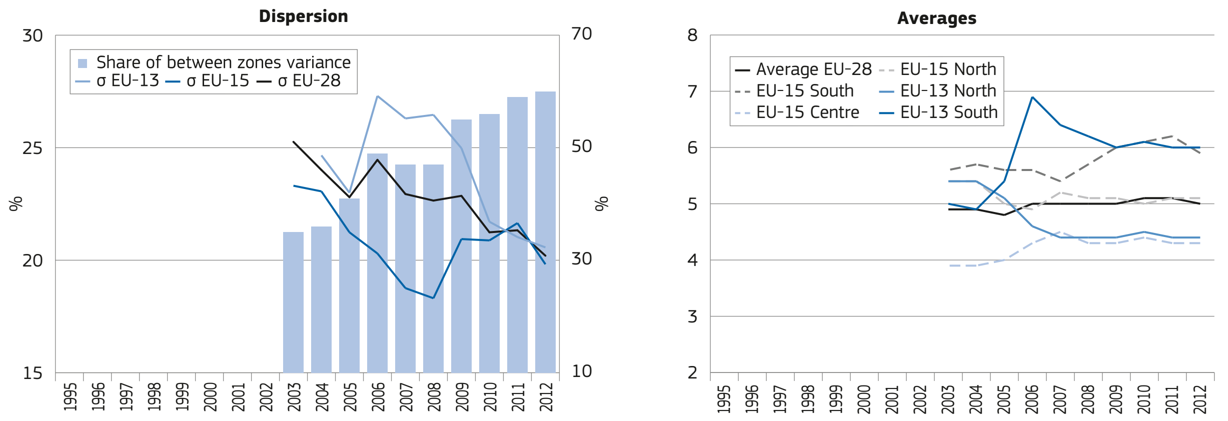
Ongoing convergence in inequalities masks increasing dispersion between zones

Finally, convergence in inequalities occurred over the last decade (measured as the ratio of average incomes of fifth and first quintiles S80/S20), but with different timings in their development in EU-13 and EU-15. While the onset of the crisis saw divergence being followed by some convergence within EU-13, the reverse occurred in EU-15, where there was significant convergence until the crisis which reversed and then stabilised. Overall, these trends were associated with a significant increase in the share of variance between zones, with adverse developments in the EU-15 Southern and peripheral zone.

Chart 10: Convergence and divergence of inequalities (S80/S20) in the EU (2004–12)



Reading note: σ values refer to the coefficient of variation (based on weighted averages) and are reported on the left scale. The share of between zones variance in total is reported on the right axis. The dates correspond to the dates of the SILC waves which refer to households' incomes on the year before.

Source: Eurostat, calculations DG EMPL.

Notes: σ refers to the coefficient of variation (based on weighted averages); the share of inter groups variance is based on un-weighted averages by zone (see annex). Some missing values at the beginning of the period were kept constant for the calculation of dispersion and averages: CZ, DE, CY, LV, LT, HU, MT, NL, PL, SI, SK, UK (2004).

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2.1.3. EU and United States experienced different trends during the crisis

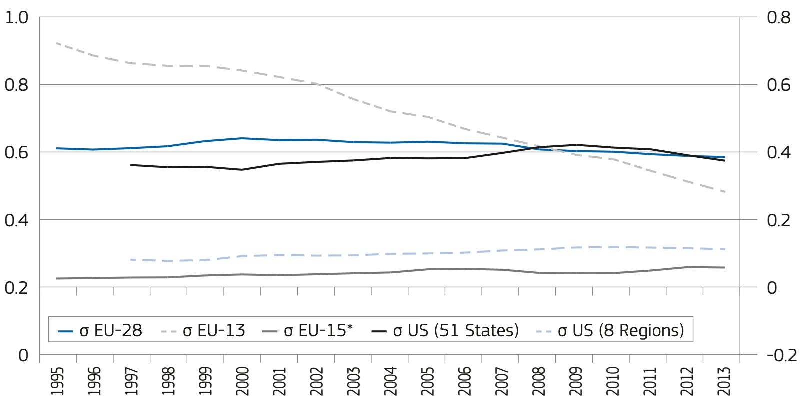
It is useful to compare trends in dispersion rates of GDP per head; unemployment rates; and poverty rates within Europe with those within the United States over recent decades given their similarity in terms of economic development and overall size ([13]), and the availability of relevant long-term data series.

GDPpc convergence resumes slightly more quickly in the United States than in Europe

While some convergence of GDP per head continued in the EU as a whole during the crisis, this was the product of different trends (see above). On one side, strong convergence dynamics remained at play in EU-13 while there was stability in dispersion within EU-15. On the other side, the long-term trend of between-zones convergence eventually came to a halt and reversed in relative terms.

The dynamics of GDP per head convergence were slightly different in the United States, with an initially divergent trend, in the early phase of the crisis, which reverted afterwards (from 2010 between States and from 2012 between regions).

Chart 11: Convergence and divergence of GDP per capita in the EU and in the United States (1995–2013)



Reading note: σ values refer to the coefficient of variation (based on weighted averages).
The definition of the five EU-28 zones is the same as in the former section.

Source: Eurostat and BEA, calculations DG EMPL.

Note: Real GDP per capita expressed in euro in Europe and dollar in USA. Dispersion measured as the coefficient of variation, based on the weighted average of each zone EU-15* does not include LU.

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Divergence of unemployment rates in Europe, stability in the United States

Since 1995, developments were similar in the EU-28 and EU-15, with some convergence followed by significant divergence in unemployment rates since the beginning of the crisis. Within EU-15 (for which longer time series are available) convergence actually dates back to the 1960s and the reversal since the crisis has brought it back to the early 1970s dispersion levels.

In the United States, where the dispersion of unemployment rates between States is around half that in Europe, there has been some overall stability in dispersion over recent decades, with the most significant

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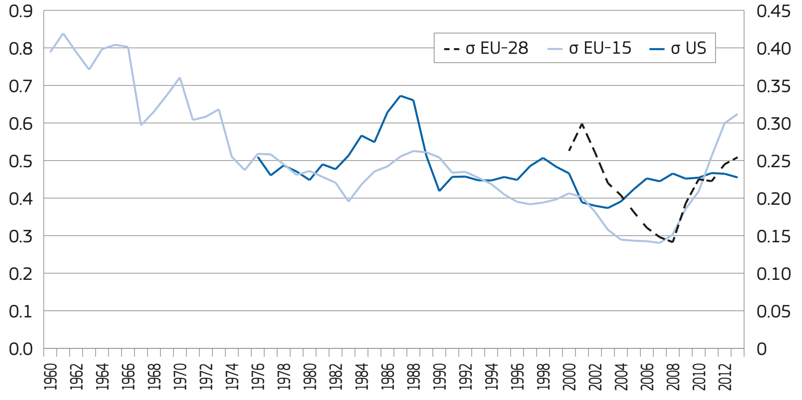
[13] In this respect the comparison with other federal countries, such as CH or CAN, may be less relevant.

increase occurring in the second half of the 1980s. Most notably, unemployment rates have not shown a significant increase in dispersion in recent years.

Stability in dispersion of poverty rates in Europe, signs of further convergence in the United States

In both the EU and United States the crisis led to an increase in overall levels of poverty. The increase is seen to have been more substantial in the United States, though it should be noted that their definition of poverty differs and is not linked to the median income as in Europe (14). In the United States overall dispersion of poverty levels continued to decline during the crisis. In Europe, the slightly declining trend reflected different dynamics in EU-13 and EU-15.

Chart 12: Dispersion of unemployment rates in the EU and in the United States (1960–2013)



Reading note: σ values refer to the coefficient of variation (based on weighted averages) reported on the left axis for EU and right axis for the United States. The scales are different on both axis.

Source: Eurostat, AMECO and DoL, calculations DG EMPL.

Note: Dispersion measured as the coefficient of variation, based on the weighted average of each zone considered. For Germany, values up to 1989 refer to West Germany.

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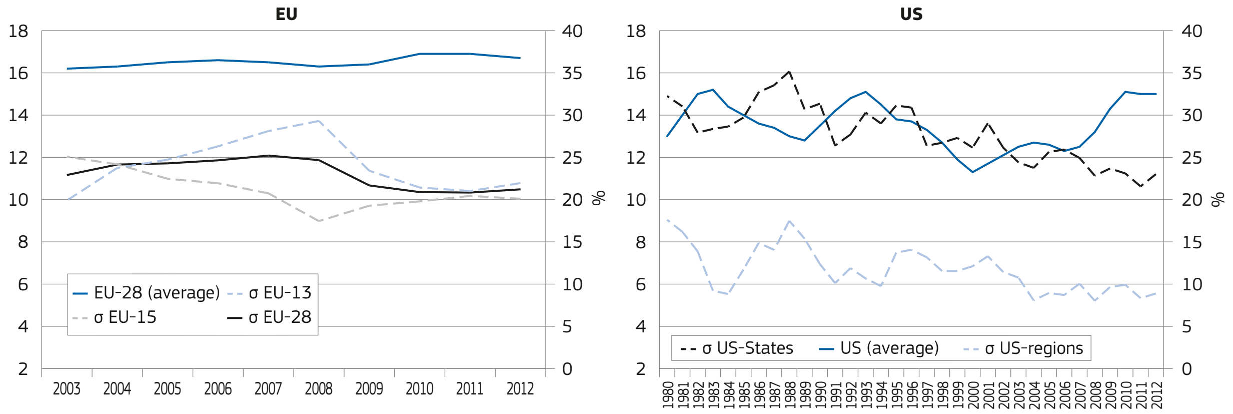
Chart 13: Convergence and divergence of poverty rates in the EU and in the United States



Reading note: σ values refer to the coefficient of variation (based on weighted averages) reported on the right axis, while average values are reported on the left axis.

Source: Eurostat and Census bureau, calculations DG EMPL.

Note: Poverty relates here to monetary poverty and poverty thresholds are not defined in the same manner in Europe (where it corresponds to 60 % of the median equivalised disposable income) and in the USA.

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(14) For instance, when the median income declines, which has been the case in some Member States during this crisis (also see Chapter 1), this can translate into declines in at-risk-of-poverty rates as measured based on poverty threshold reflecting 60 % of the median income, as long as the income situation of the lower end of the income distribution remains unchanged.

2.2. Structural factors impacting on employment and social divergence

An important issue to address is the extent to which nominal unit labour cost growth in the euro area, weak productivity growth, limited human capital formation and increasing indebtedness (of both private and public sectors) has contributed to diverging socioeconomic performance, and how such developments may affect upward convergence in the future.

Since a currency union implies irreversible nominal exchange rates, Member States are No longer able to adjust relative prices and wages via changes in the nominal exchange rate in the face of economic shocks and competitive challenges, and have to make adjustments in terms of prices and nominal unit labour costs (reflecting changes in nominal wages and productivity). However, experience shows that these adjustments are generally slow to take place (see below) with the inevitable risk that this may trigger increases in unemployment.

The first subsection reviews trends in dispersion of nominal unit labour cost growth in the euro area, both during the run-up to the crisis and since then.

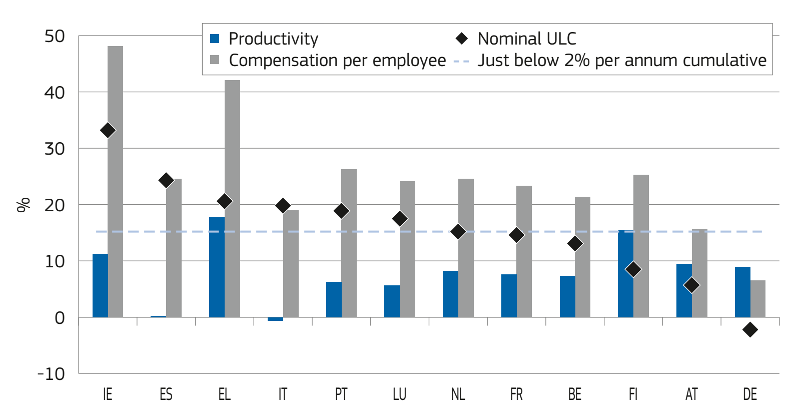
The second subsection reviews major drivers of potential divergence in human capital formation, in terms of possible impact on productivity growth, notably developments for early school leavers, thereby complementing the analyses provided in the other chapters of this review (see Chapter 2).

The third subsection reviews debt level trends, during the run-up to the crisis, with increases across the EU, notably reflecting in some euro-area Member States strong decreases in nominal interest rates, which may also hinder convergence across Member States.

2.2.1. Productivity matters for nominal unit labour cost divergence across the euro area

Developments in nominal unit labour cost, which measures nominal compensation per employee adjusted for productivity, may lead to inflationary (or deflationary) cost-push pressures in an economy. Clearly, in the long-run, strong divergence in nominal unit labour cost growth across Member States of a currency union (with irreversible nominal exchange rates) is unsustainable.

Chart 14: **Nominal unit labour cost and its components — EA-12 cumulative growth 2001–07**



Source: DG EMPL calculations based on Eurostat (nama_aux_lp and nama_aux_ulc).

Note: Just below 2 % per annum increase is set at 1.95 %.

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While changes in nominal compensation are often seen as one way to correct such developments, at least in the short run, the following analysis shows that strengthening labour productivity (in a sustainable way (15)) is necessary in order to both restore external balance and promote upward convergence.

Divergence in unit labour costs during the run-up to the crisis …

In the run-up to the crisis (i.e. the 2001–07 period) there was a strong divergence in nominal unit labour cost (ULC) growth across the euro area (see Chart 14). More particularly, taking growth of just below 2 % per year (i.e. the ECB's inflation target, since if real wages grow in line with productivity developments, nominal ULCs will grow at the same rate as nominal prices), several Member States greatly exceeded this benchmark, particularly Ireland, Spain and, to a lesser extent, Greece, Italy and Portugal (16). In contrast, Germany and to a lesser extent Austria and Finland, undershot this benchmark. These divergent developments led to an unsustainable distortion of competitiveness within the euro area.

However, while divergent development in nominal unit labour costs may impact directly on a country's competitiveness, it is primarily driven by developments in labour productivity and nominal compensation per employee. In Italy and Spain, for example, it was largely driven by relatively weak productivity growth. In contrast, Greece and Ireland (together with Finland) showed the strongest increases in productivity and also recorded much stronger than average increases in nominal compensation per employee. At the same time Germany, and to a lesser extent Austria, showed fairly robust productivity growth in combination with relatively weak growth in nominal compensation per employee.

Correcting such divergent developments across Member States can be approached in different ways, with differing impacts on convergence. Nominal wages can be reduced in the Member States with excessive nominal unit labour cost growth, or increased in the States with relatively weak nominal unit labour cost growth. While this may restore international competitiveness (17), it will not

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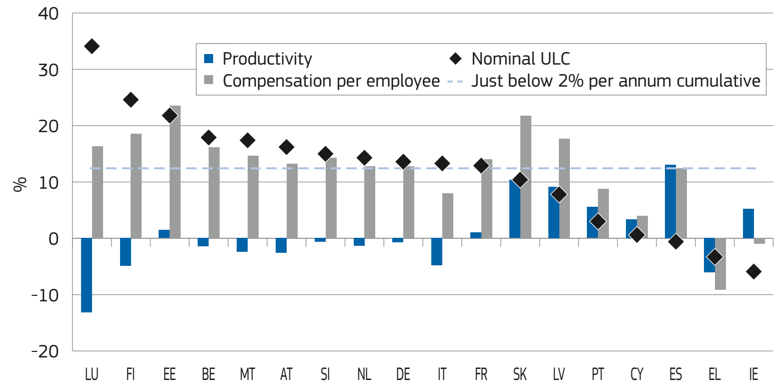
(15) Labour productivity measures output per unit of labour input. The rule that productivity is calculated as GVA divided by the number of employed persons is an accounting rule which does not constitute a behavioural relationship that indicates a direction of causality, i.e., it still allows that causality runs from (predetermined) productivity and GVA to a (endogenous) number of employed persons, from (predetermined) GVA and number of employed persons to (endogenous) productivity, or from (predetermined) productivity and number of employed persons to (endogenous) GVA. While the latter adjustment is underpinned by structural developments, the two other adjustment schemes may reflect cyclical behaviour in GDP and structural rigidities in labour markets.

(16) Among the EA-12 Member States that were members of the euro area over the entire period.

(17) It can notably be noted that an additional element for consideration lies in the average development in unit labour costs of the euro zone as a whole, as compared with the ones in the main trading partners.

affect the Member State's overall productivity level. Another approach would be to increase productivity in Member States where unit labour cost growth was too strong, which would increase the Member State's overall productivity level — thereby potentially strengthening upward convergence.

Chart 15: **Nominal unit labour cost and its components — EA-18 cumulative growth 2008–13**



Source: DG EMPL calculations based on Eurostat (nama_aux_lp and nama_aux_ulc).

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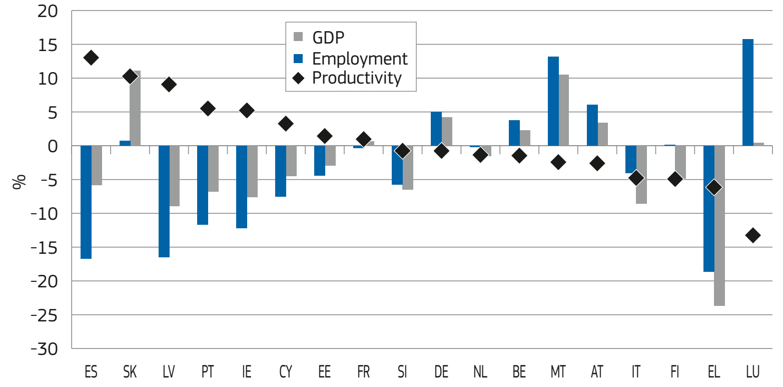
Chart 16: **Labour productivity and its components — EA–18 cumulative growth 2008–13**



Source: DG EMPL calculations based on Eurostat (nama_aux_lp and nama_aux_ulc).

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… mainly corrected by adjustments in nominal compensation per employee …

Adjustment over the period 2008–13 has primarily occurred via changes in nominal unit labour costs, with strong downwards adjustment in several euro area Member States (see Chart 15). Ireland and Greece showed negative cumulative growth in nominal unit labour cost for 2008–13, followed by very low growth in Spain and Portugal. At the same time, several core Member States remained close to the just below 2 % cumulative growth.

However, the underlying downward adjustment pattern varied significantly across Member States. In Spain strong productivity growth tempered nominal unit labour cost growth, while in Greece it was primarily decreases in nominal compensation per employee that corrected past slippages in nominal unit cost growth.

In this respect, since the onset of the crisis, adjustment has primarily occurred via changes in nominal compensation per employee. This can be due to several reasons, for example the time it takes to improve productivity means that declines in wages and employment could have been necessary to restore 'confidence' under pressing circumstances. Moreover, the financial means to improve productivity growth (such as training and skill formation) are not always readily available during an economic downturn.

… and shedding labour, but with adverse impacts on upward socioeconomic convergence …

Divergence in cumulative nominal unit labour costs were tempered by increased productivity in some Member States. However, in several Member States (particularly Spain, Latvia, Portugal, Ireland and Cyprus) the gains in productivity were primarily realised by sharper reductions in employment than output (see Chart 16) (18). While such productivity increases may restore convergence in nominal unit labour cost in the short run, they may also have an adverse impact on long-term upward convergence and social cohesion.

… which can be insufficient to restore competitiveness in a sustainable way

On the whole, the rebalancing over the 2008–13 period reversed some of the divergence observed in the 2001–07 period (Chart 17). While, on average, nominal ULCs were very slightly below the 2 % benchmark, corresponding to the ECB inflation target, relatively lower development in some Member States reflects stronger increases in nominal ULCs elsewhere.

This pattern of development was achieved through significantly below average developments in some Member States who had previously experienced above average increases (particularly Ireland, Greece, Spain and Portugal, who saw declines or stagnation in nominal ULCs), but generally without above average increases in Member States who had previously experienced lower than average developments (in particular in Austria and Germany).

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(18) It can also be noted that changes in employment can have affected more specifically lower productivity sectors, resulting in a positive impact on average productivity (see, for instance, European Commission, 2014a, for analysis of the sectoral composition).

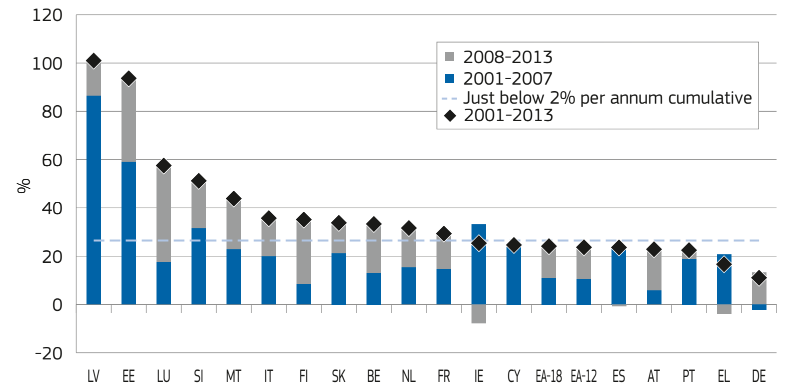
While it is beyond the scope of this chapter to investigate in depth the various roots of wage dynamics, developments over the period also reflect shortcomings in the architecture of the euro area (such as developments in real interest rates). Moreover, the underlying loss of competitiveness can be related to wage setting developments (19) and to the incomplete pass through from wages to prices (see Section 2.2).

2.2.2. Trends in human capital investment

In the years preceding the crisis, some countries experienced weak productivity gains, (notably the Southern or periphery EU-15 as indicated above), with future productivity growth prospects seen to rely strongly on education and skill among the active population. This section thus reviews some key dimensions of trends in education and skill structures of the active age population, as well as trends in the youngest segment of the active population, namely early school leavers and NEETs (20). In particular, it seeks to document whether trends observed before the crisis have been affected in recent years (21).

The average level of education of the working age population (as reflected by the ISCED classification) is progressively increasing with convergent trends in educational attainments by 16–39 year olds over the past 15 years. Moreover, these trends were not affected by the crisis, suggesting that there has not been any significant deterioration in the potential for long-term growth. However, the stabilisation in dispersion of the share of the active age population with education levels up to lower secondary education (ISCED 0–2 range) in recent years is worth noting.

Chart 17: Nominal unit labour cost — EA-18 cumulative growth 2001–13



Source: DG EMPL calculations based on Eurostat (nama_aux_ulc).

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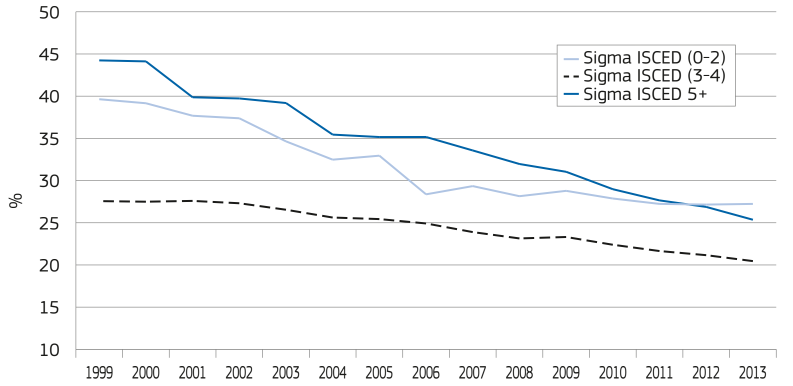
Chart 18: Trends in dispersion of education performance in the EU-28 (active age 16–39 population) (1999–2013)



Source: Eurostat, calculations DG EMPL.

Note: dispersion measured as the coefficient of variation, based on the unweighted average.

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Nevertheless, any review of trends in the education of the working age population needs to be complemented by analysis of the trends in skills, since these are even more relevant to productivity (and education levels can reflect very different skills between countries) (22). In this regard, there is No indication that the dispersion of skill levels in the 16–64 population improves when considering younger age brackets (16–24). Though younger cohorts generally benefit from higher average skills, the differentials between countries are lower for younger generations and are sometimes reinforced (as, for instance, in the case in England and Northern Ireland, see Chart 18).

When considering the youth situation over the period, it is remarkable that there is a clear convergence pattern in the share of early school leavers (aged 18–24), with convergence continuing during the crisis — though at a reduced pace, particularly in Southern EU-15 countries. This is a positive sign that most of the gains made before the crisis will be beneficial after the crisis, providing stronger grounds for employment growth. It can be noted that the slowdown of the convergence pattern in recent years could reflect longer periods at school, due to the deterioration of the labour market.

The labour market attachment of younger generations, as reflected by the rate of NEETs, has seen some significant reversal of the convergence trends in recent years. However, this mainly reflects increases in unemployment rather than inactivity (23).

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(19) As well as either price or non-price competiveness factors. For instance, assessing external positions on the basis of real effective exchange rates (based on wages adjusted for productivity) does not reflect all costs, such as capital costs, R&D expenditure and distribution costs.

(20) Young people Not in Employment, Education or Training.

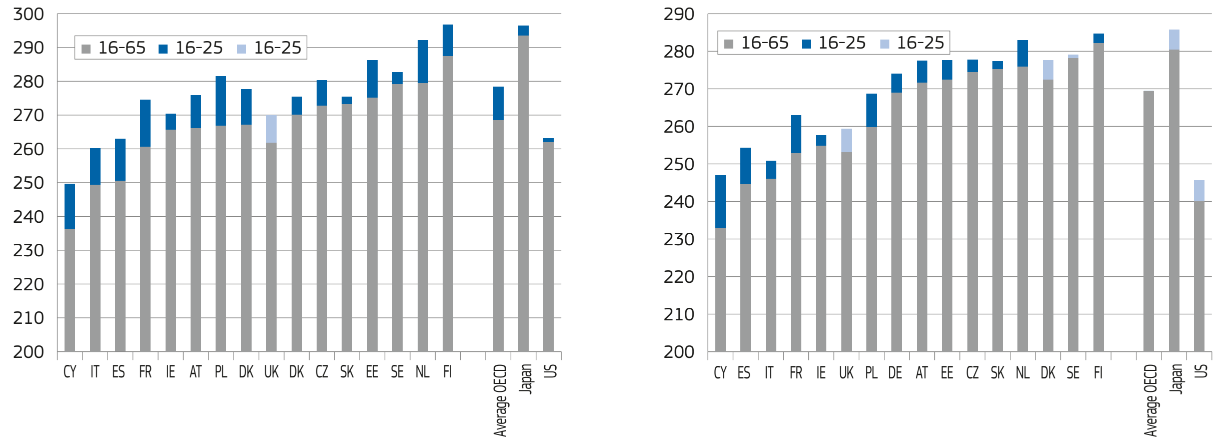
(21) The analysis in this section complements analyses presented elsewhere in this report. Chapter 2 discusses in more detail the challenges to future human capital formation, while Chapter 3 provides an analysis of the increasing importance of job quality and workplace innovation to strengthen productivity growth.

(22) See, for instance, OECD (2012).

(23) See, for instance, EU Employment and Social situation, Quarterly review, March 2014.

Chart 19: Scores in literacy (left panel) and numeracy (right panel) for a selection of Member States or regions (2012)

Adjusted average scores for populations aged 16–25 and 16–65



Reading note: The bar for 16–25 is in light blue and not in blue when the score for 16–25 is lower than the one for 16–65.

Source: OECD PIAAC, calculations DG EMPL.

Note: UK refers to England and Northern Ireland.

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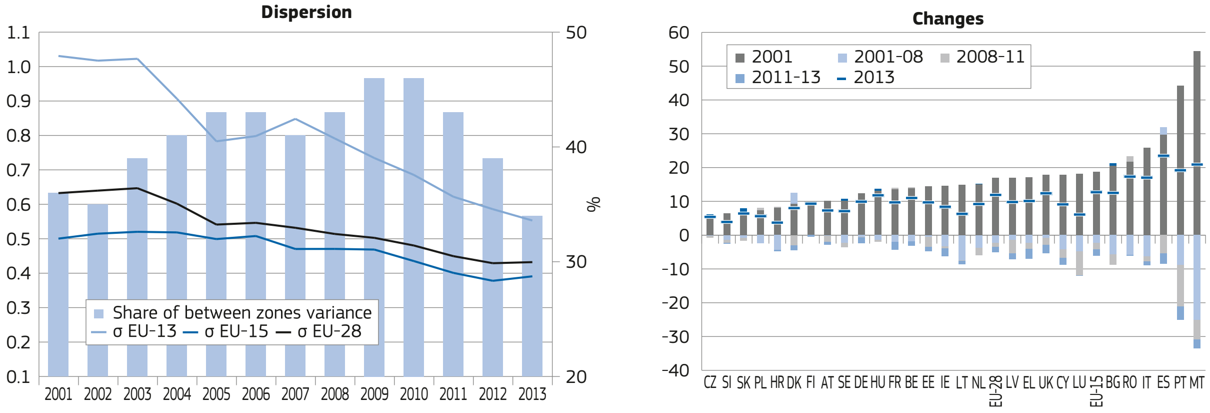
Chart 20: Trends in the rate of early school leavers in Europe (age 18–24 population) (2001–13)



Source: Eurostat, calculations DG EMPL.

Notes: σ refers to the coefficient of variation (based on weighted averages); the share of inter groups variance is based on unweighted averages by zone (see annex). Some missing data at the beginning of the period were kept constant for the calculation of dispersion: CZ, IE, HR, LV, SK (2001) and UK (2003).

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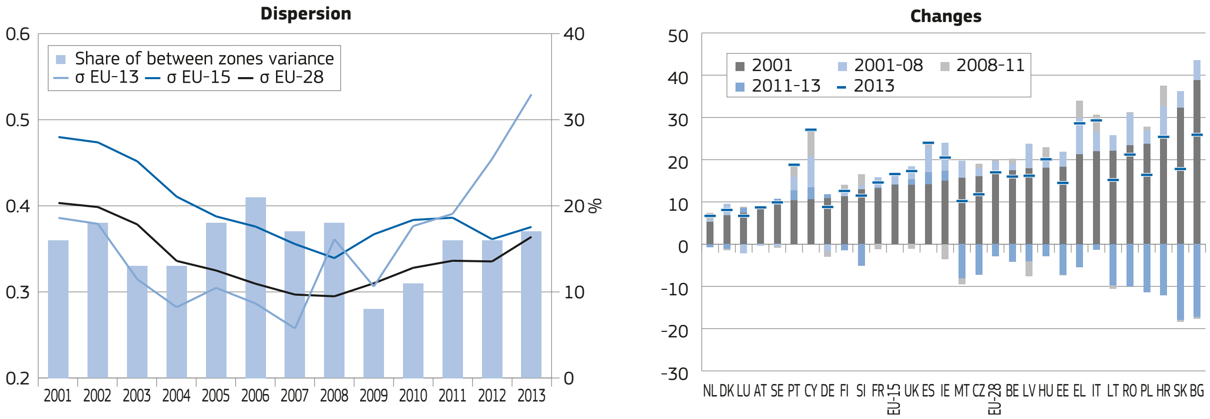
Chart 21: Trends in the rate of NEETS (18–24) in Europe (2001–13)



Source: Eurostat, calculations DG EMPL.

Notes: Dispersion measured as the coefficient of variation, based on the unweighted average. Some missing data at the beginning of the period were kept constant for the calculation of dispersion: CZ, IE, HR, LV, SK (2001).

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2.2.3. Trends in public and private indebtedness

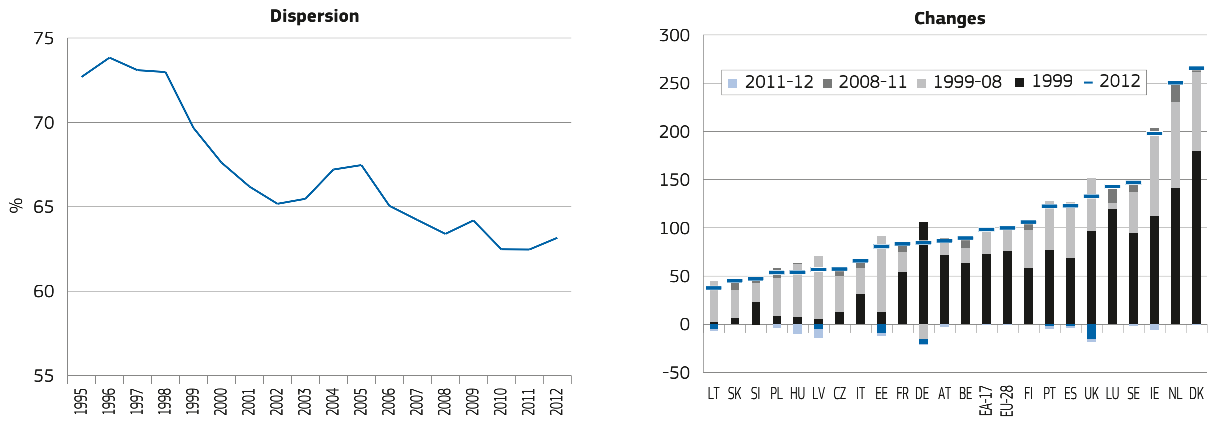
Trends in public and private indebtedness can also contribute to diverging socioeconomic performance, notably since increases in good economic times can reduce access to credit in bad economic times, while increases in private debt can fuel consumption when debt is increased, but also then reduce consumption when debt is serviced. Furthermore, during an economic downturn, servicing debt may have a strong adverse impact on the purchasing power of households (especially when inflation is lower than expected), notably at the lower end of the income distribution. This may also hinder convergence across Member States, to the extent that it stifles aggregate demand in debtor countries.

Households' debt to income ratios had been converging overall in Europe since the mid-1990s but this convergence essentially halted during the crisis (see Chart 22) and was accompanied by a significant increase between 1999 and 2008 (over 20 percentage points for the whole EU average). This increase was not only significant in EU-13 Member States (in relative and absolute terms) where initial levels were relatively low, but also in some Member States where rates were already relatively high (such as Ireland, the Netherlands or Denmark). During the crisis household debt to income ratios were on average nearly stable, including in Member States where household incomes were more strongly affected.

While household debt to income ratios converged, non-financial corporate indebtedness diverged in the decade preceding the crisis, with significant increases in the EU-15 Southern and periphery zone (see Chart 22) and declines mostly in EU-13. These diverging developments reverted somewhat during the crisis, with some significant declines in some EU-15 Southern and periphery Member States (in particular in Spain and Portugal).

Public debt to GDP ratios showed some divergence before the crisis, notably as a result of increases in Southern and peripheral EU-15 Member States (such as Portugal and Greece), but also due to declines in some EU-15 Northern Member States (such as Sweden and Denmark) and EU-13 Member States (such as Bulgaria and Slovakia). Overall, there was some convergence over

Chart 22: **Trends in households' gross debt to income ratio (1995–2013)**



Source: Eurostat, calculations DG EMPL.

Notes: Gross debt-to-income ratio of households as registered by national accounts ((AF4, liab)/(B6G+D8net)). Missing data for BG, EL, CY, HR, MT and RO, some missing data at the beginning of the period were kept constant for the calculation of dispersion : IE (1995-01), ES (1995-99), LU (1995-2005), SI (1995-01).

Reading note: Dispersion measured as the coefficient of variation, based on the EU-28 weighted average.

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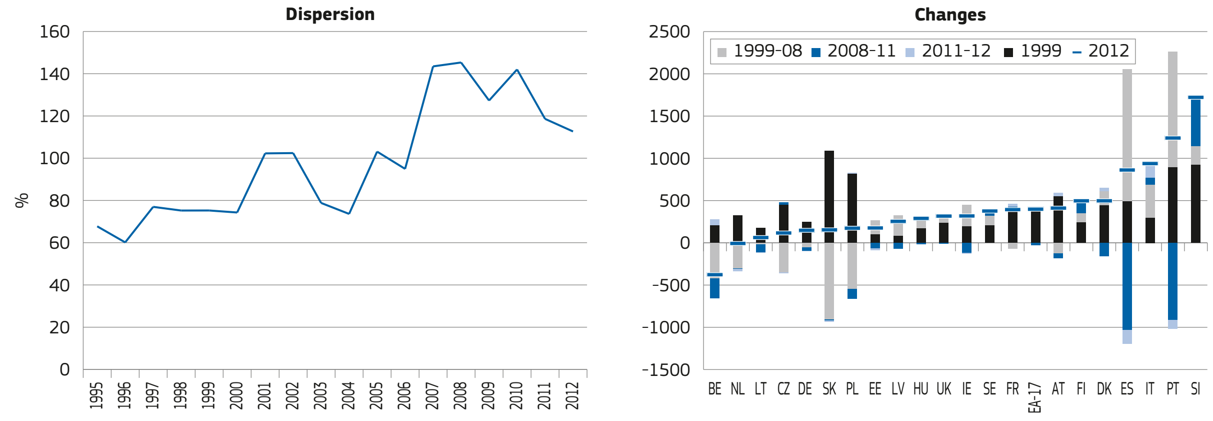
Chart 23: **Trends in non-financial corporations' net debt to income ratio (1995–2013)**



Source: Eurostat, calculations DG EMPL.

Notes: net debt-to-income ratio, after taxes, of non-financial corporations: (AF2+AF33+AF4, liab - assets)/(B4N-D5PAY). Missing data for BG, CY, EL, MT and RO, some missing data at the beginning of the period were kept constant for the calculation of dispersion DK (1995-02), EE, SI (1995-01), ES (1995-99), PL (1995-96), LV (1995 and 1997).

Reading note: Dispersion measured as the coefficient of variation, based on the unweighted average.

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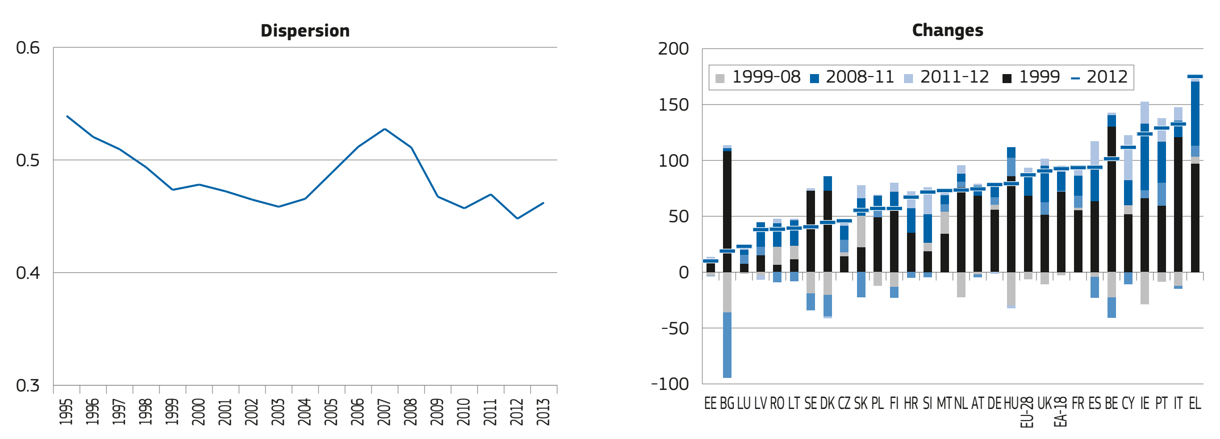
Chart 24: Trends in public debt to GDP ratio (1996–2013)



Source: Eurostat, calculations DG EMPL.

Note: Some missing data at the beginning of the period were kept constant for the calculation of dispersion BG (1995-97), HR (1995-01).

Reading note: Dispersion measured as the coefficient of variation, based on the EU-28 weighted average.

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the first years of the crisis and some stabilisation since then, but within the context of a significant average increase in public debt.

2.3. Conclusion: promoting upward convergence by balanced adjustment efforts and strengthening human capital formation

While socioeconomic convergence had been ongoing across the EU over the last two decades, it came to a halt with the crisis in terms of GDP per head and reversed strongly for employment and unemployment rates. Activity rates, which held up during the crisis, broadly continued to converge. Convergence slightly reversed in terms of household incomes and came to a halt in terms of poverty. These trends were mainly due to adverse developments in southern and peripheral EU-15 Member States, which translated into an overall increase in the share of dispersion between zones. Conversely, convergence (within EU-13 and with the EU-15) broadly continued for most Member States that joined the EU in 2004 or later.

In comparison, adjustments in the crisis were more balanced in the United States than in Europe, with convergence (between States or regions) in GDP per capita recovering slightly more quickly after the crisis in the United States, unemployment rates not diverging in the United States, (they diverged significantly in the EU) and poverty rates still showing signs of convergence in the United States (convergence came to a halt in the EU).

These divergent socioeconomic trends after 2008 concentrated mainly within EU-15 and reflect the exceptional scale and impact of the crisis in a context where the adjustment capacity in the euro area was wanting (see Section 2.1). But they also reflect the consequences of the build-up of structural imbalances that had taken place prior to the crisis, notably divergent nominal unit labour cost growth in the euro area, low productivity growth in several Member States, and the rising indebtedness of households, enterprises and the public sector in many Member States. While this correction led to a cyclical recovery in productivity growth in Member States such as Spain, it also led to deflationary tendencies in Member States such as Greece, Cyprus and Portugal. Furthermore, the correction has not been distributed symmetrically across Member States, notably with respect to nominal unit labour cost growth. It was primarily the Member States that had experienced higher than average growth in nominal unit labour costs in the run-up to the crisis that made the strongest downwards adjustments, while adjustment in the Member States that had recorded below average growth was rather moderate.

More positively, the convergence in labour force education levels and in the share of early school leavers was not interrupted by the crisis. However, it seems that human capital formation risks remaining an important source of divergence across Member States, since strong dispersion in skill levels persists, especially among the young (also see Chapter 2 of this report).

3. CONVERGENCE WITHIN THE EU, A SPECIFIC CHALLENGE?

The persistent divergent socioeconomic cyclical developments across the euro area since the onset of the crisis, suggest that the current E(M)U framework, could be strengthened to foster upward convergence in times of cyclical downturn (24).

In particular it is important to consider the extent to which cross-border effects arising from labour market and social adjustments are likely to intensify in the future, how such developments might impact on the goals of upward convergence, and whether a fiscal capacity at the EMU level could mitigate any negative effects.

There is a need to look beyond traditional macro-economic adjustment channels and also consider socioeconomic developments, such as changes in labour market polarisation and hysteresis effects, that risk deepening and extending the duration of any economic downturns.

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(24) Such ideas go back to the early discussions on optimal currency areas, with Mundell (1961) emphasising the need for price flexibility and labour mobility, and Kenen (1969) the need for fiscal integration for smoothening adjustment to asymmetric shocks.

3.1. The specificities of a monetary union

The capacity to adjust to asymmetric shocks in the EMU

In an economic and monetary union with irreversible nominal exchange rates, the available channels for adjustment to asymmetric shocks at the Member State level include, on one hand, market based channels such as wages, prices, labour mobility (geographic and occupational), and private capital flows, and on the other hand, policy based channels including fiscal policies such as automatic fiscal stabilisers, discretionary taxes and public expenditure. And by construction, they do not include monetary policy instruments (such as open market operations) or the possibility of adjusting nominal exchange rates.

The absence of national monetary policy instruments and nominal exchange rates, combined with downward rigidity in prices and wages, requires additional adjustments through quantities (including raising unemployment and decreasing real income) when a national economy is hit by an adverse asymmetric shock. This is especially the case when access to capital markets is limited, so that the adjustment burden cannot be spread over time.

In addition, such a limited adjustment capacity can generate strong adverse socioeconomic consequences (such as distributional impacts, hysteresis effects, and interactions with product markets, as discussed below), which may generate self-reinforcing adverse labour market developments that increase the duration and intensity of an economic downturn, with the risk of a permanent loss of potential output and employment.

It is worth noting that since the introduction of the euro, there appear to be at least as many asymmetric shocks as before (such as, for instance, measured by the dispersion in growth rates; see, for instance, European Commission (2008), Pisani (2012) and Allard et al. (2013)). While a number of factors affect trends in business cycle synchronisation, increased trade integration can lead to more synchronisation of the business cycle (see, for instance, Frankel and Rose, 1998), while there are other forces that reduce synchronisation, such as increasing economic specialisation linked to trade integration (see, for instance, Krugman 1993) (25), as well as heterogeneity in the development of real interest rates (see, for instance, ESDE 2013).

In such an environment, the fiscal capacity of the currency union level is an important factor in terms of the system's ability to alleviate the economic and social impact of asymmetric shocks. Under the current architecture of the EMU, however, adjustment relies on decentralised fiscal policies under a rule-based framework and does not provide for an (automatic) fiscal stabilisation capacity (26). Furthermore, while social protection generally played a prominent role in compensating households' income losses in the early phase of the crisis (2008–9), and thus helped stabilise the economy, this capacity was eroded in the second phase of the crisis (particularly in 2012 and 2013). This was due to a number of factors, including high pre-existing levels of sovereign debt and protracted uncertainty about the EMU's future, leading to cuts in public spending and/or tax increases in many Member States (27).

The importance of a common fiscal capacity at the monetary union level had already been recognised in the early stages of European monetary policy cooperation, such as in the Marjolin Report in 1975, the MacDougall Report in 1977 and the Delors report in 1989. Enderlein and Rubio (2014) underlined that the Delors report considered that 'a well-functioning economic pillar was needed to limit the scope for divergences', requiring common regional and structural policies and macroeconomic policy coordination and that 'more effective EC structural and regional policies were seen as indispensable to mitigate the negative effects that economic and monetary integration was expected to have on poorer regions'. In particular, it was feared that agglomeration effects would 'favour a shift in economic activity away from less developed regions, especially if they were in the periphery of the Community, to the highly developed areas in the centre'. They also note that the Report 'emphasised the need to "equalise production conditions" in the Community by strengthening EC cohesion policies and developing major EC investment programmes in areas such as physical infrastructures, communications, transportation and education' and 'stressed the need to ensure the "efficient use" of EC cohesion funds, the performance of which had to be evaluated and "if necessary be adapted in the light of experience"'. The Commission's *Blueprint for a deep and genuine EMU* (2012), the Four Presidents' report (2012) and the Commission Communication on strengthening the Social Dimension of the EMU (2013) stress that the creation of an EMU-wide fiscal capacity should be considered as a longer-term step to improve the stabilisation of EMU economies, particularly in case of asymmetric shocks.

It should also be underlined that, as stated in the *Blueprint for a deep and genuine EMU* (2012), such developments relate to a medium- and long-term vision of the EMU and are thus complementary to existing measures to improve policy coordination, in particular implementation of the economic governance framework, as well as developments relating to the Banking Union, while they also imply a greater degree of sovereignty transfer and hence should be accompanied by steps towards political integration.

Available estimates of the level of risk sharing (smoothing capacity against the impact of country specific shocks) overall in Europe suggest that it remains low, compared to Canada or the United States (see Allard et al. (2013) and Van Beers et al. (2014)). It appears that the relative weakness of risk sharing in Europe and EMU does not derive from the credit markets, but is mainly due to lower risk sharing in the capital market channels (which remains weak) and fiscal transfer channels (which are comparatively inexistent, see chart). In this respect, the Banking Union should strengthen the capital market and depreciation channels, while the argument that its credibility and efficiency would be strengthened by a fiscal backstop should be noted (28).

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(25) See Section 2.2 below.

(26) The EU budget contributes to stabilising national budgets only in a marginal way, namely through slightly lower national fiscal contributions due to lower imports (tariffs) and economic activity (VAT) and through reduced requirements for co-financing of European Structural and Investment Funds' support (in the case of 'programme countries'). The European Globalisation Adjustment Fund, outside the MFF, provides small-scale financial assistance in case of regional economic shocks.

(27) See, for instance, EU Employment and Social situation, Quarterly review, March 2014.

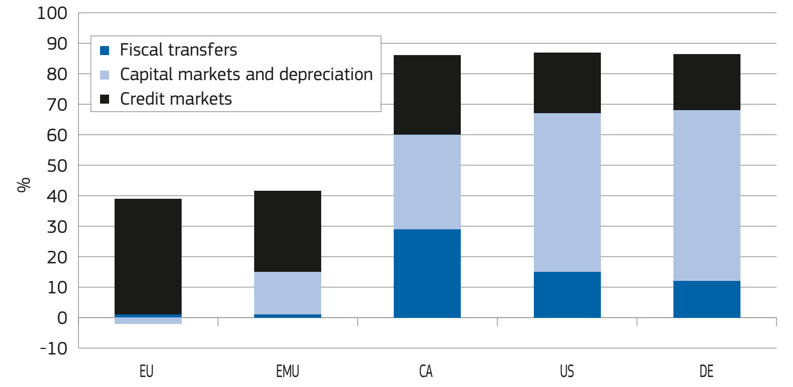
(28) See, for instance, IMF (2014), Article IV Consultation with the Euro Area — Staff report.

Labour mobility

While the last decade has seen a large increase in mobility within the EU, mostly due to the 2004–07 enlargements, there is still scope to increase labour mobility. In 2013, 3.3 % of the total population (29) (of economically active EU-28 citizens) resided in another EU-28 country, compared with 2.1 % in 2005. This increase mainly occurred post-enlargement (2004 and 2007) with more than three quarters of this net increase corresponding to citizens from EU-12 (30) countries.

During the crisis, mobility flows helped Member States adjust, to some extent, to changing labour market conditions. Intra-EU mobility flows actually declined in the first phase of the crisis (2009–10), but have partly recovered subsequently (31), especially from Southern EU Member States (although the majority of intra-EU movers — around 60 % — still originate from Central and Eastern Member States).

Chart 25: Risk sharing — insurance against income shocks remains low in Europe



Source: Allard et al. (2013).

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There has been a notable increase in inflows in more resilient countries (such as Germany, Austria, Belgium and the Nordic countries) (32) and, by contrast, reduced inflows and increased outflows in the countries most affected by the crisis (such as Spain and Ireland (33)). However, part of this adjustment reflects changes in migration to and from non-EU countries, rather than intra-EU movements (34). Overall, intra-EU labour mobility remains limited, in comparison to other OECD countries (such as the United States, Canada or Australia) (35). However, while the migration response to labour market shocks prior to the crisis was stronger in the United States, recent evidence suggests that migration in Europe reacted quite strongly to changes in labour market conditions — more so than in the United States, where internal mobility seems to have declined (see, for instance, Jauer et al., 2014).

There is further potential for increased intra-EU labour mobility. Given the disparities in unemployment rates (36) and recent increases in mobility intentions in some countries (37), mobility changes remain limited in absolute terms (38). The potential for countries with high unemployment levels to tackle that problem through migration to other countries is limited by the fact that the education profile of the average unemployed person does not match the profile needs of the potential recipient country (39). While there is evidence that current levels of mobility are below the measured mobility intentions (40) in terms of movements between euro area countries, any further intra-EU labour mobility is likely to require a reduction in the many remaining barriers to mobility, which notably include differences in administration, taxation, social security systems, transferability of professional qualifications (see Section 3.2).

Moreover, it is important to monitor the broader long-term impact of mobility on both destination and origin countries, and recognise that there are natural limits to intra-EU mobility, as well as potential negative side effects in both destination countries (impact on local services and budgets, risk of displacement effects on low-skilled natives) and origin countries (youth and brain drain, risk for cohesion and sustainability of social security systems in the long-run).

3.2. Cross-border externalities arising from employment and social developments linked to economic shocks in a monetary union

In terms of future perspectives, two particular questions can be raised:

- To what extent will cross-border effects arising from employment and social developments intensify in the future, and how will they impact on upward convergence across the EU?
- Do cross-border externalities stemming from developments in national labour markets provide a basis for more EU-level policy coordination?

When an economy is hit by a shock, it has to adjust, but the nature of the shocks and adjustment channels vary greatly (see, for instance, Box 2). In closely integrated national economies,

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(29) Corresponding to 8 million persons; in addition, there are also around 1.1 million EU inhabitants working outside their country of residence (i.e. 'cross-border' or 'frontier' workers).

(30) EU-12: countries that joined the EU in 2004 (EU-10) and 2007 (EU-2).

(31) European Commission, EU ESSQR June 2014, Supplement 'Recent trends in the geographical mobility of workers'.

(32) See European Commission, EU ESSQR June 2014, Supplement 'Recent trends in the geographical mobility of workers'.

(33) See Deutsche Bank (2011).

(34) European Commission (2014a), pp. 281–6.

(35) See European Commission (2014a), pp. 282–3 for a recent review of the literature.

(36) See European Commission (2014a), Boxes 2 and 3, pp. 282–6.

(37) According to the Gallup Word Poll, the share of EU citizens planning to move permanently in another country increased from 0.5 % in 2008–10 to 1.2 % in 2011–12, see European Commission, EU ESSQR June 2013, pp. 38–50. Another indicator is the rising number of EU citizens registering in EURES CV online (from 761 000 in June 2012 to 1 035 000 in June 2013 and 1 160 000 in January 2014).

(38) See European Commission, EU Employment and Social Situation Quarterly Report, June 2013, pp. 38–50 and European Commission, EU Employment and Social Situation Quarterly Report June 2014, Supplement 'Recent trends in the geographical mobility of workers'.

(39) EU-LFS data indicate that most (around 60 %) recent movers from the South are highly educated while around 80 % of the unemployed in Southern countries have a low or medium level of education, see EU Employment and Social Situation Quarterly Report, June 2013, p. 45.

(40) See European Commission, Employment and Social Situation Quarterly Report, June 2013.

such as the EU, the effects of domestic economic shocks and labour market adjustment can often be rapidly transmitted to other Member States, in particular through international trade, labour mobility, knowledge networks and capital flows.

Cross-border effects are determined by the nature of the domestic shock, the domestic adjustment to that shock and the strength of the channels through which shocks are transmitted across borders. All of this can reinforce upward convergence if they involve, for example, the dissemination of good business practices across borders. However, they can increase divergence if they involve, for example, the migration of highly skilled persons who want to escape adverse socioeconomic developments in their home country.

The scale and intensity of these cross-border effects is largely conditioned by the structural characteristics of the economies, such as their trade openness, their integration in cross-border supply chains, their financial integration with the rest of the world, and their access to international knowledge networks and market flexibility (see, for instance, IMF, 2013 and Weyerstrass et al., 2006) (41).

Box 2: Types of macro-economic shocks

Different types of shocks

A shock on the supply side of the real sector affects, production technologies (e.g. a decrease in productivity growth) or production factors (e.g. increases in the price of raw materials), while a shock on the demand side of the real sector affects, the preferences of consumers (e.g. a shift in propensity to consume), the public sector (e.g. less military spending) or trading partners (e.g. a shift towards overseas imports). In the long run, permanent real shocks induce adjustments in the quantities and relative prices, to restore equilibrium — in the absence of structural reforms. These changes may generate spill-overs to the rest of the world.

A permanent shock is defined as a shock that does not disappear and has a permanent impact, while a temporary shock has No permanent effect on trend developments. Nevertheless, as discussed elsewhere in this section, this distinction does not hold once hysteresis effects in labour markets (and other markets) are taken into account.

A symmetric shock affects all economies in the same way (e.g. the rise in the price of oil affects all oil importers), while an asymmetric shock (1) affects a specific Member State (e.g. a boom in the domestic construction sector). Nevertheless, while countries may be hit by a common shock, differences in (labour market) institutions or other country specific characteristics (such as wage setting) may generate asymmetric outcomes (at least in the short- to medium-term).

An exogenous shock (e.g. a geopolitical crisis) is beyond the control of policy makers, while policy-induced shocks (e.g. unexpected bail-outs of banks) stem from discretionary policy decisions. Finally, shocks may be anticipated (e.g. introduction of the euro) or unanticipated (i.e. 'news').

Difficulties in identifying the nature of different shocks

Although knowledge of the nature of a shock that hits an economy is important, it should be recognised that the exact nature of a shock is not always unambiguously observable in real time, and estimations confront several issues.

First, it cannot be excluded that national policy makers may have an incentive to misrepresent the nature of a shock. Consequently, it may be useful to establish an institutional framework that provides an independent assessment of the nature of shocks and macro-economic outlooks.

Furthermore, literature provides several methodologies to estimate (sources of) business fluctuations (including output gaps). Seminal work include Tinbergen (1939) using a linear difference equation, Burns and Mitchel (1946) using leading indicators, Shapiro and Watson (1989) using multivariate dynamic factor models, and Hamilton (1989) using a Markov-based regime shifting models. Nevertheless, experience has shown that real time estimates can be very uncertain, inter alia, due to parameter instability, model uncertainty, and data revisions. See, for instance, Marcellinoa and Musso (2011), Cheremukhin (2013) and Orphanides and van Norden (2002).

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(1) Sometimes referred to as 'country-specific shocks'.

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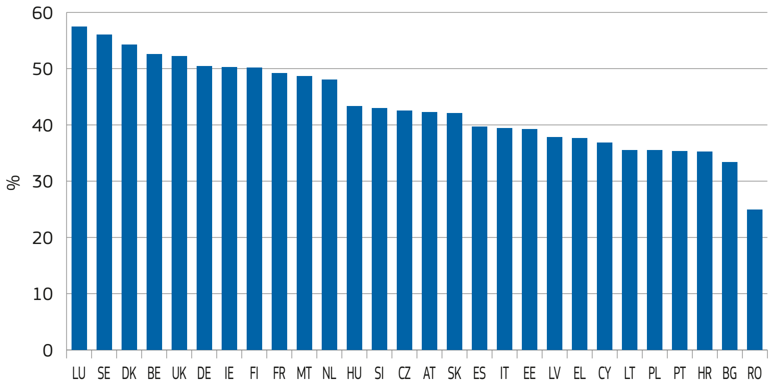
(41) Empirical assessments of spill-over effects within EMU in the face of budgetary consolidation and structural reforms prior to the crisis can be found in, for example, Weyerstrass et al. (2006) and Beetsma and Giuliodori (2011).

3.2.1. Stronger cross-border transmission in the future

A key question concerns the extent to which structural developments in the economy strengthen the channels through which domestic employment and social developments are transmitted across borders, and can this affect upward convergence.

It can be expected that recent or future developments, such as the establishment of a banking union, further strengthening of the European Single Market, and technological developments (including trans-European networks), will together reinforce the channels through which cross-border effects are transmitted within the EU, namely international trade, knowledge networks, migration and capital flows [42].

Chart 26: **Employment share of employment in knowledge intensive services and manufacturing — 2012**



Source: DG EMPL calculations based on Eurostat (htec_emp_nat2).

Notes: employment in knowledge-intensive services and high- and medium-high-technology manufacturing. UK is 2011 observation.

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Expanding international trade and supply chains

The continued opening of national markets to international trade and the expansion of value chains across borders should allow countries to further exploit their comparative advantages — with potential to increase upward convergence between countries. Nevertheless, such developments will also make national labour markets more sensitive to labour market conditions in their trading partners and to generate spill-over effects stemming from developments inside and outside the EU, thus calling for changes such as a stronger coordination of working conditions across the EU.

First, when markets are opened further, economic developments in the (main) trading partners impact more strongly domestically. Second, the further expansion of supply chains across borders facilitates the spread of technologies thereby strengthening upward convergence of productivity. Nevertheless, such supply chains also increase countries' exposure to developments in the rest of the world and their sensitivity (both positively and negatively) to EU labour market conditions (see Elekdag and Muir (2013) for aspects relating to Germany, the Czech Republic, Hungary, Poland and the Slovak Republic).

Stronger knowledge diffusion across borders

Knowledge is expected to become an increasingly important driver of productivity growth and job creation in the future (see, European Commission, 2014a). Hence, fostering the diffusion of knowledge across borders may become a strong force in support of sustainable upward convergence through catching-up (see, for instance, Guerrieri et al., 2005).

Indeed, there are still major cross-country differences in the share of employment between knowledge intensive services and manufacturing, indicating a strong catch-up potential for the Member States that joined the EU in 2004 or later, as well as Portugal, Greece, Italy and Spain (see Chart 26).

Due care will have to be given to cross-border effects that may have an adverse impact on convergence. First, employees and employers do not always have the skills to use and apply (new) knowledge in an optimal way (see, for instance, Audretsch and Keilbach (2010)) [43]. Second, depending on the nature of the activity, increasing returns in the accumulation of knowledge may lead to a stronger geographical pooling of highly skilled workers. Such agglomeration effects may however carry negative externalities for the countries/regions from which the high-skilled workers move [44]. On balance, there is a risk that such outcomes may weaken convergence across regions and countries.

Nevertheless, not all knowledge-intensive activities are subject to agglomeration effects, and further decreases in trade and transaction costs that strengthen the connectivity of agents with the outside world (such as the expansion of Trans-European networks) may put downward pressure on agglomeration effects (see, for instance, Baldwin et al., 2001). More importantly, efficient and effective use of public funds to boost local innovation capacity has the potential to remedy

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[42] Although an analytical distinction will be made between four channels, due recognition will be given to possible interactions.

[43] In this context it is important to note that the private sector may underinvest in private research and innovation, as well as skill formation, while such outcomes may intensify if labour becomes more mobile.

[44] See, for instance, European Commission (2012), Chapter 6, and European Commission (2014) EU Employment and Social Situation Quarterly Review, June 2014, supplement on mobility.

such adverse developments. See, for instance, European Commission (2010).

Labour mobility can strengthen upward convergence

Increased labour mobility means that, in principle, workers can move more easily from areas with a surplus of workers (and lower real wages) to areas with a shortage (and higher real wages). Significant immigration flows put downward pressure on real wages in host countries, while emigration flows put upward pressure on real wages in sending countries (45) — thereby strengthening convergence in earnings.

In addition, increased mobility of skilled workers can strengthen the diffusion of knowledge and has strong potential to promote upward convergence in productivity growth. Nevertheless, increased labour mobility runs the risk of agglomeration of knowledge-intensive industries and brain drain that may strengthen divergence (as discussed above). Hence, the coordination of synergies between policies that promote labour mobility and knowledge networks will continue to be an important policy challenge (at the European level) in the future (see also Section 3.2 below).

International capital flows: direct foreign and portfolio investment

Domestic labour market conditions can also trigger cross-border effects via their impact on international capital flows. Foreign direct investment (FDI) from countries at the cutting edge of technology to lagging countries is expected to have a positive impact on employment and growth as well as on human capital formation in the destination country (46). Increased dependency on FDI can however make the host country more vulnerable to sudden reductions in FDI flows, such as labour market shocks, with consequential risks of a slowdown or halt of the convergence process. Furthermore, there is a risk that the diffusion of technology weakens firms' competitiveness in international markets, so that firms may decide to export rather than invest in production capacity in the other countries — with a potentially adverse impact on convergence (see, for instance, Fosfuri et al. (2001) and Kudo (1993)).

Finally, cross-border portfolio investment can be affected by the development of socioeconomic conditions, in particular by adverse developments in unemployment and income distribution. Firstly, low income earners are generally more affected, since their capacity to service debt may deteriorate more quickly than for other categories of the population. Secondly, as rising income inequality and unemployment affects domestic economic, social and political stability, the 'confidence' of portfolio investors may decrease and a higher risk premium demanded.

3.2.2. Cross-border transmission of domestic socio-economic developments in the economic cycle

This section examines the cross-border effects stemming from domestic labour market adjustment in the face of a temporary shock. More specifically, the analysis in this section will look beyond the traditional macro-economic adjustment channels (47), and identify socio-economic adjustment channels that may also affect the depth and persistence of the downturn. Such socio-economic channels include distributional effects, labour market hysteresis and interactions between labour and product markets (as discussed in the first part of this section). In turn, these socio-economic developments may generate cross-border effects via international trade and capital flows (as discussed in the second part of this section).

Domestic socioeconomic developments include…

When a Member State of a currency union is hit by a temporary asymmetric negative demand shock, its economy will temporarily (but not necessarily only for a short period) deviate from its growth path, before it eventually returns to its original growth path (48), at least in the absence of hysteresis effects, such as the erosion of employability of unemployed workers — as discussed below.

The cross-border effects will primarily be transmitted via the trade channel as the country's real effective exchange rate depreciates and its domestic absorption decreases (49). While cross-border effects are transmitted through changes in average prices, wages and domestic income (50), a full assessment of the adjustment process needs to also take account of the socioeconomic adjustment channels (in particular, distributional and labour market hysteresis effects) as well as other socioeconomic feedbacks.

…cyclical distributional effects…

An adverse temporary asymmetric shock will not only affect total output and income, but can also intensify inequality resulting in important feedbacks to aggregate demand, employment and social cohesion along the following channels.

Firstly, job losses are likely to be disproportionally carried by the low-skilled since the hiring and firing costs of low-skilled workers are lower than those of the highly skilled (notably since that the latter carry more valuable firm-specific human capital) (51). Consequently, as the low-paid generally have an above average propensity to consume out of their incomes, aggregate demand will experience an additional downward push (52).

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(45) See, for instance, European Commission (2012), Chapter 6, and European Commission (2014) EU Employment and Social Situation Quarterly Review, June 2014, supplement on mobility.

(46) See, for instance, http://ec.europa.eu/research/social-sciences/pdf/labfdi-final-report_en.pdf

(47) I.e. changes in average prices, wages, income, etc. (in a currency union with irreversible nominal exchange in the absence of a fiscal capacity). See, for example, De Grauwe (2014) for an analysis of traditional macro-economic adjustment channels.

(48) It should be noted that a similar argument can be made in the case of a temporary negative supply shock.

(49) If focusing only on macro-economic adjustment in labour markets. It would be beyond the scope of this chapter to examine also cyclical cross-border effects that arise from developments that are not directly related to labour market adjustment, such as developments in bond, money and product markets.

(50) In a currency union with irreversible nominal exchange and an absence of fiscal capacity.

(51) See, for example, Agénor (2001).

(52) To the extent that the related average propensity to consume will be higher than the average propensity to consume in the economy.

Furthermore, if the downturn persists and entitlement to unemployment benefits expire after a certain period, reductions in unemployment benefit outlays will put additional downward pressure on aggregate demand as well as social cohesion.

Secondly, some additional adverse feedbacks arise from the financial markets, notably as liquidity (53) and credit constraints hinder households' borrowing and spending, with a view to smoothing their consumption over time, particularly at the lower end of the income distribution (54).

… labour market hysteresis effects …

Once a negative demand shock disappears, the economy will start to revert towards equilibrium. However, several adverse labour market feedbacks may prevent a return to pre-shock levels of employment and output (55).

Firstly, persistent spells of unemployment may erode the employability of unemployed persons as well as their earnings potential (for example: due to a loss of skills; decline in the motivation to look for a job; and stigmatisation in the eyes of potential employers). Cockx and Picchio (2013) — using Belgian panel data covering the labour market history of young people over the 1998–2002 period — report that, if job market entry is delayed by one year, the probability of finding a job in the following two years falls from 60 % to 16 % for men and from 47 % to 13 % for women. Arulampalam (2001) — using UK data for the 1991–97 period — reports that unemployment carries a wage penalty of about 6 % on re-entry in Britain and that, after three years, they are earning 14 % less than if they had not been unemployed. Ball (2009) provides evidence from 20 developed countries that points to a degeneration of skills, a reduction in motivation to search for a job and stigmatisation when unemployment spells persist, while Edin and Gustavsson (2008) report similar results using Swedish data from two waves (1994 and 1998) (56). On the other hand, when the job of the 'main breadwinner' becomes precarious, other members of the family may become more economically active — the 'added worker effect' — partly offsetting the initial hysteresis effects. See, for instance, European Commission (2013).

Secondly, apart from the direct labour market effects on the unemployed persons, such outcomes are also associated with adverse impacts on their health, as well as poorer academic performance and reduced earnings opportunities for their children — all of which have an adverse impact on potential output in the long run (see, for instance, Dao and Loungani (2010) and Bell and Blanchflower (2011)). However, adverse developments in the labour market can translate into longer periods in education for cohorts who are about to enter the labour market.

Thirdly, the impact of a downturn on retirement decisions is twofold. On the one hand, when economic activity slows down and employers want to fire employees to meet the fall in activity, early retirement may be the preferred exit route. On the other hand, if the crisis has a strong adverse impact on their (financial) wealth, older workers may have a strong incentive to postpone their retirement. See, for instance, OECD (2010).

… and distorted product market feedbacks.

The employment impact of a temporary asymmetric shock depends not only on the nature of the shock but also on the cyclical behaviour of prices and wages. To the extent that prices react to changes in nominal wages with a lag (i.e. pro-cyclical real wages) the domestic purchasing power of wage earners will decrease (57), further deepening the downturn (58). Chart 27 provides some empirical evidence (59) on the pass-through of changes in nominal wages (adjusted for productivity, i.e. nominal unit labour cost) to output prices in the euro area (see Box 3 and Annex for more technical details on the specification and estimation).

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(53) Liquid assets (including cash and checking accounts) are vital to meet uncertain consumption needs. Liquidity constraints amplify business cycle volatility and have nonlinear effects on risk premia. See, for instance, Jaccard (2013).

(54) Furthermore, downward pressure on prices will increase both the real incomes but also the real value of debt and real interest rates affecting notably debtors, which can in turn, have a negative feedback on aggregate demand.

(55) Also see Blanchard and Summers 1986 for an analysis of the impact of an increase in the structural unemployment on employees' reservation wage and bargaining power, and real wages dynamics. See, for instance, Ball (2014) and Hall (2014) for an analysis of hysteresis effects that look beyond labour markets, including hysteresis in capital accumulation and total factor productivity. Haltmaier (2012) reports regression results covering 40 countries that indicate that the reduction in the capital-labour ratio as a result of lower investment is the main driver of declines in potential output. See also Summers and DeLong (2013).

(56) For more details on labour market hysteresis effects see, for example, European Commission (2013, Chapter 3).

(57) i.e. in absolute (via the real wage effect) and relative terms (via the labour income share effect which is equal to the real wage effect adjusted for productivity).

(58) Again, assuming that the marginal propensity to consume out of wage income is larger than the marginal propensity to consume out of capital income.

(59) Based on an econometric analysis using quarterly data for the Member States of the euro area over the 1995q1–2013q2 period.

Box 3: Estimating the pass-through of changes in the nominal unit labour cost (1)

The starting point of the empirical analysis is the assumption that in the long run output prices are in line with the nominal unit labour cost (2). However, in markets characterised by imperfect competition and imperfect information, the output prices are not automatically fully aligned with nominal unit labour costs due to, inter alia, menu costs (3), administered prices (4), or backward-looking 'rule of thumb' price setting (5). Moreover, the state of the business cycle (i.e. fluctuations in effective demand compared to potential output) may put demand-push inflationary pressures on prices (6). Within such an economy, prices may over- or undershoot their equilibrium values in the short- to medium-run so that output prices will only converge gradually towards the nominal unit labour cost (7).

Specifying these adjustment channels and regressing quarterly changes in output prices on a set of explanatory variables (including changes in the nominal unit labour cost, past price changes and past divergence between output price and nominal unit labour cost) (8), yields estimates that are in line with the hypothesis that output prices adjust with a lag to changes in nominal unit labour costs. Subsequently, the point estimates can be used to project the path along which prices converge to the new equilibrium in response to changes in nominal unit labour cost (keeping all other factors constant) — as shown in Chart 27.

More particularly, Chart 27 shows the impact of an (exogenous shock in the) nominal unit labour cost after two quarters and then one, three, five and ten years — for the euro area Member States for which the data are available (for other Member States the dataset needed for the estimation is not available). It would be beyond the scope of this chapter to take into account feedbacks of changes in output prices and nominal unit labour cost on the rest of the economy, such as nominal interest rates, exchange rates, etc. Moreover, it should also be recognised that to the extent that the effects of cuts and increases in nominal unit labour cost are not symmetric in price adjustment, the simulated results in Chart 27 may overestimate the adjustment speed of prices.

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(1) More technical details are to be found in Annex 1.

(2) More specifically, it is assumed that unit labour cost and price levels are co-integrated.

(3) See, for instance, Mankiw (1984).

(4) Which are in the short run not necessarily disciplined by market forces.

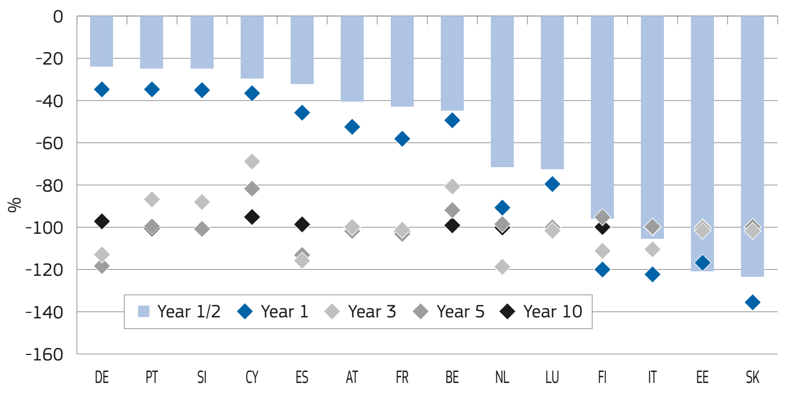
(5) See, for instance, Calvo (1983).

(6) As well as inflationary pressures on nominal unit labour cost via its impact on nominal wages and productivity — requiring the use of instrumental variables estimation techniques.

(7) Note that the analysis in this note is limited to the Member States of the euro area (for which the data are available). This section does not analyse the price level at the level of the euro area as a whole. At that level, the price level is aligned (in the long run) to developments in the supply of money and demand for real money balances.

(8) Using harmonised, seasonally and working-time adjusted, quarterly Eurostat data of the Member States for which the data are available, covering the 1995a1–2013q2 period, and applying instrumental variables estimation techniques.

Chart 27: Adjustment path of output prices after a permanent cut in nominal unit labour cost — total economy



Source: DG EMPL estimations using Eurostat data.

Notes: nominal unit labour cost is compensation per employee adjusted for productivity. No data available for IE and EL.

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Box 4: Income distribution and international trade

In classical economic models, such as the Heckscher-Ohlin model, causality runs from international trade to factor income distribution. In assessing the impact of income distribution on international trade, a distinction has to be made between a scale and composition effect (1).

The scale effect is related to differences in marginal propensity to spend income across the income quintiles (2). As income earners in the lower quintiles have a higher marginal propensity to spend income, a re-distribution of income from low- to high-income earners will reduce aggregate demand, including imports. Moreover, when low-income earners face liquidity (or credit) constraints, cuts in their disposable income strengthen the fall in aggregate demand, including imports. The composition effect refers to the allocation of a budget across different goods and services — whereby a distinction has to be made between necessities (3) and luxuries (4). A decrease in disposable income will decrease demand for luxuries and increase demand for necessities. Hence, when the home country and trading partners produce different types of goods, the change in income inequality will affect trade patterns.

The quantitative impact of these channels depends largely on the structural characteristics of the economies. It is beyond the scope of this chapter to investigate this in more detail, but Chart 28 provides some indicative evidence of strong differences in trade openness of the Member States of the euro area. As the Chart shows, for example, Greece has the lowest number of jobs (% of total business sector employment in the business sector) sustained by foreign final demand, while Ireland has the highest.

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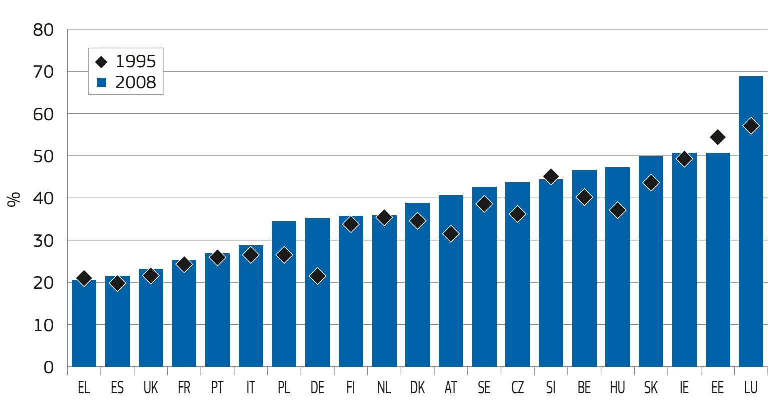
(1) Assuming separability of preferences, i.e. in a first stage it is decided how much to spend and how much to save, while in a second stage it is decided how the total spending will be allocated between the available goods and services. See, for instance, Deaton and Muellbauer (1986).

(2) See for instance Parker et al. (2013).

(3) Such as food and beverages which have a positive income elasticity below 1.

(4) Such as exotic travel which has an income elasticity above 1.

Chart 28: Jobs in the business sector sustained by foreign final demand (% of total business sector employment)



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Source: OECD.

In short, the responsiveness of output prices to changes in nominal unit labour cost (at the level of the economy as a whole) appears to occur very slowly. This is seen to be especially the case in Germany, Portugal and Slovenia, and to a lesser extent in Cyprus and Spain. Such lag between price and nominal wage adjustment implies that real wages (i.e. nominal wage adjusted for prices) and hence the labour income share will decrease, which may then trigger a further contraction in aggregate demand (60). Nevertheless, the pro-cyclical nature of wages is not observed across all euro area Member States — in Slovakia, Estonia, Italy and Finland, price adjustment overshoots on impact, but returns to equilibrium rather quickly.

Transmission of domestic cyclical effects across borders

The socioeconomic adjustments in the face of a temporary asymmetric shock described above (distributional effects, hysteresis and product market feedbacks) will not only affect economic activity in the domestic country, but also the economies of its trading partners through channels such as international trade, capital flows and migration.

Furthermore, as a temporary asymmetric (negative demand) shock may increase income inequality, this will in turn also affect international trade (since demand elasticities vary between types of goods (e.g. luxuries or necessities), as well as between income levels, while countries often specialise in different categories of goods and services; see Box 4). In addition, gains in national price and cost competitiveness also translate into losses in competitiveness of trading partners which can affect a significant share of employment (see Chart 28), inducing a decrease in their exports and an increase in their imports.

Apart from these demand side effects, several adverse hysteresis feedbacks on the supply side have to be considered as well, including the possibility of a permanent productivity loss. Indeed, when the rise in income inequality persists after a temporary shock has waned, the domestic country may experience a permanent loss of productivity — which, in turn, has a permanent adverse impact on its trading partners by limiting their opportunities to exploit comparative advantages in world markets.

Furthermore, while international capital flows have the potential to stabilise an economy, these flows can be reduced if, for example, borrowers cannot provide sufficient collateral as a consequence of a shock and rising inequality.

Finally, rising labour flows in the face of an economic downturn can affect domestic wages which tend to start to rebound earlier (while domestic demand can be boosted via remittances from migrant workers), while at the same time, the increased supply of labour in the receiving country tends to put downward pressure on wages. However,

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(60) Provided the marginal propensity to consume out of labour incomes is larger than the marginal propensity to spend out of capital income.

hysteresis effects (such as changes in family life and commitments) make it difficult for some temporary workers to return to their home country once the shock has waned. Hence, given that it is usually younger, more dynamic workers who move and become permanent residents (61), in the long run the productivity of the destination country would be expected to increase (relative to the home country), thereby hindering the process of convergence within the currency union.

3.2.3. Convergence also requires strengthened socioeconomic stability

Strengthening the capacity to stabilise national economies and implement appropriately designed structural reforms is a necessary requirement to ensure stronger employment and social resilience, and upward socioeconomic convergence, across the EU. In the EMU context, that central stabilisation capacity is currently weak: this serves as an argument for a reinforcement of the euro area fiscal stabilisation capacity. Furthermore, structural reforms could be incentivised by a discretionary fiscal capacity at the euro area level (which could, for instance, take the form of strengthened investment in cohesion funds).

Stabilisation is not only required in order to avoid labour market hysteresis effects, such as skill erosion following persistent unemployment spells (that may reduce long-term growth potential), but also because an economic downturn almost inevitably has social consequences since it tends to have its hardest impact on the most vulnerable groups (such as low skilled workers) with adverse impacts on social cohesion in the long run (62).

The previous analysis has suggested that, in the face of nominal and real rigidities, macro-economic shocks may have a strong adverse impact on employment and social cohesion if adjustment is left solely to market mechanisms, with potentially adverse hysteresis and cross-border effects. Structural employment and social reforms (combined with other types of structural reforms) are key to strengthening countries' capacity to absorb shocks (especially lasting shocks) and limiting adverse socio-economic outcomes and cross-border effects. Moreover, well-designed insurance mechanisms (such as automatic fiscal stabilisers) have the potential to make a significant contribution in terms of absorbing temporary asymmetric shocks, notably since the capacity may not always be available at the national level (especially when the countries concerned have limited access to financial markets).

In these respects, it can be argued that the effectiveness and sustainability of adjustment mechanisms in E(M)U depends on the nature of the shock. In the case of a temporary demand shock, automatic fiscal stabilisers (including unemployment benefits) can dampen the fluctuations (around predetermined trends) of economic activity (including real GDP). In case of a permanent supply shock, the growth trend itself will be affected rendering automatic fiscal stabilisers unsustainable in the long run. In this case, relative prices have to adjust or structural reforms have to be implemented in order to strengthen employment and labour productivity. However, adjustment to the new equilibrium is unlikely to occur immediately and nominal rigidities will impose an additional adjustment burden, including on the labour market. When this also generates labour market hysteresis effects, additional actions may be needed to smooth the adjustment process (see, DeLong and Summers (2012), Pissarides (2014)).

3.3. The contribution of employment and social policies to convergence in the EU

To what extent can reforms in labour market and social institutions at national and European level contribute to a strengthening of upward convergent growth across the EU and better stabilisation of the European economy?

In recent years, there have been strong calls for such reforms and the previous section argued that in a currency union, when adjustment is left to market mechanisms, the adverse socioeconomic impact of temporary asymmetric shocks are likely to be intensified (such as distributional and hysteresis effects) — risking lasting adverse effects on long-term growth.

In that context, reforms at both the national and EU levels could contribute to strengthening growth and convergence (see, for instance, Coeuré (2014) and Sapir and Wolff (2014)). In this respect, this section focuses specifically on employment and social policies and discusses their contribution at the national and the EU level to strengthening long-term growth and better stabilising national economies.

3.3.1. Strengthening the contribution of national systems

At the national level, labour market and social protection reforms can strengthen the resilience of Member States and reduce the risk of shocks causing divergence, by a stronger contribution to growth and to stabilisation in the face of a temporary shock.

Employment-friendly social policies and better prevention of scarring effects

The design of national systems is essential to support employment and productivity growth. In particular, national employment and social protection systems should provide adequate protection against social risks as well as support to find a job, thus preventing long-lasting impacts of exclusion from the labour market and the long-term costs of shocks. They also support employment growth, notably by providing support to human capital formation, and ensuring the right incentives to work and hire.

Adequate protection against social risks includes protection for not only the active (through unemployment, disability, housing and exclusion benefits) and inactive population (through pensions and family services), but also the whole population through health benefits and services. In line with the Active Inclusion Strategy (63), adequate and minimum income support measures should be considered, when necessary. Beyond their direct socioeconomic impact, if well designed, such services and benefits constitute an investment (see Chapter 1) and contribute to the prevention of scarring effects. Employment and social protection

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(61) See, for instance, OECD (2014).

(62) Although it would have been beyond the scope of this chapter to focus also on price stability, financial stability and fiscal stability, possible interactions with labour markets have been briefly mentioned.

(63) Commission Recommendation of 3 October 2008 on the active inclusion of people excluded from the labour market (notified under document number C(2008) 5737), OJ L 307, 18.11.2008, pp. 11–14.

systems also need to adapt to long and short-term changes in labour markets, including more frequent unemployment spells, as well as increased segmentation (see Chapter 1).

Furthermore, employment and social protection systems support the preservation and accumulation of human capital, leading to higher employment and productivity growth. They contribute to a life-cycle approach of building and preserving human capital, with impacts on education systems, childcare services and post-education systems, notably vocational training and active labour market policies (see Chapter 2).

Employment and social protection systems should also provide the right incentives to work and hire. Attention needs to be given to inactivity traps, including linked to pensions, disability or early retirement schemes (see Chapter 1). The financing of employment and social protection systems can also be made more favourable to employment and growth, notably by broadening the financing base from wages towards other financing basis, as well as introducing some social contribution exemptions for certain categories of workers (notably the lower waged, as the employment elasticity to labour costs is higher). While some positive impact on employment can be expected when these measures are well designed, they can have distributive impacts which need to be monitored (see Chapter 1).

Employment and social protection systems play a key role in stabilising aggregate demand. Unemployment benefits are particularly important and their stabilisation potential can be strengthened provided they can be made more responsive to cyclical developments (see Blanchard et al. 2010 and below, such as for instance unemployment benefit duration). Other aspects need to be considered, including short-time compensation systems and smoothing the price indexation of benefits, such as pensions, which are not directly linked to the active population.

Towards more efficient stabilisation at national level through better welfare systems

In recent years, the contribution to the stabilisation of households' income through social protection expenditure was significant in 2009, but declined from mid-2010, reversed in 2012 and was negligible in 2013. (64) Actually, as indexation of social benefits is generally based upon the previous year's inflation, this leads to an increase in real terms of benefits in periods of declining inflation (such as periods of low growth), amplifying the stabilisation impact, with potentially sizeable budgetary impacts.

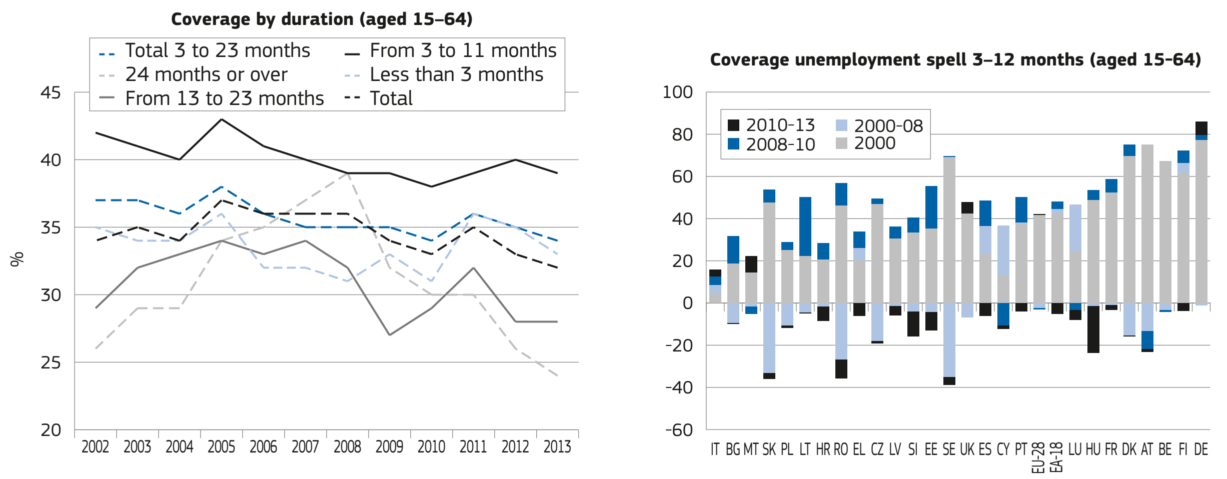
While this is understandable for the indexation of benefits that aim at replacing labour market incomes, it is unclear that it is the most efficient in terms of stabilisation for benefits which are less directly related to the labour market such as (taken up) pensions or to a lesser extent family benefits. For these benefits, indexation rules could be smoothed over the cycle, enabling to strengthen automatic stabilisers more directly linked to labour market developments (see also Chapter 1).

Unemployment insurance could be more sensitive to the business cycle …

The ability of unemployment insurance schemes to stabilise an economy depends largely on their design, notably in terms of eligibility conditions and duration. The coverage of unemployment spells of less than one year is particularly relevant and there were signs of weakening of coverage for periods of between 3 and 12 months in the crisis (Chart 30a), with declines in a number of Member States since 2010 (see Chart 30b, notably in Greece or Spain). Beyond 12 months, coverage has eroded in 2009 and then stabilised, but went on declining for the very long-term unemployment (more than 24 months).

Making unemployment benefits more sensitive to the business cycle could for

Chart 29: Trends in unemployment coverage by duration in Europe (2000–13)



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Source: Eurostat, LFS, calculations DG EMPL.

Note: This measure of coverage of unemployment benefits does not reflect coverage by other types of benefits. Missing data for some: BG (2006–13), IE and HR (2004–13), LU (2002–13), MT (2005–13), NL and AT (2012), UK (2009–10). Breaks in series for: EE, PL and FI in 2000, BE, BG, ES, HU, PL and SE in 2001, LV, LT and RO in 2003, BG, FR, HR, LU, PL, RO and SK in 2004, all countries except SE in 2005, DE, ES, FR and HR in 2006, LV, LT, LU, FI and UK in 2007, BE, PL, FI and UK in 2008, EL, CY, LT and HU in 2009, PL in 2010, BE, BG, CZ, DE, PT and SK in 2011, DE in 2012, FR and AT in 2013.

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(64) See European Commission (2014a) and European Employment and Social situation report, March 2014.

instance take the form of temporarily raising the duration (or coverage) of unemployment benefits (65). Nevertheless, due regard needs to be paid to possible adverse feedbacks such as the impact on workers' behaviour with regard to job-search intensity and the readiness to accept job offers.

… and complemented by other instruments, such as short-time work compensation arrangements

Well-designed short-time working arrangements can alleviate some negative employment and social outcomes during economic downturns. Such schemes, which are often the result of negotiations between employers and trade unions (66), include temporary reductions in working time, while maintaining the existing contractual employer–employee relationship. This allows firms to avoid the costs of recruiting and training new workers (67) when demand recovers, and to distribute the adjustment more equitably across workers. However, such schemes are not without risks including possible deadweight costs and delays in unavoidable restructuring that might prevent more productive firms from expanding (see, for instance, Cahuc 2014). Furthermore, alternatives may exist, such as working time accounts (see, for instance, Burda and Hunt (2011) and Möller (2010)).

3.3.2. Strengthening the contribution of EU employment and social policies to long-term growth

National efforts to support employment and productivity growth could be complemented by EU employment and social policies, with three areas seen as particularly important: support for human capital formation, typically through structural funds; and the introduction of EU common labour market and social benchmarks.

Furthermore, the Blueprint mentioned Convergence and Competitiveness Instruments (or CCIs) as steps to be considered in an initial phase of strengthening the EMU, which include contractual arrangements or solidarity mechanisms and financial support for the implementation of reforms. While discussions concerning such mechanisms are expected to further progress in the near future (68), it can be noted that possible associated provisions as regards labour market institutions and social protection systems could be supportive to long-term growth and convergence, though they are not likely to strengthen short-term economic stabilisation.

Fostering investments in human capital through European funds

Proposals to increase the use of European funds to foster upwards convergence trends are rooted in early debates on the design of the EMU (see section 2.1). It remains however difficult to measure the contribution of structural and cohesion funds on convergence patterns in Europe (see e.g. Marzinotto, 2012) (69).

The new legislative framework of the European Structural and Investment (ESI) Funds adopted in 2013 (including the ESF) puts a greater emphasis on ensuring that funding priorities better reflect the investment needs of human capital development and employment, social and public administration reform — notably through the introduction of a minimum ESF share (23.1 % of cohesion policy resources). New provisions also provide for more effective and results-oriented use of the funds, such as making investments conditional on the fulfilment of ex-ante requirements. Furthermore, for the 2014–20 period, the Common Agricultural Policy provides for a policy framework, complementary to other EU policies, aiming at the maintenance of existing jobs, the reduction of seasonality fluctuations in employment and promotion of employment and growth in rural areas (70).

Looking forward, the above analysis suggests that in order to foster long-term growth, in particular in the regions most affected by adverse long-lasting developments, funds could further reinforce the focus on structural challenges, notably human capital formation. In this context several types of measures have been mentioned such as activation and training programmes or strengthening the administration of employment services, as well as training services and social benefits (see, for instance, Schmid 2014).

Common benchmarks supportive of inclusive growth

The literature on EU common benchmarks or standards covers provisions that can contribute to more mobility and adaptability in the labour markets (such as Public Employment Services and active labour market policies or employment protection legislation) as well as to reducing scarring effects and avoiding social dumping (in fields such as wages, unemployment benefits and minimum incomes). Such EU-level common benchmarks or standards are generally seen to be common rules or principles which complement the EU's substantial experience in sharing good practice examples and encourage Member States to take them up.

Common benchmarks or standards have been proposed in the past, such as in a 1992 European Council recommendation (71) on common criteria concerning sufficient resources and social assistance in social protection systems (72). More recently, this approach has been taken in the Youth Guarantee, with guidelines given to reach the desired outcomes for young people within four months and a related standard (ensure that No one stays 'NEET' for more than four months).

Looking forward, the above analysis suggests that common benchmarks can increase the effectiveness of national employment and social protection systems in reducing the lasting impacts of economic downturns. Several different types of proposals have been developed. The Youth Guarantee could be extended, as proposed by the incoming Commission President Juncker (73), while others have proposed

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(65) See, for instance, European Commission (2013a), Chapter 3, and Andersen (2014).

(66) See European Commission, Industrial Relations in Europe 2010, Chapter 3.

(67) See for instance, Balleer et al. (2014).

(68) The December 2013 Council Conclusions http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/140245.pdf announced further work on the options for a 'solidarity mechanism' or a CCI.

(69) While macroeconomic estimates generally provide positive assessments as a result of sizeable productivity improvements, econometric assessments tend to be somewhat inconclusive. Nevertheless, the impact on GDP and employment appears more pronounced for Member States which are the main recipients of support, while the effect of funds continues to build up years after the programmes have ended (see e.g. European Commission, 2014b).

(70) Mutually reinforcing support measures, such as investments in local services and infrastructure to improve the quality of life and improve connectivity, training and knowledge transfer actions, research and innovation can effectively contribute to tackling the structural challenges in rural areas with long-term social benefits.

(71) 92/441/EEC.

(72) See, for instance, Frazer and Marlier (2009).

(73) See Juncker (2014).

to cover unemployment benefit and minimum income provisions. These could contribute to ensuring the provision of adequate income support during unemployment, backed by effective activation support, for instance through high levels of coverage of benefits (for instance, through minimum duration of unemployment benefits, levels of potential coverage of the employed population (74) and of access to active labour market policies). Other proposals have also been made in support of minimum income guarantees based on minimum levels of resources (possibly including incomes and assets), notably for child benefits (75), as well as for pensions, all of which could also strengthen mobility and may also translate into transfers that could partially offset the potentially negative impacts of increased mobility on the sustainability of welfare systems.

A debate has also developed on the merits of common standards for minimum wages, typically expressed as a fraction of the median national wage (76), based on the argument that well calibrated common standards of minimum wages would support the labour market income of the lowest paid workers, without entailing negative effects on unemployment (77). It is argued that common minimum wage standards in the EMU (or EU) would help anchor national wage-setting systems and avoid countries being tempted to compete on low-paid, low-quality, low-productivity jobs, and risk social dumping, while they could also contribute to stronger stabilisation and possibly to some rebalancing of internal demand in countries where it is relatively weak.

These different types of benchmarks or standards, could contribute to 'a gradual and monitored process of structural convergence, ensuring all countries are well equipped to reap the full economic gain from their participation in the EMU' (Von Rompuy, 2014), notably through promoting more adaptability in the labour markets, reducing scarring effects and avoiding social dumping.

3.3.3. Strengthening the contribution of EU employment and social policies to short-term stabilisation

The above analysis underlines that labour mobility remains low in Europe, notably in the euro area (see Section 2.1), and that a euro-area fiscal capacity would have the potential to smooth the adjustment path and mitigate adverse hysteresis effects following an asymmetric temporary shock (see Section 2.2).

The *Blueprint for a Deep and Genuine Economic and Monetary Union* (78) underlined that the creation of an EMU-wide fiscal capacity should be considered as a long-term step to improve the stabilisation of EMU economies, in particular in the case of asymmetric (temporary) shocks, as well as the need to proceed in parallel with a process of political integration.

Supporting labour mobility

Geographical labour mobility can bring substantial benefits to workers, as well as destination and origin countries, so long as potential negative side effects such as brain drain or the impact on the sustainability of public finances are monitored and addressed. The main driver of mobility between EU Member States is seen to be work opportunities (79), which helps in explaining why mobility between euro area Member States has been limited (80), while in contrast, the current significant differences in unemployment rates may increasingly act as a push factor (81) (82).

Despite long-standing EU-wide policy actions, obstacles such as administrative, language and housing issues can still remain, while some obstacles addressed by EU policies on employment and social protection, such as improving job matching capacity across borders, coordination of social security schemes and mutual recognition of qualifications , can persist.

Looking forward, remaining obstacles to mobility and better mobility for EU citizens could be reduced, notably as regards the remaining barriers beyond language skills and housing regulations (83), such as for instance in the area of social security coordination, but also as regards the improvement in matching cross-border employment policies, for example, improving the recognition of qualifications and implementing and enforcement EU laws in the fight against undeclared work.

Unemployment and fiscal capacity

Three forms of fiscal capacity linked to unemployment and providing additional short term stabilisation are most commonly discussed in academic circles (see Box 5) (84):

- transfer systems (leading to budgetary flows in case of specific predetermined circumstances);
- reinsurance systems (that provide national unemployment systems some reinsurance of their cyclical deficits);
- EMU-wide unemployment benefit systems (that partially pool fiscal risks of short-term unemployment changes).

To help plug the many gaps in the analysis of such supranational schemes (see Box 5), the European Commission has commissioned a study on the feasibility and added value of a European unemployment benefit scheme, following a

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(74) See, for instance, ILO (2014), notably Annexes II and III.

(75) See, for instance Atkinson (2013), and Levy et al. (2013).

(76) See, for instance, the May 2013 French–German contribution for a stronger Europe of stability and Growth FR and DE and the interview of J.C. Juncker and M. Schultz on May 7th 2014 to *El Pais, La Stampa, Le Monde, Süddeutsche Zeitung* and *The Guardian*.

(77) See, for instance, Brischoux et al. (2014).

(78) See European Commission (2012b) and the mission letter of V. Dombroskis notably mentioning the pursuit of the '*work of the "Four Presidents' report" and the Commission Blueprint for a Deep and Genuine Economic and Monetary Union, integrating the social dimension*'.

(79) Family reasons and the wish to study abroad also play a role, Eurostat (LFS, 2008 ad-hoc module).

(80) European Commission, ESDE 2013, Chapter 5, Box 3, p. 284.

(81) European Policy Centre, Making progress towards the completion of the single European labour market, Issue paper No 75, May 2013.

(82) While differences in welfare systems or regimes (i.e. restrictions during the transitional arrangements phase) appear to have limited influence on the direction and distribution of flows. See notably OECD (2012b).

(83) As regards the simplification of housing regulations, see OECD (2012, 2014b).

(84) See, for instance, Bertelsmann Stiftung (2014) and Conference, *Economic shock absorbers for the Eurozone. Deepening the debate on automatic stabilizers* (2014). http://www.bertelsmann-stiftung.de/cps/rde/xchg/SID-B776DEF6-96A5BBCD/bst_engl/hs.xsl/nachrichten_121747.htm

Box 5: Three types of fiscal capacity strengthening short-term stabilisation

Transfer mechanisms

A transfer mechanism consists in net transfers to national budgets under specific circumstances, based on a trigger that identifies when a country is entitled to access resources from the supranational fund. Payments can be set at non-frequently ('high') or frequently reached ('low') trigger values. In the first case, the fund can be seen as a 'stormy day' fund, while the second is a 'rainy day' fund.

In such a mechanism, the choice of a trigger mechanism and its implementation is particularly important. The output gap of an economy (i.e. the difference between actual and potential GDP), is theoretically the best approximation of its cyclical position and is therefore often considered as a trigger. However, it is difficult to measure and can only be definitively established a few years later (1). Using an output-gap based trigger can thus lead to inappropriate triggering due to revisions. Available estimates indicate that using real-time estimates would significantly reduce (nearly halve) the stabilising impact, compared to actual estimates available ex-post after revisions (2). Directly observable indicators, such as the unemployment rate, are not prone to significant revisions.

Furthermore, there may be significant delays in implementation, which can result in lower stabilisation impact (3). The stabilisation impact of transfer mechanisms is also most likely to be effective in so far as the corresponding funds have a strong stabilisation impact, such as unemployment benefits (which support a population with a high propensity to consume income).

Reinsurance mechanisms

In reinsurance mechanisms, Member States pay a contribution into a supranational unemployment reinsurance scheme ('fund'), which pays out to the Member State's unemployment system in cases of shocks. Setting a trigger raises the same type of concerns as with transfer mechanisms.

As the payouts are earmarked for national UBS, a strong stabilisation impact is generally expected. As almost by definition, reinsurance comes with experience rating and as long as contributions and payouts can be balanced over time, there may not be a need to have a claw-back mechanism or to issue debt. However, the estimation of the levels of contributions needed is a serious challenge for 'stormy day' funds, since it is particularly difficult to foresee significant shocks.

Beblavý et al. (2014) present simulations of a reinsurance system for the EU as a whole with payments triggered by deviations in the short-term unemployment rate from its 10-year average. National contributions depend on the scheme's overall holdings and the Member State's balance within the scheme. Simulations over the period 2000–12 show that, on the basis of a small average contribution, the system would have provided a large degree of shock absorption (assuming a fiscal multiplier of 1.5 for unemployment benefits).

European unemployment insurance mechanisms

European unemployment insurance mechanisms operate permanently and partially pool fiscal risks of short-term unemployment changes, through a mechanism which can also be of a reinsurance type (a 'rainy day' fund working for all types of shocks), potentially requiring only small changes to national systems. Such schemes could also contribute to better labour mobility.

It is generally assumed that such a supranational scheme would remain complementary to national schemes (which could keep extending beyond the common provision according to national preferences) and focus exclusively on short-term unemployment (leaving the task of tackling long-term unemployment to national policies). In practice, however, it is not straightforward to determine a 'common core' of national unemployment benefit systems given the large differences between EU Member States (4) and there is a wide range of options from basic conditions generally reached by national systems, to more stringent conditions. This type of mechanism does not rely on a trigger (since its operation reflects changes in the number of unemployed eligible), minimising implementation delays and thus maximising the stabilisation impact. Earmarking for unemployment benefits is generally assumed to translate into a strong stabilisation effect. Implementation risks include moral hazard linked to the possible changes of Member States' activation efforts or a loosening of the supervision of eligibility conditions (5). The introduction of an EMU-level scheme may be accompanied by minimum requirements in national activation efforts, while further mechanisms to minimise moral hazard and avoid lasting transfers include experience rating and claw-back mechanisms (6).

Most available studies assume a borrowing facility and provide estimates of substantial stabilisation for a reasonably sized system (see, for example, Dullien 2013), while simulations of claw-back mechanisms (such as Dullien 2014) suggest that the risk of lasting transfers could be limited to the cost of only a limited loss of stabilisation. Studies based on micro-simulation (7) also find a significant level of stabilisation, while it is likely that experience ratings and/or claw-back mechanisms would be needed to avoid some lasting net transfers. More analysis is however needed since there remain uncertainties notably on the number of eligible persons due to relatively scarce EMU-wide disaggregated information on employment histories.

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(1) See, for example, Kempkes (2012).

(2) See, for instance, Enderlein et al. (2013) and Carnot et al. (2014).

(3) Such delays can typically arise from the time needed to observe the trigger and the time needed to authorise the trigger mechanism to operate.

(4) Though in general, differences between euro-area Member States are smaller (see Esser et al. (2013)).

(5) See for instance Vandenbroucke and Luigjes (2014).

(6) As well as the variety in the way unemployment benefits are considered for the eligibility and calculation of other benefits. Such mechanisms also deal with the issue of the variety of the taxation treatments of benefits, since these are then reflected in the levels of national contributions.

(7) See Dolls et al. (2014) and Jara and Sutherland (2014).

Box 6: The American unemployment benefit system mixes different features

The unemployment system in the United States combines a first layer of common unemployment benefit system type with very loose harmonisation criteria, a second layer of reinsurance type for big shocks, and a discretionary supplementary scheme. While the common unemployment benefit system is automatically activated by unemployment, this is not the case for the other two programmes.

1) The regular Unemployment Compensation (UC) programme. It is a partnership between the federal government and the States. In general, it provides unemployment benefits to workers who are unemployed 'through No fault of their own', and meet other eligibility requirements of State law. In most States, workers are eligible for a maximum of 26 weeks. Each State administers its own programme within guidelines established by federal law and has, within certain bounds, discretion in terms of eligibility, benefit amounts and benefit duration.

2) The Emergency Unemployment Compensation (EUC) programme, which is an example of Temporal Federal Benefits (TFB). These are paid under conditions set by emergency federal legislation in the case of a recession (see also Vroman 2010).

3) The Extended Benefits (EB) scheme, which was put in place in 1970 and extends the duration of benefits in periods of economic difficulties. This programme is permanent, but benefits can only be paid if a trigger related to the unemployment rate is 'on' in a given State. In these States, only the unemployed who have exhausted their (regular) UC and EUC benefits can receive these EB.

In the regular unemployment compensation, States have an individual State account at the federal unemployment trust fund. States are supposed to levy taxes on (mainly) employers to build up balances in their account during periods of healthy economic growth, and then draw down those balances to provide UB during downturns. States can draw on their accounts so much as to go into deficit. However, States are required to fully repay the loans, with interest, within two years of borrowing the funds. If a state does not repay the full amount, the federal government will recoup its funds by raising the federal payroll tax rate for the State each year until the loan is repaid. This increase is automatically triggered. This mechanism helps avoid permanent transfers for individual States for the regular (UC) benefits.

Pilot Project launched by the European Parliament (85).

Key design issues in such systems include the choice of indicator that can serve to link to national unemployment systems, and the mechanisms to guard against moral hazard or lasting transfers. Such mechanisms to avoid lasting net transfers can be conceived ex-ante ('experience rating') or ex-post ('claw-back') and could be applied separately or jointly. The ex-ante form is called 'experience rating' and consists in using contribution rates to the supranational fund which vary by Member State. The differentiation can be made in function of the recent history in terms of payments made by the supranational fund to the Member State (or another variable). Rates are automatically updated at a regular interval. The ex-post form is called 'claw-back' and the Member State's contribution rate to the supranational fund is adjusted in function of the national balance (of contributions and pay-outs) with the supranational fund, with a rule for automatic updating over time.

Such systems can be conceived to stabilise both geographically (e.g. across Member States) and over time, thereby allowing for the accumulation of reserves and temporary deficits, which could substantially increase their stabilising impact. Furthermore, a fiscal capacity of either form could be linked to some minimum requirements on labour market or social systems by, for instance, linking it to a commitment to undertake structural reforms and/or other activation policies.

Furthermore, it can be noted that the current United States unemployment system actually mixes these different features (see Box 6), with estimates of the stabilisation provided during a recession ranging between 15 % and 30 % of the initial drop in GDP (see Chimerine et al. (1999) as well as Vroman (2010)) (86).

4. CONCLUSION

Addressing socioeconomic divergences in Europe requires …

The convergence in terms of economic and social performance that had been under way across the EU over the past two decades came to a halt with the crisis, and reversed strongly in the case of employment and unemployment rates. This particularly reflected the adverse impact of the crisis on Southern and peripheral EU-15 Member States, while convergence did continue for most of the Member States that joined the EU in 2004 or later.

These developments reflected both the exceptional size of the crisis but also the underlying structural imbalances that had become apparent in some Member States in the run-up to the crisis (such as weak productivity growth and divergent nominal unit labour cost

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(85) See Call for Tenders VT/2014/045, http://ec.europa.eu/social/main.jsp?catId=624&langId=en&callId=414&furtherCalls=yes)

(86) See for instance European Commission (2013c).

growth) as well as the absence of a fiscal capacity at EMU level that would help to stabilise national economies in the face of asymmetric temporary shocks.

In that respect it has become clear that the further integration of the national economies that is going to occur in the future is likely to strengthen cross-border economic relationships between EU Member States, which, while improving their overall productivity performance through specialisation and competition, will, for countries in the euro area, limit their capacity to stabilise their national economy and promote sustainable growth in the face of asymmetric shocks.

In this context, the ongoing debate continues regarding the most appropriate ways to complement the ambitious reforms already undertaken with further reforms aiming to create a euro area banking union, deepening the fiscal and economic union, strengthening its social dimension, and creating a genuine political union (see, for instance, European Commission 2012).

In this process it has become increasingly clear that there is a need to look beyond the traditional macro-economic adjustment channels and consider changes in socioeconomic factors and cross-border effects (both stemming from labour markets) that may influence the depth and persistence of an economic downturn, as well as the adjustment capacity of any given economy. The analysis suggests in particular that in a monetary union, in the face of nominal and real rigidities, macro-economic shocks may have a strong adverse impact on employment and social cohesion if adjustment is left solely to market mechanisms, with potentially adverse hysteresis and cross-border effects.

... a strengthening of national reforms and of the socioeconomic dimension of European cooperation

Actions at both the national and European level can foster stronger upward socioeconomic convergence in the EU.

In particular, reforms in national-level employment and social protection systems can make them more responsive to the economic cycle and thereby contribute to the stabilisation of aggregate demand in the face of a temporary shock, while strengthening convergence and mitigating adverse labour market hysteresis effects. There is also still much room to improve employment and productivity growth, notably by supporting human capital development and providing the right incentives for employment growth.

At the European level, a range of specific proposals are being discussed in the public domain in order to speed up and strengthen the return to a path of long-term convergence, notably including: strengthening mobility; investing in human capital; and introducing more common benchmarks. In a long-term perspective, a well-designed fiscal capacity at the level of the EMU could be particularly effective, especially when combined with other wide-ranging structural reforms.

The incoming European Commission President Juncker announced his intention to promote initiatives to deepen the EMU, including proposals to encourage further structural reforms, if necessary through additional financial incentives and targeted fiscal capacity at the euro-area level (87). For the longer term, to restore convergence, the Blueprint for a Deep and Genuine Economic and Monetary Union (88) considered the creation of an EMU-wide fiscal capacity with an unemployment based system as an option.

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(87) See Juncker (2014).

(88) See European Commission (2012b) and the mission letter of V. Dombroskis notably mentioning the pursuit of the '*work of the "Four Presidents' report" and the Commission Blueprint for a Deep and Genuine Economic and Monetary Union, integrating the social dimension*'.

ANNEX 1: PRICE DYNAMICS IN THE EURO AREA

This Annex examines empirically the pass-through of changes in nominal compensation per employee (adjusted for labour productivity) to output prices in the euro area. First, the transmission mechanisms will be specified, next the data will be discussed followed by a brief presentation of the empirical results.

Specification

A composite good is produced of which the equilibrium price is determined by the marginal production cost, PMC. However, prices adjust only slowly due to menu costs, administered prices, or backward-looking 'rule of thumb' price setting behaviour. Moreover, calculating the marginal cost and adjusting prices involves a cost that may exceed the potential gain. As a consequence, prices are adjusted for only x percent of the composite good. In that case the price at moment t is set as

$$\log(Pt) = (1-x)\log(Pt-1) + x \log(PRt) \tag{A.1}$$

with

Pt: the price at t

PRt: the new price of the part that undergoes a price change

x: the share of the composite good that undergoes a price change.

with $0\leq x \leq 1$ and log(.) the natural logarithm operator.

However, not all information is available to calculate the marginal production cost. As a consequence, part of the prices that are revised are set following a 'rule of thumb' rule while the other part is set based on marginal costs, i.e.

$$\log(PRt) = y \log(PMCt) + (1-y) \log(PBt) \tag{A.2}$$

with

PRt: the new price of the part that undergoes a price change

PMCt: the marginal cost

PBt: the 'rule of thumb' price

y: the share of the revised prices set along marginal cost calculation

with

$0 \leq y \leq 1$

The 'rule of thumb' for price changes is driven by an extrapolation of past inflation developments and adjustment to differences between prices and marginal costs in the previous year (that are known at moment t), i.e.

$$\log(PBt/PBt-1) = z1 \log(Pt-1/Pt-2) + z2 \log(PMCt-1 / Pt-1) \tag{A.3}$$

Taking finite differences of equations (A.1) and (A.2) yields

$$\log(Pt/Pt-1) = (1-x)\log(Pt-1/Pt-2) + x \log(PRt/PRt-1) \tag{A.4}$$

$$\log(PRt/PRt-1) = y \log(PMCt/PMCt-1) + (1-y) \log(PBt/PBt-1) \tag{A.5}$$

Inserting (A.3) into (A.5) yields

$$\log(PRt/PRt-1) = y \log(PMCt/PMCt-1) + (1-y) [z1\log(Pt-1/Pt-2)+ z2 \log(PMCt-1 / Pt-1)] \tag{A.6}$$

Inserting (A.6) into (A.4) yields

$$\log(Pt/Pt-1)= (1-x+x\, z1 - x\, y\, z1) \log(Pt-1/Pt-2) + x\, y \log(PMCt/PMCt-1) + x\, (1-y)\, z2 \log(PMCt-1/Pt-1) \tag{A.7}$$

or on collecting terms

$$\log(Pt/Pt-1)= (1-x+x\, z1 - x\, y\, z1) \log(Pt-1/Pt-2) + x\, y \log(PMCt/PMCt-1) + x\, (1-y)\, z2 \log(PMCt-1/Pt-1) \tag*{(A.7)}$$

Finally, the production cost function (assuming a homothetic production function) read as

$$\log(PMCt) = g1 \log(Wt /PROD\_Lt) + g2 \log(PXt/PROD\_Xt) \tag{A.8}$$

with

W: nominal compensation per employee

PROD_L: labour productivity

PX: price of other production factors

PROD_X: productivity of other production factors.

Inserting equation (A.8) into (A.7) and adding a term MU to capture a price mark-up, yields an equation that can be estimated as

$$\log(Pt/Pt-1) = a \log(Pt-1/Pt-2) + b \log(NULCt/NULCt-1) + e \log[(PXt/PROD\_Xt)/[(PXt-1/PROD\_Xt-1)] + f \log(PMCt-1 / Pt-1) + g\, MUt + constant \quad (A.9)$$

with

$a = (1-x+x\, z1 - x\, y\, z1)$

$b = x\, y\, g1$

$e = x\, y\, g2$

$f = x\, (1-y)\, z2$

Towards empirical application

The empirical analysis is based on harmonised, seasonally-adjusted and working-time adjusted, quarterly Eurostat data. The business cycle effect is measured by fluctuations in national gross domestic product (89). Prices as well as gross value added are net of indirect taxes and subsidies. The sample size runs from 1995q1 until 2013q2. Quarterly changes are measured compared to the same quarter in the previous year. Due to limited availability of quarterly data, the price of oil is the only other factor cost that has been taken into account in the regression. Equation (A.9) has been estimated using the Engle-Granger Two-Step estimation procedure. First, the error correction term ERT (=log(PMCt-1 / Pt-1)) is estimated. Next, the error correction mechanism (as specified in equation A.9) is estimated for each of the Member States of the euro area for which quarterly data are available (i.e. all Member States excluding Ireland, Greece and Malta). Implicitly the constant term in the regression covers variables that can drive a (permanent) discrepancy between prices and nominal unit labour cost, but for which No quarterly data are available.

Point estimates

Instrumental variables estimation techniques have been used to avoid potential simultaneity biases. Estimation results are shown in Table 1. Point estimates in bold with t-values below. All significant point estimates have the expected sign.

Table A.1: Estimation results — total economy

	Lagged inflation	Nominal unit labour cost	Output	ERT	Price of oil	Constant	Euro dummy		R-squared	Durbin-Watson
BE	**0.28**	**0.15**	**0.28**	**-0.24**	**0.00**	**0.01**			**0.56**	**1.50**
	1.87	2.93	3.56	-3.21	-0.53	3.38				
DE	**0.79**	**0.04**	**0.02**	**-0.14**	**0.00**	**0.00**			**0.72**	**1.83**
	9.87	1.02	0.52	-2.33	-1.31	2.23				
EE	**-0.18**	**0.69**	**0.31**	**-0.63**	**0.01**	**0.00**	**0.00**		**0.92**	**1.98**
	-2.18	13.4	10.46	-8.11	2.04	1.65	1.15			
ES	**0.75**	**0.10**	**0.11**	**-0.13**	**0.00**	**0.00**			**0.88**	**2.09**
	6.06	1.15	1.5	-1.31	0.41	0.84				
FR	**0.68**	**0.29**	**0.21**	**-0.03**	**0.00**	**0.00**			**0.84**	**1.26**
	7.43	2.91	3.63	-0.3	-1.12	-1.3				
IT	**0.40**	**0.47**	**0.15**	**-0.41**	**-0.01**	**0.00**			**0.77**	**1.42**
	4.45	7.03	2.98	-2.93	-1.47	0.68				
CY	**0.52**	**0.13**	**0.17**	**-0.10**	**0.01**	**0.00**	**0.01**		**0.72**	**1.76**
	2.76	3.58	1.63	-1.7	2.18	0.59	1.7			
LU	**0.28**	**0.07**	**0.22**	**-0.56**	**0.03**	**0.01**			**0.41**	**1.62**
	2.29	0.29	0.86	-3.98	1.84	0.98				
NL	**0.57**	**0.26**	**0.21**	**-0.29**	**0.01**	**0.00**			**0.81**	**1.66**
	4.88	2.48	2.7	-3.37	1.18	-0.17				
AT	**0.61**	**0.15**	**0.13**	**-0.16**	**0.00**	**0.00**			**0.72**	**1.10**
	6.69	4.2	3.69	-4.29	0.62	1.59				
PT	**0.73**	**0.10**	**0.05**	**-0.08**	**0.00**	**0.00**			**0.90**	**1.34**
	7.26	2.19	0.73	-0.94	-1.11	1.82				
SI	**0.75**	**0.11**	**0.17**	**-0.07**	**-0.01**	**0.00**	**0.00**		**0.93**	**1.56**
	8.47	1.61	4.00	-1.10	-2.56	-0.12	0.76			
SK	**0.27**	**0.49**	**0.35**	**-0.60**	**0.00**	**-0.01**	**-0.01**		**0.61**	**1.65**
	2.27	3.71	2.12	-4.39	0.06	-0.43	-0.47			
FI	**0.54**	**0.34**	**0.20**	**-0.41**	**0.00**	**0.00**			**0.76**	**1.96**
	6.42	4.99	3.52	-3.9	0.06	-1.89				

Source: DG EMPL estimates using Eurostat data; sample 1995Q1–2013Q2.

Note: Point estimates in bold, t-values below.

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(89) A better measure would have been the output gap. However, as quarterly data are used, such data are not readily available.

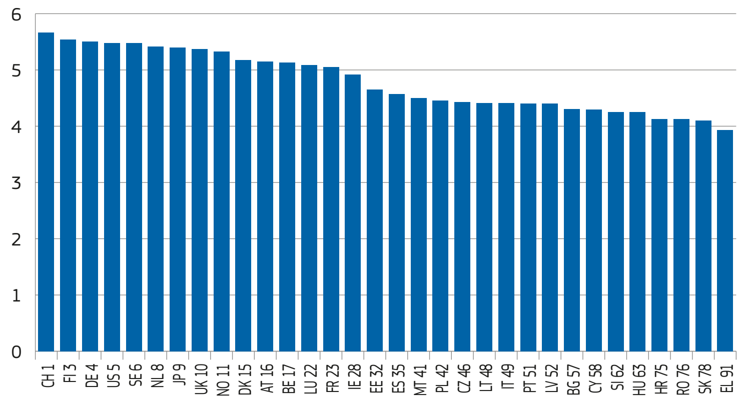
Annex 2: Member States' overall capacity to promote productivity growth: 2013–14 ranking

Capacity to promote productivity

The 'competitiveness indicator' (⁹⁰) of the World Economic Forum provides a benchmark to assess a country's capacity to promote productivity growth that underpins strong sustainable inclusive growth. It aggregates a broad set of indicators that covers a country's institutions, infrastructure, macro-economic environment, technological readiness, and capacity to innovate. See World Economic Forum (2014) for more details.

Chart X1 shows how the EU Member States compare to each other (as well as to the US, Japan, Norway and Switzerland) in terms of their capacity to promote productivity growth. Among the EU Member States, the Nordic Member States as well as Germany, the Netherlands and the United Kingdom show the strongest capacity to promote productivity growth (and they are also among the top performers in the world), while most Member States that joined the EU in 2004 or later, as well as Greece, Portugal and Italy, showed the weakest capacity to promote productivity.

Chart X1: 'Competitiveness indicator': 2013–14 rankings



Source: World Economic Forum.

Note: Country labels with their ranking.

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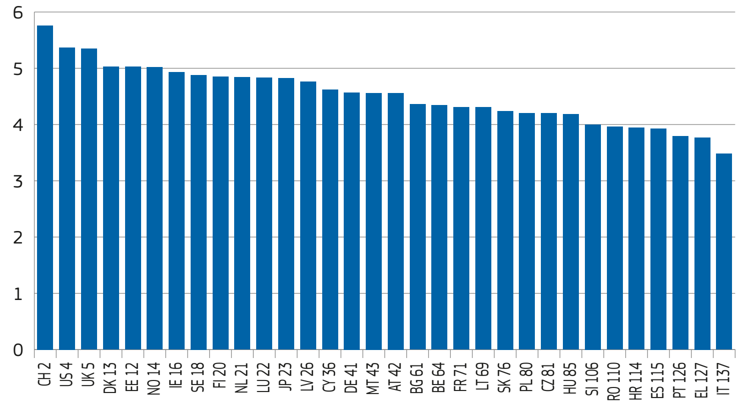
Chart X2: Labour market efficiency: 2013–14 ranking



Source: World Economic Forum.

Note: Country labels with their ranking.

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Labour market efficiency

One of the dimensions to assess a country's 'competitiveness' is its labour market efficiency, which captures, inter alia, the flexibility and cost at which labour can be reallocated, wage flexibility, incentives to perform on the job, barriers to entry and gender balance.

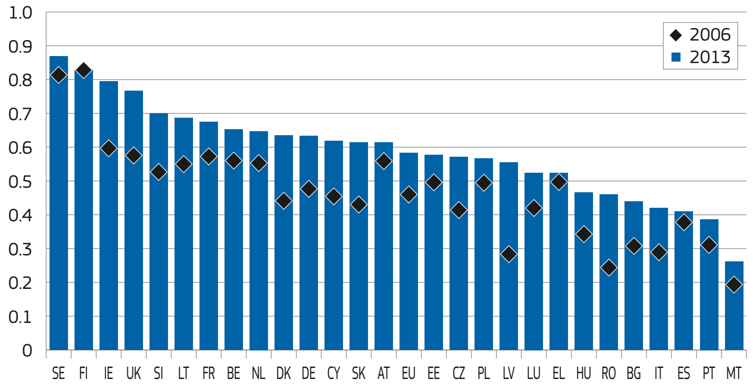
Chart X2 shows that there are some notable differences across EU Member States. Strong labour market efficiency is to be found in the United Kingdom, Denmark, Estonia, Ireland, Sweden and Finland, while the weakest form of flexibility is to be found in Italy, Greece, Portugal, Spain, Croatia and Romania.

(⁹⁰) Such indicators should not be confused with indicators that measure enterprises' competitiveness. At the level of countries, international trade is about a mutually beneficial exchange in which a country specialises in the production of goods and services for which it has a comparative advantage. In other words, international trade provides a country (as well as its trading partner) the opportunity to improve its production efficiency, thereby also improving its national productivity level — see, for instance, Krugman (1994).

Human resource potential

Finally, Chart X3 shows developments in human resources across EU Member States for 2006 and 2013 (91) — based on the EU-Innovation Union Scoreboard. In 2013, Sweden, Finland, Ireland and the United Kingdom scored best, while Malta, Portugal, Spain and Italy scored worst. Nevertheless, several Member States recorded notable increases between 2006 and 2013, including Ireland, the United Kingdom, Denmark, Slovenia and Romania. See European Commission (2014) for more details.

Chart X3: Human resources



Source: EU-Innovation Union Scoreboard.

Notes: Value between 0 and 1. A higher value indicates stronger human resources. The indicators capture: new doctorate graduates, population aged 30–34 with completed tertiary education and population aged 20–24 having completed at least upper secondary education. See European Commission (2014).

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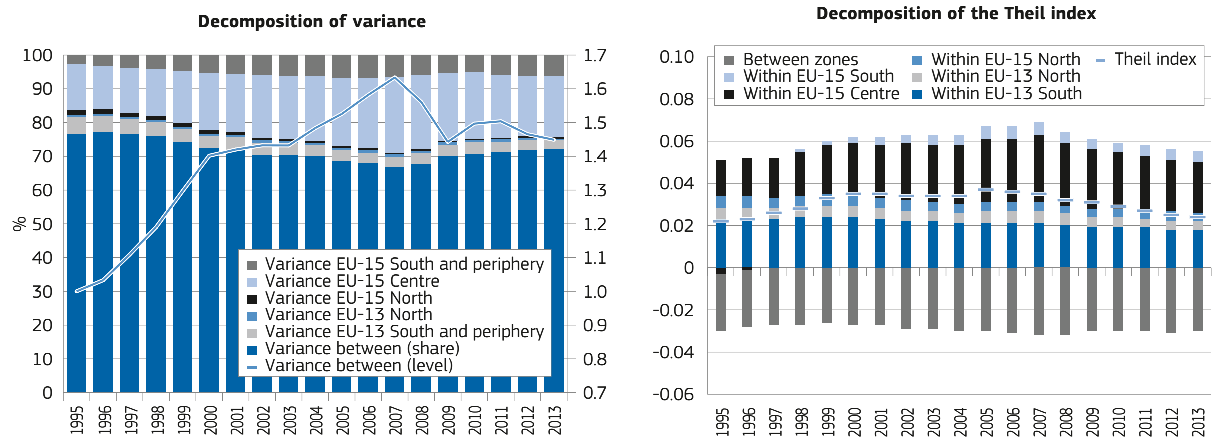
(91) i.e. a measure of the availability of a highly skilled and educated workforce which is one of the three dimensions of a country's innovation capacity. See European Commission (2014) at http://ec.europa.eu/enterprise/policies/innovation/files/ius/ius-2014_en.pdf.

ANNEX 3: BETWEEN AND WITHIN ZONES CONVERGENCE

This Annex provides detailed information on the relative contribution of between zones and within zones trends in dispersion to the overall dispersion trend in the EU as a complement to section 1. For this purpose, two decomposition methods are used, one the one side the standard decomposition of variance and on the other side the decomposition of the Theil index.

GDP per capita

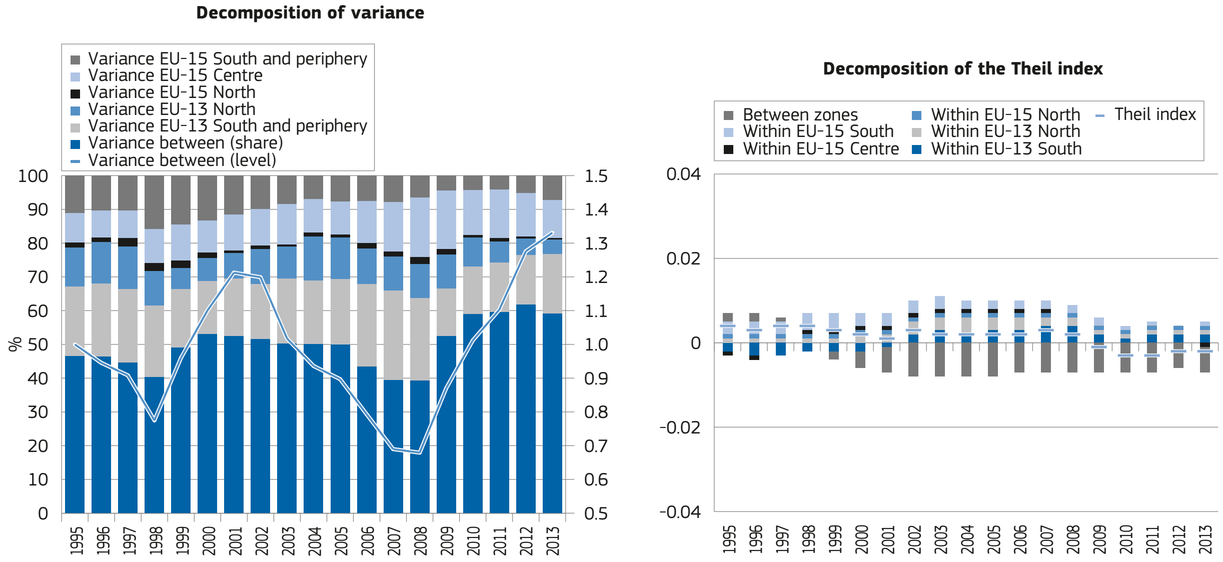
Chart 30: **Between and within zones contributions to GDPpc dispersion in the EU (1995–2013)**



Source: Eurostat, calculations DG EMPL.

Notes: Calculations based on GDP in real terms, in euros. Between and within contributions to total variance are based on unweighted averages by zone, while the Theil index is based on weighted averages (including the EU-28 weighted average). Some missing values in the beginning of the period were kept constant for the calculation of dispersion and averages: BG, EE, HR, CY, MT (1995-99), LV (1995-98), EL, LT, SK (1995-97), PL, RO (1995-96), HU, SI (1995).

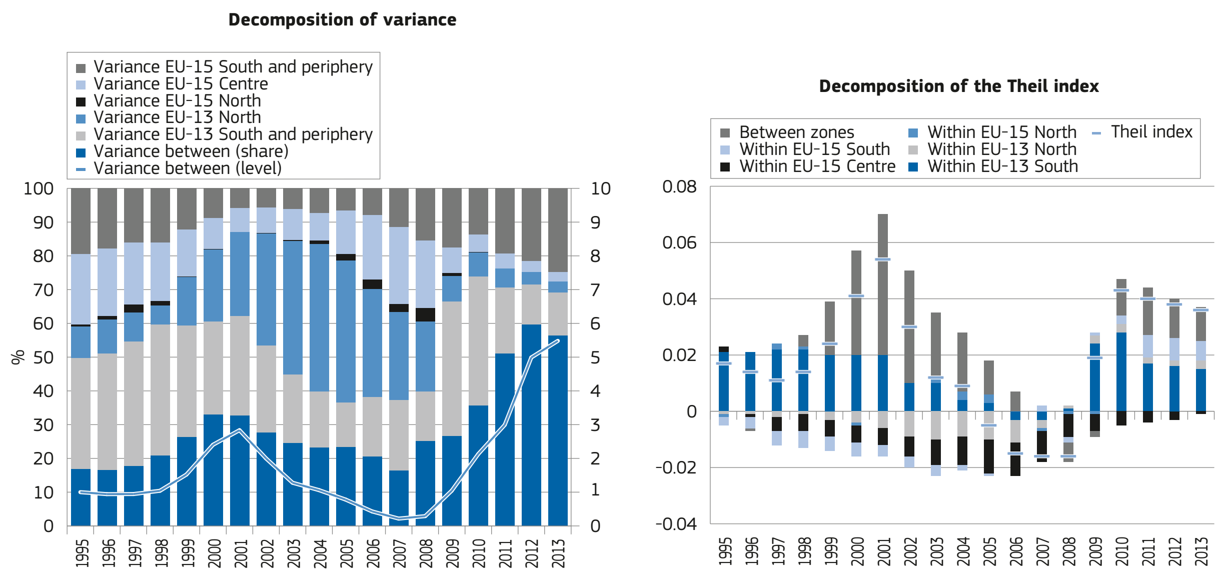
Chart 31: **Between and within zones contributions to ER dispersion in the EU (1995–2013)**



Source: Eurostat, calculations DG EMPL.

Notes: Between and within contributions to total variance are based on unweighted averages by zone, while the Theil index is based on weighted averages (including the EU-28 weighted average). Some missing values in the beginning of the period were kept constant for the calculation of dispersion and averages: HR (1995-01), BG, MT (1995-99), CY (1995-98), LT, LV, SK (1995-97), CZ, EE, PL, RO (1995-96), HU, SI (1995), AT, FI, SE (1990-94).

Chart 32: Between and within zones contributions to UR convergence in EU (1995–2013)



Source: Eurostat, calculations DG EMPL.

Notes: Between and within contributions to total variance are based on unweighted averages by zone, while the Theil index is based on weighted averages (including the EU-28 weighted average). Some missing values in the beginning of the period were kept constant for the calculation of dispersion and averages: BG, CY, EE, HR, MT (1995-99), LV (1995-98), LT (1995-97), PL, RO (1995-96), HU, SI (1995), AT (1990-93), DE (1990), EL (1990-97).

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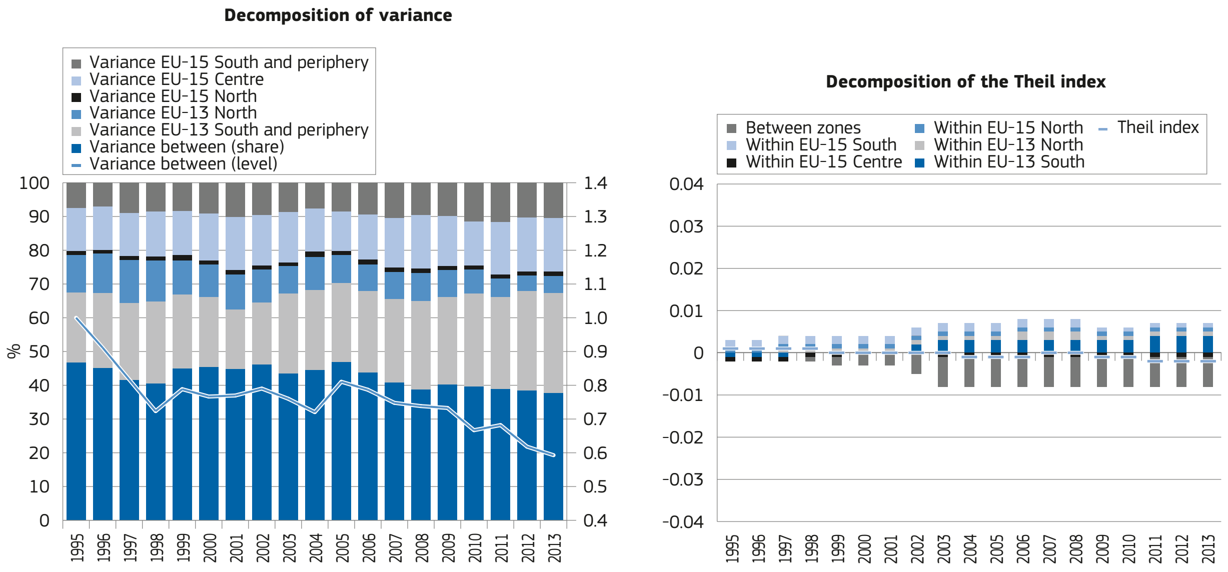
Chart 33: Between and within zones contributions to activity rates convergence in EU (1995–2013)



Source: Eurostat, calculations DG EMPL.

Notes: Between and within contributions to total variance are based on unweighted averages by zone, while the Theil index is based on weighted averages (including the EU-28 weighted average). Some missing values in the beginning of the period were kept constant for the calculation of dispersion and averages: HR (1995-01), BG, CY, MT (1995-99), CZ, EE, LV, LT, SK (1995-97), PL, RO (1995-96), HU, SI (1995), IT (1992), AT (1992-93).

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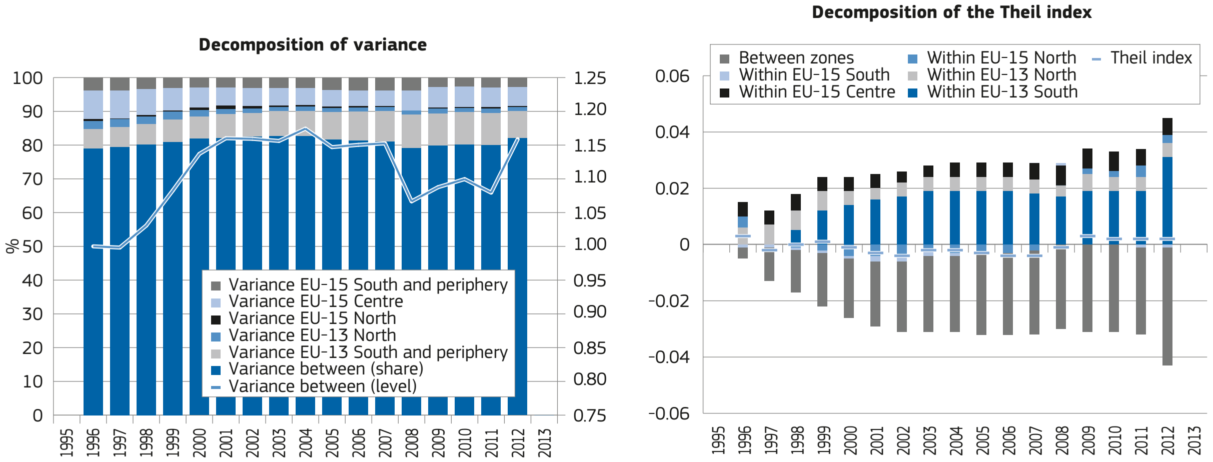
Chart 34: Between and within zones contributions to GHDI convergence in EU (1995–2013)


Decomposition of variance

Decomposition of the Theil index

Source: Eurostat, calculations DG EMPL.

Notes: Values in real Euros deflated by HICP ; between and within contributions to total variance are based on unweighted averages by zone, while the Theil index is based on weighted averages (including the EU-28 weighted average). Missing data for MT, some missing values in the beginning of the period were kept constant for the calculation of dispersion and averages: LU (1996-2005), BG, HR, IE (1996-01), EL, ES, RO (1996-99).

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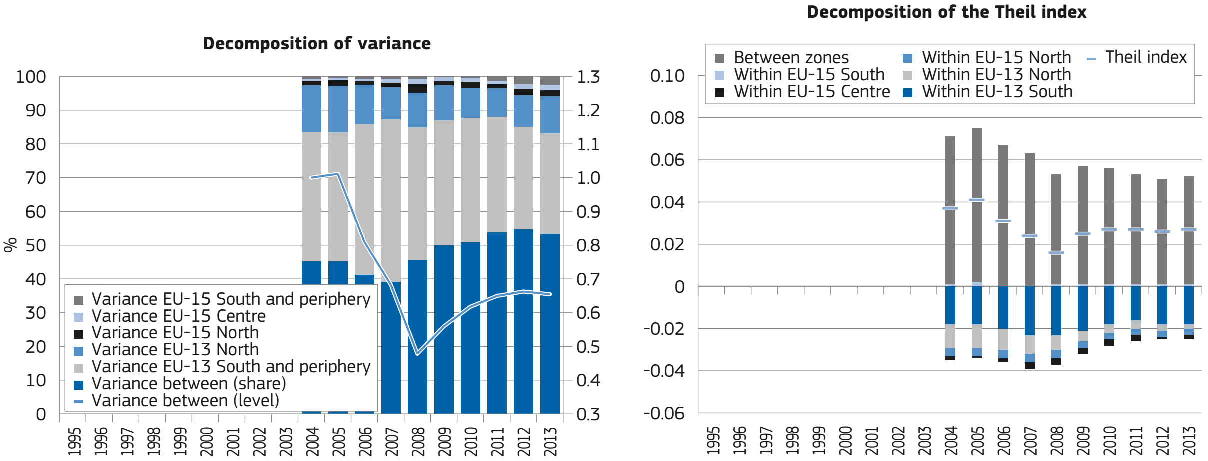
Chart 35: Between and within zones contributions to AROPE convergence in EU (1995–2013)


Decomposition of the Theil index

Decomposition of variance

Source: Eurostat, calculations DG EMPL.

Notes: Between and within contributions to total variance are based on uneweighted averages by zone, while the Theil index is based on weighted averages (including the EU-28 weighted average). Some missing values at the beginning of the period were kept constant for the calculation of dispersion and averages: HR (2004-09), RO (2004-06), BG (2004-05), CZ, DE, CY, LV, LT, HU, MT, NL, PL, SI, SK, UK (2004).

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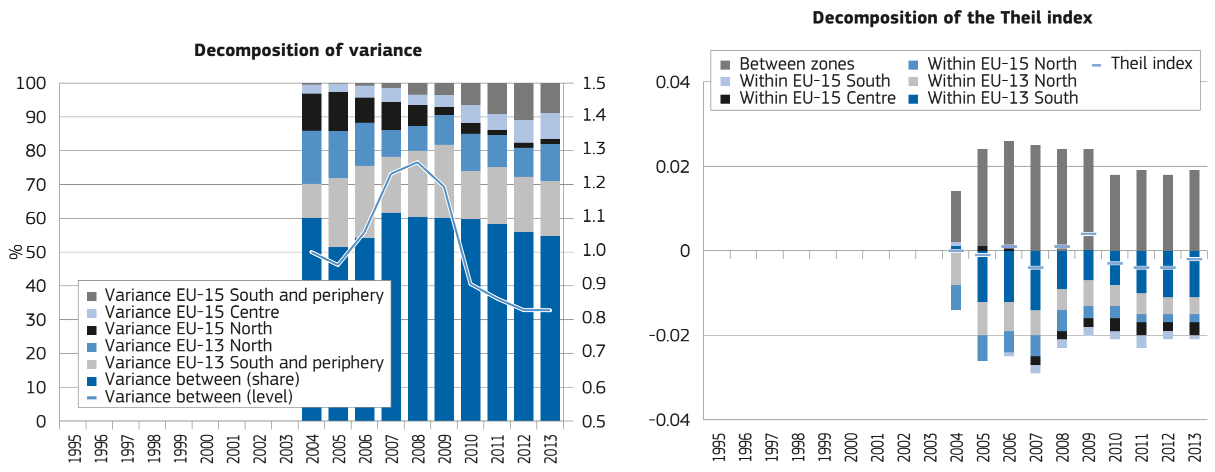
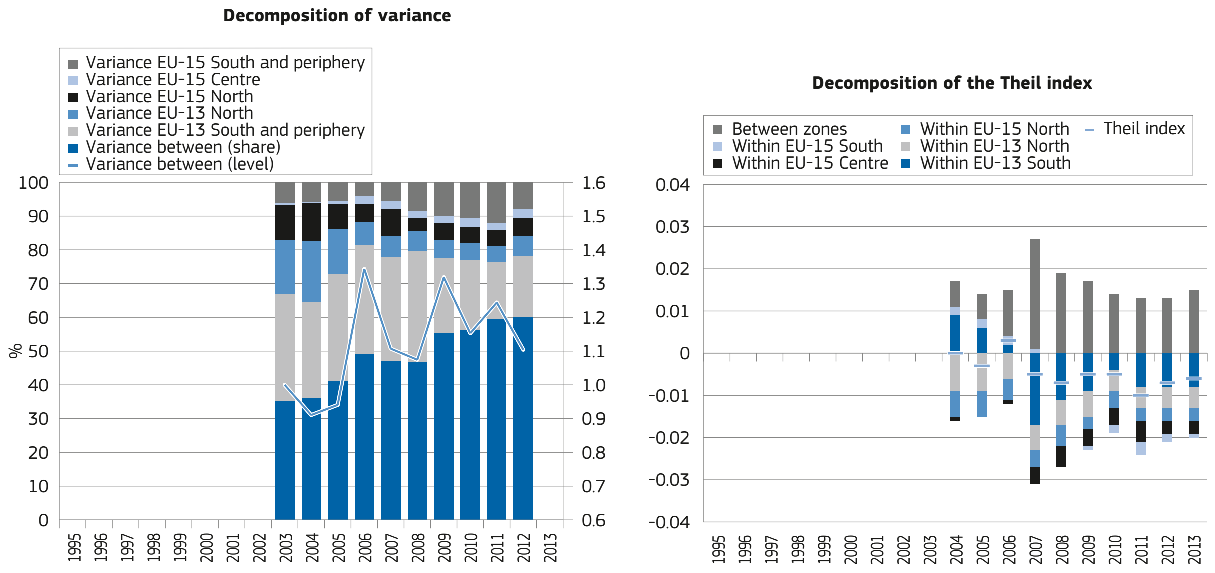
Chart 36: Between and within zones contributions to AROP convergence in EU (1995–2013)



Source: Eurostat, calculations DG EMPL.

Notes: Between and within contributions to total variance are based on unweighted averages by zone, while the Theil index is based on weighted averages (including the EU-28 weighted average). The dates correspond to the dates of the SILC waves which refer to households' incomes on the year before. Some missing values at the beginning of the period were kept constant for the calculation of dispersion and averages: RO (2005-06), CZ, DE, CY, LV, LT, HU, MT, NL, PL, SI, SK, UK (2004).

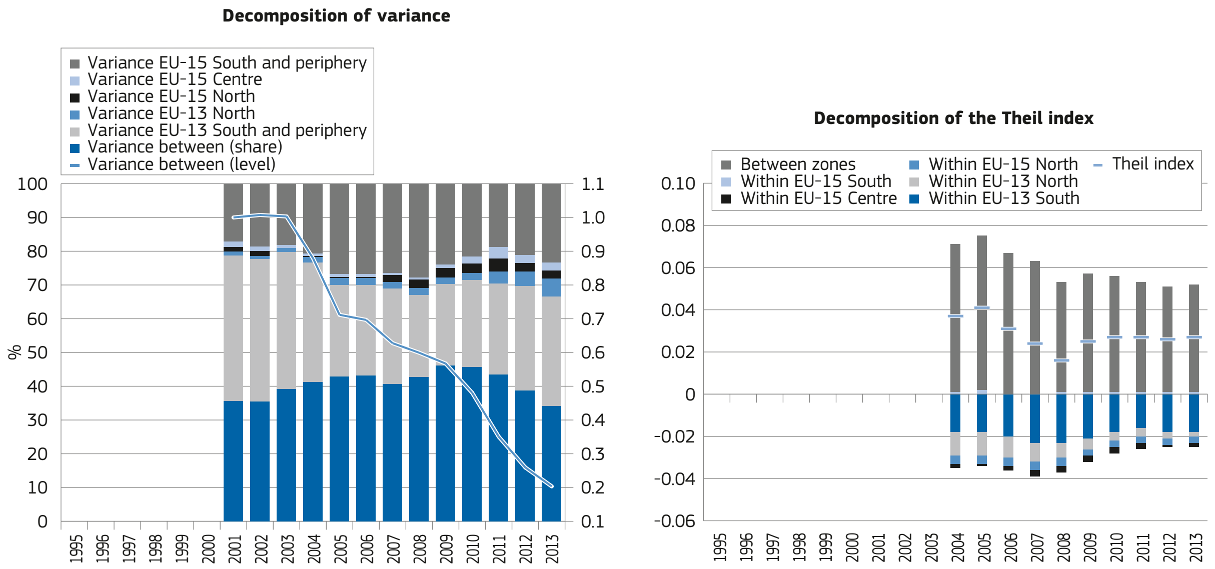
Chart 37: Between and within zones contributions to S80/S20 convergence in EU (1995–2013)



Source: Eurostat, calculations DG EMPL.

Notes: Between and within contributions to total variance are based on unweighted averages by zone, while the Theil index is based on weighted averages (including the EU-28 weighted average). The dates correspond to the dates of the SILC waves which refer to households' incomes on the year before. Some missing values at the beginning of the period were kept constant for the calculation of dispersion and averages: CZ, DE, CY, LV, LT, HU, MT, NL, PL, SI, SK, UK (2004).

Chart 38: Between and within zones contributions to early school leavers convergence in EU (1995–2013)



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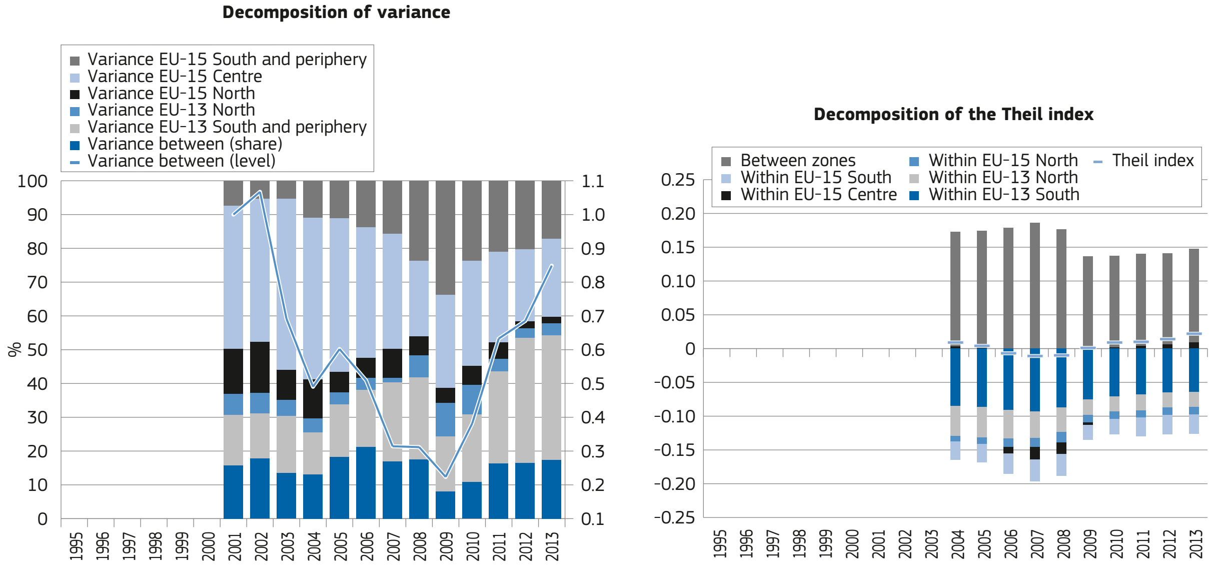
Source: Eurostat, calculations DG EMPL.

Notes: Between and within contributions to total variance are based on unweighted averages by zone, while the Theil index is based on weighted averages (including the EU-28 weighted average). The dates correspond to the dates of the SILC waves which refer to households' incomes from the year before. Some missing values at the beginning of the period were kept constant for the calculation of dispersion and averages: CZ, IE, HR, LV, SK (2001) and UK (2003).

Chart 39: Between and within zones contributions to NEETs convergence in EU (1995–2013)



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Source: Eurostat, calculations DG EMPL.

Notes: Between and within contributions to total variance are based on unweighted averages by zone, while the Theil index is based on weighted averages (including the EU-28 weighted average). The dates correspond to the dates of the SILC waves which refer to households' incomes from the year before. Some missing values at the beginning of the period were kept constant for the calculation of dispersion and averages: CZ, IE, HR, LV and SK (2001).

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Statistical annex (1)

1. MACRO ECONOMIC INDICATORS

Macro economic indicators: European Union 28 – Annual percentage growth

European Union (28 countries)	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	1.5	2.6	2.2	3.4	3.2	0.4	-4.5	2.0	1.6	-0.4	0.1
Total employment	0.4	0.7	1.0	1.6	1.8	1.0	-1.8	-0.7	0.2	-0.2	-0.3
Labour productivity	1.1	1.9	1.1	1.7	1.4	-0.6	-2.8	2.7	1.4	-0.1	0.4
Annual average hours worked	:	:	:	:	:	:	:	:	:	:	:
Productivity per hour worked	:	:	:	:	:	:	:	:	:	:	:
Harmonized CPI	2.1	2.3	2.3	2.3	2.4	3.7	1.0	2.1	3.1	2.6	1.5
Price deflator GDP	0.2	2.4	2.2	2.3	2.7	0.2	-1.4	2.4	1.4	2.3	0.8
Nominal compensation per employee	1.0	2.7	2.5	2.9	3.2	0.7	-1.1	3.6	2.0	3.0	0.8
Real compensation per employee (GDP deflator)	0.8	0.4	0.3	0.6	0.5	0.4	0.3	1.2	0.6	0.6	0.1
Real compensation per employee (private consumption deflator)	1.2	0.4	0.1	0.4	0.7	0.2	1.5	0.4	-0.6	-0.2	0.2
Nominal unit labour costs	-0.1	0.8	1.4	1.1	1.8	1.3	1.8	0.9	0.6	3.1	0.4
Real unit labour costs	-0.3	-1.5	-0.8	-1.1	-0.9	1.1	3.2	-1.4	-0.8	0.8	-0.3

European Union (27 countries)	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	1.5	2.6	2.2	3.4	3.2	0.4	-4.5	2.0	1.7	-0.4	0.1
Total employment	0.4	0.6	1.0	1.6	1.8	1.0	-1.8	-0.7	0.3	-0.2	-0.3
Labour productivity	1.1	1.9	1.1	1.7	1.4	-0.6	-2.8	2.7	1.4	-0.2	0.4
Annual average hours worked	-0.5	0.2	-0.2	-0.4	-0.1	-0.1	-1.3	0.3	0.1	-0.4	-0.1
Productivity per hour worked	1.6	1.7	1.3	2.1	1.5	-0.5	-1.5	2.4	1.3	0.3	0.6
Harmonized CPI	2.1	2.3	2.3	2.3	2.4	3.7	1.0	2.1	3.1	2.6	1.5
Price deflator GDP	0.2	2.3	2.2	2.3	2.7	0.2	-1.4	2.4	1.4	2.4	0.8
Nominal compensation per employee	1.0	2.7	2.5	2.9	3.2	0.7	-1.1	3.6	2.0	3.0	0.8
Real compensation per employee (GDP deflator)	0.8	0.4	0.3	0.6	0.5	0.5	0.3	1.2	0.6	0.6	0.0
Real compensation per employee (private consumption deflator)	1.2	0.4	0.1	0.4	0.7	0.2	1.6	0.4	-0.6	-0.2	0.2
Nominal unit labour costs	-0.1	0.8	1.4	1.1	1.8	1.3	1.7	0.9	0.6	3.1	0.4
Real unit labour costs	-0.3	-1.5	-0.8	-1.1	-0.9	1.1	3.2	-1.4	-0.8	0.8	-0.4

European Union (15 countries)	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	1.3	2.4	2.0	3.2	3.0	0.1	-4.6	2.0	1.5	-0.5	0.0
Total employment	0.5	0.8	1.0	1.5	1.6	0.8	-1.8	-0.3	0.3	-0.3	-0.4
Labour productivity	0.8	1.6	1.0	1.6	1.3	-0.7	-2.8	2.3	1.2	-0.2	0.4
Annual average hours worked	-0.4	0.2	-0.3	-0.5	-0.1	-0.3	-1.4	0.4	0.0	-0.5	-0.1
Productivity per hour worked	1.2	1.4	1.3	2.2	1.4	-0.4	-1.5	1.9	1.2	0.3	0.6
Harmonized CPI	2.0	2.0	2.1	2.2	2.2	3.3	0.7	1.9	3.0	:	:
Price deflator GDP	0.4	2.3	1.7	2.1	2.3	-0.5	-0.8	2.1	1.3	2.5	0.8
Nominal compensation per employee	0.9	2.9	2.0	2.9	2.9	0.0	-0.5	3.0	2.0	3.2	0.9
Real compensation per employee (GDP deflator)	0.5	0.6	0.3	0.8	0.6	0.5	0.3	0.9	0.7	0.7	0.1
Real compensation per employee (private consumption deflator)	0.9	0.5	0.1	0.6	0.7	0.2	1.6	0.1	-0.6	-0.1	0.3
Nominal unit labour costs	0.1	1.3	1.0	1.2	1.5	0.7	2.4	0.7	0.8	3.4	0.5
Real unit labour costs	-0.3	-1.0	-0.6	-0.8	-0.7	1.2	3.2	-1.4	-0.5	0.9	-0.3

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(1) By David Arranz (EMPL) and Frank Bauer (Eurostat).

Euro area (18 countries)	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	0.7	2.2	1.7	3.3	3.0	0.4	-4.5	1.9	1.6	-0.7	-0.4
Total employment	0.5	0.8	1.0	1.7	1.8	0.8	-1.9	-0.5	0.3	-0.6	-0.8
Labour productivity	0.2	1.4	0.7	1.6	1.2	-0.4	-2.6	2.5	1.3	0.0	0.4
Annual average hours worked	-0.3	0.2	-0.3	-0.6	-0.2	-0.3	-1.5	0.4	0.0	-0.8	-0.2
Productivity per hour worked	0.6	1.2	1.0	2.2	1.4	-0.2	-1.1	2.0	1.3	0.7	0.7
Harmonized CPI	2.1	2.2	2.2	2.2	2.2	3.3	0.3	1.6	2.7	2.5	1.3
Price deflator GDP	2.2	1.9	1.9	1.9	2.4	2.0	1.0	0.8	1.2	1.3	1.5
Nominal compensation per employee	2.3	2.2	1.9	2.3	2.6	3.4	1.5	1.8	2.1	1.9	1.6
Real compensation per employee (GDP deflator)	0.1	0.3	0.0	0.4	0.2	1.4	0.5	1.0	0.9	0.6	0.2
Real compensation per employee (private consumption deflator)	0.1	0.1	-0.2	0.1	0.3	0.7	1.9	0.2	-0.3	-0.2	0.4
Nominal unit labour costs	2.0	0.7	1.2	0.7	1.4	3.8	4.3	-0.6	0.8	1.9	1.2
Real unit labour costs	-0.2	-1.2	-0.7	-1.1	-1.0	1.8	3.2	-1.4	-0.4	0.6	-0.2

Euro area (17 countries)	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	0.7	2.2	1.7	3.3	3.0	0.4	-4.4	2.0	1.6	-0.7	-0.4
Total employment	0.5	0.8	1.0	1.6	1.8	0.8	-1.8	-0.5	0.3	-0.7	-0.8
Labour productivity	0.2	1.4	0.7	1.6	1.2	-0.4	-2.7	2.4	1.3	0.0	0.4
Annual average hours worked	-0.3	0.3	-0.3	-0.6	-0.1	-0.3	-1.5	0.5	0.0	-0.8	-0.2
Productivity per hour worked	0.6	1.1	1.0	2.2	1.2	-0.1	-1.2	2.0	1.3	0.8	0.7
Harmonized CPI	2.1	2.2	2.2	2.2	2.1	3.3	0.3	1.6	2.7	2.5	1.4
Price deflator GDP	2.2	1.9	1.9	1.8	2.4	2.0	1.0	0.8	1.2	1.3	1.5
Nominal compensation per employee	2.3	2.2	1.9	2.3	2.5	3.3	1.5	1.8	2.1	1.9	1.6
Real compensation per employee (GDP deflator)	0.1	0.2	0.0	0.4	0.1	1.4	0.5	1.0	0.9	0.6	0.2
Real compensation per employee (private consumption deflator)	0.1	0.1	-0.2	0.1	0.3	0.6	1.9	0.2	-0.3	-0.2	0.4
Nominal unit labour costs	2.1	0.7	1.2	0.7	1.3	3.8	4.3	-0.6	0.8	1.9	1.2
Real unit labour costs	-0.2	-1.1	-0.7	-1.1	-1.0	1.8	3.3	-1.4	-0.4	0.6	-0.2

United States	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	2.8	3.8	3.4	2.7	1.8	-0.3	-2.8	2.5	1.8	2.8	1.9
Total employment	0.9	1.1	1.7	1.9	1.1	-0.4	-3.7	-0.6	0.6	1.8	1.0
Labour productivity	3.0	2.8	1.6	0.9	0.9	0.5	2.3	3.4	1.3	0.9	0.8
Annual average hours worked	-1.4	0.0	-0.2	-0.1	-0.4	-0.6	-1.9	0.5	1.0	-0.1	0.0
Productivity per hour worked	3.3	2.7	1.8	0.8	1.1	0.8	2.9	2.5	0.3	1.0	0.9
Harmonized CPI	2.3	2.7	3.4	3.2	2.8	3.8	-0.4	1.6	3.2	2.1	1.5
Price deflator GDP	2.0	2.7	3.2	3.1	2.7	2.0	0.8	1.2	2.0	1.7	1.5
Nominal compensation per employee	4.1	4.9	3.3	4.0	4.1	2.8	1.6	3.1	3.1	2.1	1.7
Real compensation per employee (GDP deflator)	2.0	2.1	0.1	0.9	1.4	0.9	0.8	1.9	1.1	0.3	0.2
Real compensation per employee (private consumption deflator)	2.1	2.4	0.4	1.3	1.6	-0.2	1.7	1.4	0.7	0.2	0.5
Nominal unit labour costs	1.1	2.1	1.6	3.1	3.2	2.4	-0.6	-0.3	1.8	1.1	0.8
Real unit labour costs	-0.9	-0.7	-1.5	0.0	0.5	0.4	-1.4	-1.4	-0.2	-0.6	-0.7

Japan	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	1.7	2.4	1.3	1.7	2.2	-1.0	-5.5	4.7	-0.5	1.4	1.5
Total employment	0.1	0.6	0.7	0.5	0.4	-0.5	-1.5	-0.4	-0.2	0.0	0.4
Labour productivity	1.6	1.8	0.6	1.2	1.8	-0.6	-4.1	5.1	-0.3	1.4	1.1
Annual average hours worked	0.1	-0.7	-0.7	0.5	0.1	-0.8	-3.2	1.1	-0.3	0.7	:
Productivity per hour worked	1.6	2.5	1.3	0.7	1.7	0.2	-0.9	3.9	0.0	0.8	:
Harmonized CPI	-0.3	0.0	-0.3	0.3	0.0	1.4	-1.4	-0.7	-0.3	0.0	0.4
Price deflator GDP	-1.7	-1.4	-1.3	-1.1	-0.9	-1.3	-0.5	-2.2	-1.9	-0.9	-0.6
Nominal compensation per employee	-2.4	-0.9	-0.4	-1.0	-1.0	-0.5	-3.3	0.4	0.6	-0.1	0.0
Real compensation per employee (GDP deflator)	-0.7	0.5	0.9	0.1	-0.1	0.7	-2.9	2.6	2.5	0.8	0.6
Real compensation per employee (private consumption deflator)	-1.4	-0.1	0.3	-0.7	-0.3	-0.8	-0.9	2.1	1.4	0.7	0.2
Nominal unit labour costs	-3.9	-2.6	-0.9	-2.2	-2.7	0.0	0.7	-4.5	0.8	-1.6	-1.1
Real unit labour costs	-2.3	-1.3	0.3	-1.1	-1.8	1.3	1.2	-2.4	2.7	-0.6	-0.6

Belgium	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	0.8	3.3	1.8	2.7	2.9	1.0	-2.8	2.3	1.8	-0.1	0.2
Total employment	-0.1	1.0	1.4	1.1	1.7	1.8	-0.2	0.7	1.4	0.2	-0.2
Labour productivity	0.9	2.2	0.3	1.5	1.2	-0.8	-2.6	1.7	0.3	-0.3	0.4
Annual average hours worked	-0.3	-0.3	-0.5	0.6	0.3	-0.4	-1.2	0.3	0.7	-0.1	-0.2
Productivity per hour worked	1.2	2.5	0.8	0.9	0.9	-0.4	-1.5	1.3	-0.3	-0.2	0.7
Harmonized CPI	1.5	1.9	2.5	2.3	1.8	4.5	0.0	2.3	3.4	2.6	1.2
Price deflator GDP	2.0	2.1	2.4	2.3	2.4	2.1	1.2	2.1	2.0	1.9	1.6
Nominal compensation per employee	1.9	1.6	1.7	3.6	3.4	3.6	1.2	1.4	3.1	3.7	2.3
Real compensation per employee (GDP deflator)	-0.1	-0.6	-0.6	1.2	1.0	1.4	0.0	-0.7	1.1	1.7	0.7
Real compensation per employee (private consumption deflator)	0.5	-0.8	-0.9	0.5	0.5	0.3	1.9	-0.6	0.0	1.2	1.1
Nominal unit labour costs	1.0	-0.6	1.4	2.0	2.2	4.4	3.9	-0.3	2.7	4.1	1.9
Real unit labour costs	-0.9	-2.7	-0.9	-0.4	-0.2	2.2	2.7	-2.3	0.7	2.1	0.3

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Bulgaria	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	5.5	6.7	6.4	6.5	6.4	6.2	-5.5	0.4	1.8	0.6	0.9
Total employment	3.0	2.6	2.7	3.3	3.2	2.4	-1.7	-3.9	-2.2	-2.5	-0.4
Labour productivity	2.5	4.1	3.6	3.1	3.2	3.7	-3.8	4.4	4.1	3.2	1.3
Annual average hours worked	-0.7	1.4	-0.3	-0.3	0.0	2.4	-2.8	-0.1	-0.1	0.1	0.0
Productivity per hour worked	3.1	2.6	3.9	3.4	3.1	1.3	-1.1	4.5	4.2	3.1	1.1
Harmonized CPI	2.3	6.1	6.0	7.4	7.6	12.0	2.5	3.0	3.4	2.4	0.4
Price deflator GDP	2.3	4.2	7.4	6.9	9.2	8.4	4.3	2.8	4.9	3.1	-0.8
Nominal compensation per employee	4.2	6.2	9.3	6.3	12.7	16.8	8.1	9.9	6.8	7.8	6.6
Real compensation per employee (GDP deflator)	1.8	1.9	1.8	-0.5	3.2	7.7	3.6	6.9	1.8	4.5	7.4
Real compensation per employee (private consumption deflator)	3.4	2.7	2.3	4.0	3.4	9.0	6.5	7.3	2.1	2.2	8.6
Nominal unit labour costs	1.6	2.0	5.6	3.1	9.3	12.6	12.4	5.2	2.5	4.4	5.2
Real unit labour costs	-0.6	-2.1	-1.7	-3.5	0.1	3.8	7.7	2.4	-2.2	1.3	6.1

Czech Republic	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	3.8	4.7	6.8	7.0	5.7	3.1	-4.5	2.5	1.8	-1.0	-0.9
Total employment	-0.8	-0.3	2.1	1.3	2.1	2.3	-1.8	-1.0	0.0	0.4	0.9
Labour productivity	4.6	5.1	4.6	5.6	3.5	0.8	-2.8	3.5	1.9	-1.4	-1.8
Annual average hours worked	-0.6	0.7	0.0	-1.0	-0.8	0.4	-1.2	1.8	0.0	-0.5	-1.7
Productivity per hour worked	5.2	4.4	4.6	6.7	4.4	0.4	-1.5	1.7	1.8	-0.9	-0.2
Harmonized CPI	-0.1	2.6	1.6	2.1	3.0	6.3	0.6	1.2	2.1	3.5	1.4
Price deflator GDP	0.9	4.0	-0.3	0.5	3.3	1.9	2.3	-1.6	-0.9	1.6	1.9
Nominal compensation per employee	7.9	8.2	3.8	6.0	6.3	4.2	-0.6	3.1	2.3	1.9	-1.9
Real compensation per employee (GDP deflator)	6.9	4.0	4.1	5.5	2.8	2.2	-2.9	4.8	3.3	0.2	-3.8
Real compensation per employee (private consumption deflator)	8.1	4.4	2.9	4.5	3.2	-0.6	-1.4	3.3	1.9	-0.8	-3.0
Nominal unit labour costs	3.1	2.9	-0.7	0.4	2.6	3.4	2.2	-0.4	0.5	3.3	-0.1
Real unit labour costs	2.2	-1.0	-0.4	-0.1	-0.7	1.5	-0.1	1.2	1.4	1.7	-2.0

Denmark	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	0.4	2.3	2.4	3.4	1.6	-0.8	-5.7	1.4	1.1	-0.4	0.4
Total employment	-1.1	-0.6	1.0	2.1	2.8	1.7	-3.4	-2.5	-0.2	-0.3	0.2
Labour productivity	1.5	2.9	1.4	1.3	-1.1	-2.4	-2.4	3.9	1.3	0.0	0.2
Annual average hours worked	-0.3	0.0	-0.3	0.4	-1.7	-0.5	0.2	-1.2	1.1	-0.1	-0.7
Productivity per hour worked	1.8	2.9	1.7	0.9	0.6	-1.9	-2.5	5.2	0.2	0.1	0.7
Harmonized CPI	2.0	0.9	1.7	1.9	1.7	3.6	1.1	2.2	2.7	2.4	0.5
Price deflator GDP	1.6	2.3	2.9	2.1	2.3	4.2	0.7	4.3	0.7	2.3	1.3
Nominal compensation per employee	3.7	3.3	3.6	3.5	3.6	3.5	3.3	3.5	1.3	1.4	1.3
Real compensation per employee (GDP deflator)	2.0	1.0	0.7	1.4	1.3	-0.7	2.6	-0.8	0.6	-0.8	0.0
Real compensation per employee (private consumption deflator)	2.4	2.1	2.1	1.5	2.3	0.8	1.7	0.8	-1.4	-1.3	0.3
Nominal unit labour costs	2.2	0.4	2.2	2.2	4.8	6.1	5.8	-0.5	0.0	1.5	1.1
Real unit labour costs	0.6	-1.9	-0.7	0.1	2.4	1.8	5.1	-4.5	-0.7	-0.8	-0.2

Germany	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	-0.4	1.2	0.7	3.7	3.3	1.1	-5.1	4.0	3.3	0.7	0.4
Total employment	-0.9	0.3	-0.1	0.6	1.7	1.2	0.1	0.5	1.4	1.1	0.6
Labour productivity	0.5	0.9	0.8	3.1	1.5	-0.1	-5.2	3.5	1.9	-0.4	-0.1
Annual average hours worked	-0.4	0.0	-0.4	-0.5	-0.1	0.0	-2.8	1.6	0.1	-0.9	-0.4
Productivity per hour worked	0.9	0.8	1.2	3.6	1.7	-0.1	-2.5	1.8	1.8	0.4	0.3
Harmonized CPI	1.0	1.8	1.9	1.8	2.3	2.8	0.2	1.2	2.5	2.1	1.6
Price deflator GDP	1.1	1.1	0.6	0.3	1.6	0.8	1.2	1.0	1.2	1.5	2.2
Nominal compensation per employee	1.4	0.3	-0.1	1.0	0.8	2.1	0.1	2.4	3.0	2.6	1.9
Real compensation per employee (GDP deflator)	0.3	-0.7	-0.7	0.7	-0.8	1.3	-1.0	1.3	1.7	1.2	-0.3
Real compensation per employee (private consumption deflator)	-0.2	-0.8	-1.7	0.0	-0.7	0.5	0.1	0.4	0.9	1.0	0.3
Nominal unit labour costs	0.9	-0.5	-0.9	-2.0	-0.8	2.3	5.6	-1.1	1.0	3.1	2.1
Real unit labour costs	-0.2	-1.6	-1.5	-2.3	-2.3	1.5	4.4	-2.1	-0.2	1.6	-0.1

Estonia	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	7.8	6.3	8.9	10.1	7.5	-4.2	-14.1	2.6	9.6	3.9	0.8
Total employment	1.4	0.0	2.0	5.4	0.8	0.2	-10.0	-4.8	7.0	2.2	1.8
Labour productivity	6.3	6.4	6.7	4.5	6.6	-4.3	-4.5	7.7	2.4	1.7	-1.0
Annual average hours worked	0.2	0.6	0.7	-0.5	-0.2	-1.5	-6.9	2.6	2.3	-1.8	0.1
Productivity per hour worked	6.1	5.8	6.0	5.0	6.8	-2.8	2.5	5.0	0.1	3.5	-0.4
Harmonized CPI	1.4	3.0	4.1	4.4	6.7	10.6	0.2	2.7	5.1	4.2	3.2
Price deflator GDP	4.0	4.5	6.1	8.8	11.6	5.4	0.2	0.3	3.0	3.3	5.0
Nominal compensation per employee	11.6	12.3	10.8	14.0	25.0	9.7	-3.1	2.3	0.5	6.0	6.7
Real compensation per employee (GDP deflator)	7.3	7.5	4.5	4.8	12.0	4.0	-3.3	2.0	-2.4	2.5	1.7
Real compensation per employee (private consumption deflator)	9.9	8.7	6.6	8.4	15.8	1.7	-2.7	-0.1	-4.2	2.2	3.2
Nominal unit labour costs	5.0	5.5	3.8	9.1	17.2	14.6	1.5	-5.0	-1.8	4.2	7.8
Real unit labour costs	0.9	1.0	-2.1	0.3	5.0	8.7	1.3	-5.3	-4.7	0.9	2.7

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Ireland	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	3.7	4.2	6.1	5.5	5.0	-2.2	-6.4	-1.1	2.2	0.2	-0.3
Total employment	1.9	3.4	4.9	4.6	4.4	-0.6	-7.8	-4.1	-1.8	-0.6	2.4
Labour productivity	1.8	0.8	1.1	0.8	0.6	-1.5	1.6	3.1	4.0	0.8	-2.6
Annual average hours worked	-0.9	-0.6	0.4	-0.2	-0.7	-1.1	-1.7	-0.6	0.0	0.2	0.5
Productivity per hour worked	2.8	1.4	0.7	1.1	1.3	-0.4	3.4	3.7	4.0	0.5	-3.1
Harmonized CPI	4.0	2.3	2.2	2.7	2.9	3.1	-1.7	-1.6	1.2	1.9	0.5
Price deflator GDP	3.7	2.4	2.4	3.3	1.7	-2.9	-3.8	-1.5	0.7	0.7	0.4
Nominal compensation per employee	6.4	5.2	5.6	4.4	5.6	5.2	-1.1	-3.8	-0.1	0.8	-1.7
Real compensation per employee (GDP deflator)	2.6	2.7	3.2	1.0	3.7	8.3	2.9	-2.3	-0.8	0.1	-2.1
Real compensation per employee (private consumption deflator)	2.4	3.4	4.0	1.9	2.4	3.6	6.3	-1.7	-1.8	0.3	:
Nominal unit labour costs	4.5	4.4	4.4	3.5	5.0	6.8	-2.6	-6.7	-4.0	0.0	1.0
Real unit labour costs	0.8	1.9	2.0	0.2	3.2	10.0	1.3	-5.3	-4.6	-0.6	0.6

Greece	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	5.9	4.4	2.3	5.5	3.5	-0.2	-3.1	-4.9	-7.1	-7.0	-3.9
Total employment	1.2	2.4	3.0	1.9	1.4	1.2	-0.6	-2.6	-5.6	-8.3	-4.1
Labour productivity	4.7	1.9	-0.7	3.5	2.1	-1.4	-2.5	-2.4	-1.6	1.5	0.2
Annual average hours worked	-0.3	-1.0	0.6	-1.4	-1.4	-4.3	2.4	0.9	1.1	-0.2	0.1
Productivity per hour worked	5.0	2.9	-1.3	5.0	3.5	3.0	-4.9	-3.3	-2.7	1.7	0.1
Harmonized CPI	3.4	3.0	3.5	3.3	3.0	4.2	1.3	4.7	3.1	1.0	-0.9
Price deflator GDP	3.9	2.9	1.9	2.4	3.3	4.7	2.3	1.1	1.0	-0.3	-2.1
Nominal compensation per employee	6.3	4.2	3.7	2.4	4.7	3.6	3.5	-2.6	-3.4	-3.7	-6.6
Real compensation per employee (GDP deflator)	2.3	1.2	1.7	0.0	1.3	-1.1	1.2	-3.7	-4.4	-3.4	-4.7
Real compensation per employee (private consumption deflator)	2.8	1.2	4.7	-1.0	1.6	-0.6	2.8	-6.3	-6.5	-4.6	-5.2
Nominal unit labour costs	1.5	2.2	4.4	-1.1	2.6	5.1	6.2	-0.1	-1.8	-5.1	-6.8
Real unit labour costs	-2.3	-0.7	2.5	-3.4	-0.7	0.3	3.8	-1.3	-2.9	-4.8	-4.9

Spain	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	3.1	3.3	3.6	4.1	3.5	0.9	-3.8	-0.2	0.1	-1.6	-1.2
Total employment	3.2	3.6	4.1	4.0	3.0	-0.1	-6.5	-2.2	-1.9	-4.2	-3.0
Labour productivity	-0.1	-0.4	-0.5	0.1	0.4	1.0	2.9	2.0	2.0	2.7	1.8
Annual average hours worked	-0.8	-0.9	-1.1	-0.8	-0.9	0.3	0.5	0.2	0.3	-0.7	-0.1
Productivity per hour worked	0.7	0.5	0.6	0.9	1.3	0.7	2.4	1.9	1.6	3.5	1.9
Harmonized CPI	3.1	3.1	3.4	3.6	2.8	4.1	-0.2	2.0	3.1	2.4	1.5
Price deflator GDP	4.2	4.0	4.3	4.1	3.3	2.4	0.1	0.1	0.0	0.0	0.6
Nominal compensation per employee	2.6	2.1	2.8	3.2	4.6	6.7	4.3	0.3	1.0	-0.3	0.1
Real compensation per employee (GDP deflator)	-1.5	-1.9	-1.5	-0.9	1.3	4.2	4.2	0.2	0.9	-0.3	-0.6
Real compensation per employee (private consumption deflator)	-0.5	-1.5	-0.7	-0.4	1.4	3.0	5.4	-1.6	-1.5	-2.8	-1.2
Nominal unit labour costs	2.7	2.5	3.3	3.1	4.1	5.6	1.4	-1.8	-1.0	-3.0	-1.7
Real unit labour costs	-1.4	-1.5	-1.0	-1.0	0.8	3.2	1.3	-1.8	-1.0	-3.0	-2.3

France	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	0.9	2.5	1.8	2.5	2.3	-0.1	-3.1	1.7	2.0	0.0	0.2
Total employment	0.1	0.1	0.7	1.1	1.4	0.5	-1.3	0.1	0.6	0.0	-0.1
Labour productivity	0.8	2.4	1.2	1.4	0.9	-0.6	-1.9	1.7	1.4	0.1	0.4
Annual average hours worked	-0.2	1.9	-0.4	-1.5	0.8	0.5	-1.3	0.5	0.1	-0.2	0.0
Productivity per hour worked	1.0	0.5	1.5	2.9	0.1	-1.0	-0.6	1.2	1.2	0.2	0.6
Harmonized CPI	2.2	2.3	1.9	1.9	1.6	3.2	0.1	1.7	2.3	2.2	1.0
Price deflator GDP	2.0	1.7	1.9	2.1	2.6	2.5	0.7	1.0	1.3	1.5	1.1
Nominal compensation per employee	2.8	3.4	3.1	3.2	2.5	2.6	1.8	2.4	2.7	2.2	1.6
Real compensation per employee (GDP deflator)	0.8	1.7	1.1	1.0	0.0	0.1	1.0	1.4	1.4	0.6	0.5
Real compensation per employee (private consumption deflator)	0.8	1.2	1.2	1.1	0.5	-0.3	2.4	1.3	0.6	0.3	0.9
Nominal unit labour costs	2.0	1.0	1.9	1.8	1.7	3.2	3.7	0.7	1.3	2.1	1.2
Real unit labour costs	0.0	-0.7	0.0	-0.3	-0.9	0.7	3.0	-0.2	0.0	0.6	0.1

Croatia	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	5.4	4.1	4.3	4.9	5.1	2.1	-6.9	-2.3	-0.2	-2.2	-0.9
Total employment	3.9	1.5	0.7	3.9	1.4	3.1	-1.8	-5.1	-2.3	-3.9	-1.0
Labour productivity	1.4	2.6	3.5	1.0	3.6	-1.0	-5.2	3.0	2.2	1.8	0.1
Annual average hours worked	:	:	:	:	:	:	:	:	:	:	:
Productivity per hour worked	:	:	:	:	:	:	:	:	:	:	:
Harmonized CPI	2.4	2.1	3.0	3.3	2.7	5.8	2.2	1.1	2.2	3.4	2.3
Price deflator GDP	4.1	3.8	3.3	4.0	4.1	5.7	2.9	0.8	1.8	1.7	0.9
Nominal compensation per employee	6.8	4.2	5.5	3.3	8.2	4.4	1.0	1.9	1.9	1.5	1.5
Real compensation per employee (GDP deflator)	2.6	0.4	2.1	-0.7	3.9	-1.2	-1.8	1.0	0.1	-0.2	0.7
Real compensation per employee (private consumption deflator)	4.4	2.1	2.1	-0.1	5.1	-1.1	-2.2	0.3	-0.5	-1.7	-0.4
Nominal unit labour costs	5.3	1.6	1.9	2.2	4.4	5.5	6.6	-1.1	-0.3	-0.2	1.4
Real unit labour costs	1.2	-2.1	-1.4	-1.7	0.3	-0.2	3.6	-1.9	-2.0	-1.9	0.6

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Italy	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	0.0	1.7	0.9	2.2	1.7	-1.2	-5.5	1.7	0.4	-2.4	-1.9
Total employment	1.5	0.4	0.6	2.0	1.3	0.3	-1.6	-0.7	0.3	-0.3	-2.0
Labour productivity	-1.5	1.3	0.4	0.2	0.4	-1.4	-3.9	2.5	0.1	-2.1	0.1
Annual average hours worked	-0.3	0.0	-0.4	-0.2	0.1	-0.7	-1.7	0.1	0.0	-1.1	0.0
Productivity per hour worked	-1.2	1.3	0.8	0.4	0.3	-0.7	-2.2	2.4	0.2	-1.0	0.1
Harmonized CPI	2.8	2.3	2.2	2.2	2.0	3.5	0.8	1.6	2.9	3.3	1.3
Price deflator GDP	3.1	2.4	1.8	1.7	2.4	2.5	2.1	0.4	1.4	1.6	1.4
Nominal compensation per employee	2.5	3.3	2.7	2.2	2.0	3.0	-0.1	2.2	1.1	0.1	1.4
Real compensation per employee (GDP deflator)	-0.6	0.9	0.9	0.5	-0.3	0.5	-2.1	1.8	-0.2	-1.5	-0.1
Real compensation per employee (private consumption deflator)	-0.3	0.7	0.5	-0.4	-0.2	-0.1	0.0	0.8	-1.6	-2.6	0.0
Nominal unit labour costs	4.1	2.0	2.4	2.0	1.6	4.5	4.0	-0.2	1.0	2.2	1.2
Real unit labour costs	0.9	-0.4	0.6	0.2	-0.7	2.0	1.9	-0.6	-0.3	0.6	-0.2

Cyprus	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	1.9	4.2	3.9	4.1	5.1	3.6	-1.9	1.3	0.4	-2.4	-5.4
Total employment	3.6	4.0	3.5	1.8	3.4	2.0	-0.4	-0.2	0.5	-4.2	-5.2
Labour productivity	-1.7	0.3	0.3	2.3	1.6	1.5	-1.4	1.5	0.0	1.8	-0.2
Annual average hours worked	-0.4	-2.0	-1.6	0.8	-0.5	-0.3	-0.5	0.4	0.1	0.7	0.0
Productivity per hour worked	-1.3	2.3	1.9	1.5	2.2	1.9	-0.9	1.1	-0.1	1.1	-0.2
Harmonized CPI	4.0	1.9	2.0	2.2	2.2	4.4	0.2	2.6	3.5	3.1	0.4
Price deflator GDP	4.8	3.3	3.0	3.4	4.4	4.6	0.1	1.9	2.3	1.6	-1.5
Nominal compensation per employee	7.9	2.1	2.0	3.2	2.8	3.4	2.6	2.6	2.5	-0.9	-6.0
Real compensation per employee (GDP deflator)	2.9	-1.1	-1.0	-0.2	-1.5	-1.2	2.5	0.6	0.2	-2.5	-4.5
Real compensation per employee (private consumption deflator)	4.2	0.4	-1.4	0.4	-0.5	-1.0	1.9	0.4	-0.8	-3.5	-5.7
Nominal unit labour costs	9.7	1.9	1.7	0.9	1.2	1.8	4.1	1.0	2.5	-2.7	-5.8
Real unit labour costs	4.7	-1.4	-1.3	-2.4	-3.1	-2.7	4.0	-0.9	0.2	-4.2	-4.3

Latvia	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	7.7	8.8	10.1	11.0	10.0	-2.8	-17.7	-1.3	5.3	5.2	4.1
Total employment	1.9	1.2	1.6	4.9	-1.4	-0.8	-14.3	-6.7	1.5	1.4	2.3
Labour productivity	5.6	7.5	8.4	5.8	11.5	-1.9	-3.9	5.7	3.7	3.7	1.8
Annual average hours worked	-0.6	-1.6	1.7	-0.9	-11.6	6.6	-2.5	-0.9	0.9	-0.9	-0.3
Productivity per hour worked	6.3	9.3	6.6	6.8	26.1	-8.0	-1.5	6.7	2.9	4.7	2.1
Harmonized CPI	2.9	6.2	6.9	6.6	10.1	15.3	3.3	-1.2	4.2	2.3	0.0
Price deflator GDP	3.8	7.0	10.2	11.4	20.3	12.4	-1.3	-0.9	6.0	3.3	1.4
Nominal compensation per employee	11.0	14.5	25.1	23.2	42.2	17.7	-11.5	-4.9	5.0	7.3	5.4
Real compensation per employee (GDP deflator)	7.0	7.0	13.5	10.6	18.2	4.7	-10.4	-4.1	-1.0	3.8	3.9
Real compensation per employee (private consumption deflator)	6.7	6.6	15.1	16.2	29.1	1.3	-14.2	-3.3	0.1	4.1	4.9
Nominal unit labour costs	5.2	6.5	15.4	16.5	27.5	20.0	-7.9	-10.1	1.2	3.5	3.5
Real unit labour costs	1.3	-0.5	4.7	4.6	6.0	6.8	-6.7	-9.3	-4.6	0.1	2.1

Lithuania	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	10.3	7.4	7.8	7.8	9.8	2.9	-14.8	1.6	6.0	3.7	3.3
Total employment	2.2	0.0	2.5	1.8	2.8	-0.7	-6.8	-11.9	0.5	1.8	1.3
Labour productivity	7.9	7.4	5.2	5.9	6.8	3.6	-8.6	15.3	5.5	1.9	2.0
Annual average hours worked	-0.9	1.3	3.4	-0.8	1.1	1.6	-2.3	1.1	-1.3	-0.1	1.0
Productivity per hour worked	8.9	6.0	1.7	6.7	5.7	1.9	-6.5	14.0	7.0	1.9	0.9
Harmonized CPI	-1.1	1.2	2.7	3.8	5.8	11.1	4.2	1.2	4.1	3.2	1.2
Price deflator GDP	-0.9	2.5	6.6	6.6	8.6	9.6	-3.4	2.3	5.4	2.6	1.7
Nominal compensation per employee	8.9	10.9	11.5	16.7	13.9	14.3	-9.9	7.2	6.3	3.8	5.9
Real compensation per employee (GDP deflator)	9.9	8.2	4.6	9.4	4.8	4.3	-6.7	4.8	0.9	1.1	4.1
Real compensation per employee (private consumption deflator)	10.6	11.1	9.0	11.4	7.5	3.1	-13.8	5.9	2.1	0.6	4.8
Nominal unit labour costs	1.0	3.3	6.0	10.2	6.6	10.4	-1.5	-7.0	0.7	1.9	3.8
Real unit labour costs	1.8	0.8	-0.6	3.3	-1.9	0.7	2.0	-9.1	-4.4	-0.7	2.1

Luxembourg	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	1.7	4.4	5.3	4.9	6.6	-0.7	-5.6	3.1	1.9	-0.2	2.1
Total employment	1.8	2.2	2.9	3.6	4.5	5.0	0.9	1.8	3.0	2.5	1.7
Labour productivity	-0.1	2.1	2.3	1.3	2.0	-5.5	-6.4	1.3	-1.0	-2.6	0.4
Annual average hours worked	-1.6	-0.1	-1.2	-0.1	0.5	0.9	-4.0	0.2	-0.1	-0.5	-1.1
Productivity per hour worked	1.4	2.2	3.6	1.4	1.5	-6.3	-2.4	1.1	-0.9	-2.1	1.5
Harmonized CPI	2.5	3.2	3.8	3.0	2.7	4.1	0.0	2.8	3.7	2.9	1.7
Price deflator GDP	5.9	1.8	4.8	6.8	3.7	0.4	0.8	7.2	4.2	3.0	3.7
Nominal compensation per employee	1.1	3.3	4.6	2.6	3.7	3.4	1.8	2.6	2.4	2.0	3.1
Real compensation per employee (GDP deflator)	-4.5	1.5	-0.2	-3.9	0.0	3.0	1.0	-4.2	-1.7	-1.0	-0.6
Real compensation per employee (private consumption deflator)	-1.0	0.9	1.5	0.2	1.5	0.0	0.7	1.3	-0.2	0.4	1.6
Nominal unit labour costs	1.3	1.2	2.3	1.3	1.6	9.4	8.7	1.4	3.4	4.7	2.7
Real unit labour costs	-4.4	-0.6	-2.4	-5.2	-2.0	8.9	7.9	-5.4	-0.7	1.6	-1.0

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Hungary	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	3.9	4.8	4.0	3.9	0.1	0.9	-6.8	1.1	1.6	-1.7	1.1
Total employment	0.0	-1.0	-0.3	0.4	0.7	-1.8	-2.5	0.8	0.3	0.0	0.4
Labour productivity	3.9	5.8	4.3	3.4	-0.6	2.7	-4.4	0.2	1.3	-1.7	0.7
Annual average hours worked	-1.4	0.4	0.0	-0.2	-0.3	0.2	-0.8	-0.3	0.9	-0.3	-0.3
Productivity per hour worked	5.3	5.4	4.2	3.6	-0.3	2.6	-3.6	0.5	0.4	-1.4	1.0
Harmonized CPI	4.7	6.8	3.5	4.0	7.9	6.0	4.0	4.7	3.9	5.7	1.7
Price deflator GDP	5.4	5.2	2.5	3.5	5.4	5.3	3.6	2.4	2.6	3.2	2.5
Nominal compensation per employee	9.9	10.3	7.1	5.6	5.5	7.2	-1.7	-0.5	3.6	0.8	4.6
Real compensation per employee (GDP deflator)	4.3	4.8	4.5	2.0	0.1	1.9	-5.0	-2.8	1.0	-2.3	2.0
Real compensation per employee (private consumption deflator)	5.4	4.4	3.4	2.0	-1.3	1.9	-5.4	-4.2	-0.6	-4.9	2.9
Nominal unit labour costs	5.8	4.2	2.7	2.0	6.2	4.4	2.8	-0.7	2.3	2.5	3.9
Real unit labour costs	0.4	-0.9	0.2	-1.4	0.7	-0.9	-0.7	-3.0	-0.3	-0.6	1.3

Malta	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	0.7	-0.3	3.6	2.6	4.1	3.9	-2.8	4.2	1.5	0.8	2.6
Total employment	-0.4	0.4	1.6	1.2	2.4	2.5	-0.2	2.1	2.5	2.4	3.3
Labour productivity	1.1	-0.7	2.0	1.4	1.7	1.4	-2.6	2.1	-1.0	-1.6	-0.7
Annual average hours worked	-1.7	-9.7	7.3	-0.3	1.9	-0.5	1.1	-1.3	6.3	-1.8	-0.8
Productivity per hour worked	2.8	10.1	-5.0	1.7	-0.2	1.9	-3.6	3.3	-6.8	0.1	0.1
Harmonized CPI	1.9	2.7	2.5	2.6	0.7	4.7	1.8	2.0	2.5	3.2	1.0
Price deflator GDP	3.2	1.4	2.4	2.8	2.9	3.0	2.8	4.0	2.1	2.2	2.1
Nominal compensation per employee	6.0	1.9	1.5	5.0	3.1	4.2	3.2	1.6	1.9	2.5	0.5
Real compensation per employee (GDP deflator)	2.7	0.5	-0.9	2.1	0.2	1.2	0.4	-2.3	-0.2	0.3	-1.6
Real compensation per employee (private consumption deflator)	5.3	-0.3	-1.4	3.3	1.0	0.9	0.5	-1.3	0.9	0.5	-0.3
Nominal unit labour costs	4.9	2.5	-0.5	3.5	1.4	2.8	6.0	-0.5	2.8	4.1	1.2
Real unit labour costs	1.7	1.1	-2.8	0.7	-1.5	-0.2	3.1	-4.3	0.7	1.9	-0.9

Netherlands	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	0.3	2.2	2.0	3.4	3.9	1.8	-3.7	1.5	0.9	-1.2	-0.8
Total employment	-0.5	-0.9	0.5	1.7	2.6	1.5	-0.7	-0.4	0.7	-0.2	-1.0
Labour productivity	0.8	3.1	1.5	1.7	1.3	0.3	-3.0	1.9	0.2	-1.1	0.2
Annual average hours worked	-0.5	-0.1	-0.4	-0.1	-0.2	0.2	-0.6	-0.2	0.1	0.1	-0.3
Productivity per hour worked	1.4	3.3	2.0	1.8	1.6	0.1	-2.4	2.1	0.2	-1.2	0.5
Harmonized CPI	2.2	1.4	1.5	1.7	1.6	2.2	1.0	0.9	2.5	2.8	2.6
Price deflator GDP	2.2	0.7	2.4	1.8	1.8	2.1	0.1	0.8	1.1	1.3	1.4
Nominal compensation per employee	3.4	3.4	1.1	2.3	3.0	3.4	2.1	1.3	1.4	1.7	2.2
Real compensation per employee (GDP deflator)	1.2	2.6	-1.3	0.5	1.1	1.2	2.1	0.4	0.2	0.4	0.8
Real compensation per employee (private consumption deflator)	1.0	2.4	-1.0	0.1	1.1	2.3	2.7	-0.2	-1.0	-0.5	0.0
Nominal unit labour costs	2.5	0.2	-0.4	0.6	1.6	3.0	5.3	-0.7	1.1	2.8	2.0
Real unit labour costs	0.3	-0.5	-2.8	-1.1	-0.2	0.9	5.2	-1.5	0.0	1.5	0.6

Austria	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	0.9	2.6	2.4	3.7	3.7	1.4	-3.8	1.8	2.8	0.9	0.3
Total employment	0.6	0.6	1.2	1.7	1.8	2.0	-0.7	1.0	1.7	1.3	0.7
Labour productivity	0.2	2.0	1.2	1.9	1.9	-0.5	-3.1	0.8	1.1	-0.4	-0.4
Annual average hours worked	-0.5	0.3	-1.0	-1.3	-0.3	-1.0	-2.9	-1.0	0.6	-1.3	-1.0
Productivity per hour worked	0.7	1.6	2.2	3.3	2.2	0.5	-0.2	1.9	0.5	0.9	0.7
Harmonized CPI	1.3	2.0	2.1	1.7	2.2	3.2	0.4	1.7	3.6	2.6	2.1
Price deflator GDP	1.1	1.7	2.0	1.9	2.0	1.7	1.6	1.4	2.0	1.7	1.7
Nominal compensation per employee	1.6	1.5	2.4	3.0	3.1	3.2	1.7	1.1	1.9	2.6	2.1
Real compensation per employee (GDP deflator)	0.5	-0.2	0.4	1.1	1.0	1.4	0.2	-0.3	-0.1	0.8	0.4
Real compensation per employee (private consumption deflator)	0.0	-0.4	-0.2	0.9	0.6	0.9	1.4	-0.7	-1.6	0.0	-0.1
Nominal unit labour costs	1.4	-0.4	1.2	1.1	1.2	3.7	5.0	0.3	0.8	3.0	2.5
Real unit labour costs	0.3	-2.1	-0.8	-0.8	-0.8	2.0	3.4	-1.1	-1.3	1.3	0.8

Poland	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	3.9	5.3	3.6	6.2	6.8	5.1	1.6	3.9	4.5	2.0	1.6
Total employment	:	:	2.2	3.2	4.5	3.8	0.4	-2.7	0.6	0.1	-0.1
Labour productivity	5.1	4.2	1.4	3.0	2.2	1.3	1.3	6.7	3.9	1.9	1.6
Annual average hours worked	0.3	0.0	-0.3	0.1	-0.1	-0.4	-0.8	-0.3	-0.3	-0.3	-0.6
Productivity per hour worked	4.8	4.1	1.7	2.9	2.3	1.7	2.0	7.0	4.2	2.1	2.3
Harmonized CPI	0.7	3.6	2.2	1.3	2.6	4.2	4.0	2.7	3.9	3.7	0.8
Price deflator GDP	0.4	4.1	2.6	1.5	4.0	3.1	3.7	1.4	3.2	2.4	0.9
Nominal compensation per employee	:	:	1.7	1.9	4.9	8.6	3.6	8.2	5.1	3.5	:
Real compensation per employee (GDP deflator)	:	:	-0.9	0.4	0.9	5.3	-0.1	6.7	1.9	1.0	:
Real compensation per employee (private consumption deflator)	:	:	-0.4	0.7	2.4	4.1	1.1	5.6	0.2	-0.2	:
Nominal unit labour costs	:	:	0.3	-1.0	2.6	7.2	2.3	1.4	1.1	1.5	:
Real unit labour costs	:	:	-2.3	-2.5	-1.3	4.0	-1.4	0.0	-2.0	-0.9	:

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Portugal	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	-0.9	1.6	0.8	1.4	2.4	0.0	-2.9	1.9	-1.3	-3.2	-1.4
Total employment	-0.6	-0.1	-0.3	0.5	0.0	0.5	-2.6	-1.5	-1.5	-4.2	-2.8
Labour productivity	-0.3	1.6	1.1	0.9	2.4	-0.5	-0.3	3.5	0.3	1.0	1.4
Annual average hours worked	-0.3	0.3	0.0	-0.5	0.7	-0.7	-0.2	-0.1	-1.0	0.5	1.2
Productivity per hour worked	0.0	1.3	1.1	1.4	1.7	0.2	-0.2	3.7	1.3	0.5	0.3
Harmonized CPI	3.3	2.5	2.1	3.0	2.4	2.7	-0.9	1.4	3.6	2.8	0.4
Price deflator GDP	3.0	2.5	2.5	2.8	2.8	1.6	0.9	0.6	0.3	-0.3	1.8
Nominal compensation per employee	3.5	2.6	4.7	1.8	3.6	3.0	2.8	2.0	-0.6	-2.0	3.4
Real compensation per employee (GDP deflator)	0.5	0.2	2.1	-0.9	0.7	1.4	1.8	1.4	-0.8	-1.7	1.6
Real compensation per employee (private consumption deflator)	0.5	0.1	1.9	-1.2	0.5	0.4	5.1	0.7	-3.0	-3.4	3.1
Nominal unit labour costs	3.8	1.0	3.6	0.9	1.1	3.5	3.1	-1.4	-0.9	-3.0	1.9
Real unit labour costs	0.8	-1.5	1.0	-1.8	-1.6	1.9	2.2	-2.1	-1.1	-2.7	0.1

Romania	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	5.2	8.5	4.2	7.9	6.3	7.3	-6.6	-1.1	2.3	0.6	3.5
Total employment	0.0	-1.7	-1.5	0.7	0.4	0.0	-2.0	-0.3	-0.8	1.3	-0.1
Labour productivity	5.3	10.3	5.8	7.1	5.9	7.3	-4.7	-0.9	3.2	-0.8	3.7
Annual average hours worked	-1.6	0.5	0.4	0.9	0.5	0.0	-0.6	-0.4	1.8	-0.4	0.4
Productivity per hour worked	7.0	9.8	5.4	6.2	5.4	7.3	-4.2	-0.5	1.4	-0.3	3.5
Harmonized CPI	15.3	11.9	9.1	6.6	4.9	7.9	5.6	6.1	5.8	3.4	3.2
Price deflator GDP	23.4	15.5	12.2	10.6	13.5	15.3	4.2	5.7	4.0	4.7	3.5
Nominal compensation per employee	27.4	13.8	29.1	12.4	22.0	31.9	-1.9	-3.3	-4.1	3.6	6.2
Real compensation per employee (GDP deflator)	3.2	-1.5	15.1	1.7	7.5	14.5	-5.9	-8.5	-7.8	-1.0	2.7
Real compensation per employee (private consumption deflator)	10.0	0.9	20.8	7.2	16.5	19.9	-5.4	-10.2	-8.0	-0.3	1.7
Nominal unit labour costs	21.0	3.1	22.0	4.9	15.2	22.9	2.9	-2.4	-7.0	4.4	2.5
Real unit labour costs	-2.0	-10.7	8.8	-5.1	1.5	6.6	-1.2	-7.7	-10.6	-0.2	-1.0

Slovenia	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	2.9	4.4	4.0	5.8	7.0	3.4	-7.9	1.3	0.7	-2.5	-1.1
Total employment	-0.3	0.4	-0.5	1.6	3.3	2.6	-1.8	-2.2	-1.6	-0.8	-2.0
Labour productivity	3.2	4.0	4.5	4.2	3.5	0.8	-6.2	3.5	2.4	-1.7	0.9
Annual average hours worked	0.2	0.8	-2.3	-1.7	-0.8	0.9	-6.0	0.7	-1.5	-1.3	0.7
Productivity per hour worked	3.0	3.2	6.9	6.1	4.3	-0.1	-0.2	2.8	3.9	-0.4	0.2
Harmonized CPI	5.7	3.7	2.5	2.5	3.8	5.5	0.9	2.1	2.1	2.8	1.9
Price deflator GDP	5.5	3.3	1.7	2.1	4.2	4.1	3.3	-1.1	1.2	0.2	1.0
Nominal compensation per employee	7.8	7.7	6.0	5.4	6.2	7.2	1.8	3.9	1.6	-1.0	0.1
Real compensation per employee (GDP deflator)	2.2	4.3	4.3	3.2	1.9	3.0	-1.4	5.0	0.5	-1.2	-0.9
Real compensation per employee (private consumption deflator)	2.5	4.6	3.7	2.9	2.0	1.7	1.2	2.4	0.0	-2.5	-0.9
Nominal unit labour costs	4.4	3.6	1.5	1.1	2.6	6.4	8.6	0.4	-0.7	0.8	-0.8
Real unit labour costs	-1.0	0.3	-0.2	-1.0	-1.6	2.1	5.1	1.5	-1.9	0.5	-1.8

Slovakia	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	4.8	5.1	6.7	8.3	10.5	5.8	-4.9	4.4	3.0	1.8	0.9
Total employment	1.1	-0.2	1.6	2.1	2.1	3.2	-2.0	-1.5	1.8	0.1	-0.8
Labour productivity	3.7	5.3	5.0	6.1	8.2	2.4	-3.0	6.0	1.2	1.7	1.7
Annual average hours worked	-3.2	2.6	1.6	0.3	0.9	0.1	-0.7	1.5	-0.8	-0.2	0.0
Productivity per hour worked	7.1	2.6	3.3	5.8	7.2	2.3	-2.3	4.4	2.0	2.0	1.7
Harmonized CPI	8.4	7.5	2.8	4.3	1.9	3.9	0.9	0.7	4.1	3.7	1.5
Price deflator GDP	5.3	5.8	2.4	2.9	1.1	2.9	-1.2	0.5	1.6	1.3	0.5
Nominal compensation per employee	7.8	8.1	9.1	7.9	8.7	7.0	2.5	5.1	2.0	2.8	0.8
Real compensation per employee (GDP deflator)	2.4	2.1	6.6	4.8	7.5	4.0	3.7	4.6	0.3	1.5	0.3
Real compensation per employee (private consumption deflator)	1.2	0.7	6.3	2.9	5.9	2.4	2.4	4.1	-1.8	-0.6	-0.5
Nominal unit labour costs	4.0	2.6	3.9	1.7	0.5	4.4	5.7	-0.9	0.8	1.0	-0.9
Real unit labour costs	-1.2	-3.0	1.5	-1.2	-0.6	1.5	7.0	-1.4	-0.8	-0.2	-1.4

Finland	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	2.0	4.1	2.9	4.4	5.3	0.3	-8.5	3.4	2.8	-1.0	-1.4
Total employment	0.1	0.4	1.4	1.8	2.2	2.6	-2.6	-0.1	1.5	0.1	-1.3
Labour productivity	2.0	3.7	1.5	2.5	3.1	-2.2	-6.1	3.4	1.3	-1.1	-0.1
Annual average hours worked	-0.4	0.3	-0.4	-0.4	-0.1	-1.0	-0.9	0.3	-0.2	0.1	-0.6
Productivity per hour worked	2.4	3.4	2.0	2.9	3.2	-1.2	-5.2	3.2	1.5	-1.2	0.5
Harmonized CPI	1.3	0.1	0.8	1.3	1.6	3.9	1.6	1.7	3.3	3.2	2.2
Price deflator GDP	-0.7	0.5	0.5	0.8	3.0	2.9	1.5	0.3	2.7	2.9	2.0
Nominal compensation per employee	2.7	3.7	3.7	2.9	3.7	4.4	2.3	1.8	3.2	3.5	2.1
Real compensation per employee (GDP deflator)	3.4	3.2	3.3	2.0	0.6	1.4	0.8	1.4	0.5	0.5	0.2
Real compensation per employee (private consumption deflator)	3.3	3.3	2.9	1.4	1.4	0.9	0.9	-0.1	-0.3	0.5	0.5
Nominal unit labour costs	0.8	-0.1	2.2	0.3	0.5	6.7	9.0	-1.6	1.9	4.6	2.2
Real unit labour costs	1.5	-0.5	1.7	-0.5	-2.4	3.7	7.4	-2.0	-0.8	1.6	0.2

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Sweden	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	2.3	4.2	3.2	4.3	3.3	-0.6	-5.0	6.6	2.9	0.9	1.6
Total employment	-0.6	-0.7	0.3	1.7	2.3	0.9	-2.4	1.0	2.1	0.7	1.0
Labour productivity	2.9	5.0	2.9	2.6	1.0	-1.5	-2.7	5.5	0.8	0.2	0.6
Annual average hours worked	-0.8	1.5	0.0	-0.4	0.8	0.3	-0.5	1.6	-0.2	-0.9	-0.6
Productivity per hour worked	3.8	3.4	2.9	2.9	0.2	-1.8	-2.2	3.9	0.9	1.1	1.2
Harmonized CPI	2.3	1.0	0.8	1.5	1.7	3.3	1.9	1.9	1.4	0.9	0.4
Price deflator GDP	1.8	0.3	0.9	1.9	2.8	3.1	2.1	0.8	1.3	1.0	0.9
Nominal compensation per employee	3.2	4.0	3.1	2.1	5.2	1.5	1.6	3.1	0.9	3.1	1.4
Real compensation per employee (GDP deflator)	1.4	3.7	2.2	0.1	2.4	-1.6	-0.4	2.3	-0.4	2.0	0.5
Real compensation per employee (private consumption deflator)	1.5	3.2	2.0	0.8	3.8	-1.5	-0.5	1.6	-0.7	1.9	0.7
Nominal unit labour costs	0.2	-0.9	0.2	-0.5	4.2	3.1	4.4	-2.3	0.1	2.9	0.8
Real unit labour costs	-1.5	-1.2	-0.7	-2.4	1.4	-0.1	2.3	-3.1	-1.2	1.9	-0.2

United Kingdom	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	3.9	3.2	3.2	2.8	3.4	-0.8	-5.2	1.7	1.1	0.3	1.7
Total employment	0.9	1.1	1.0	0.9	0.7	0.7	-1.6	0.2	0.5	1.2	1.3
Labour productivity	3.0	2.1	2.2	1.9	2.7	-1.5	-3.6	1.5	0.6	-0.9	0.4
Annual average hours worked	-0.6	-0.2	0.2	-0.3	0.1	-0.3	-1.3	0.3	-0.1	0.8	0.5
Productivity per hour worked	3.6	2.3	2.0	2.2	2.6	-1.2	-2.3	1.1	0.7	-1.7	0.0
Harmonized CPI	1.4	1.3	2.1	2.3	2.3	3.6	2.2	3.3	4.5	2.8	2.6
Price deflator GDP	2.2	2.4	2.0	2.9	2.3	3.2	2.2	3.1	2.3	1.1	1.7
Nominal compensation per employee	4.8	4.1	3.6	5.3	4.8	1.7	2.4	3.1	1.7	1.7	1.8
Real compensation per employee (GDP deflator)	2.6	1.7	1.6	2.3	2.4	-1.5	0.2	0.0	-0.6	0.5	0.1
Real compensation per employee (private consumption deflator)	3.3	2.2	1.1	2.6	2.1	-1.5	0.5	-0.8	-2.1	-0.2	-0.4
Nominal unit labour costs	1.8	2.0	1.4	3.4	2.0	3.2	6.2	1.7	1.1	2.6	1.3
Real unit labour costs	-0.4	-0.4	-0.6	0.5	-0.3	0.0	3.9	-1.4	-1.2	1.5	-0.4

Iceland	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	2.4	7.8	7.2	4.7	6.0	1.2	-6.6	-4.1	2.7	1.5	3.3
Total employment	0.1	-0.5	3.3	5.1	4.5	0.8	-6.2	-0.4	0.0	1.1	3.3
Labour productivity	2.3	8.4	3.8	-0.4	1.4	0.4	-0.4	-3.8	2.7	0.3	-0.1
Annual average hours worked	-0.1	0.9	-0.5	-0.7	-1.2	-0.2	-4.1	-0.7	2.5	-1.5	:
Productivity per hour worked	2.4	7.5	4.3	0.3	2.6	0.6	3.9	-3.1	0.2	1.8	:
Harmonized CPI	1.4	2.3	1.4	4.6	3.6	12.8	16.3	7.5	4.2	6.0	4.1
Price deflator GDP	0.6	2.5	2.8	8.8	5.7	11.8	8.3	6.9	3.3	2.9	1.8
Nominal compensation per employee	2.0	10.3	8.9	12.4	9.8	2.8	-4.5	7.2	8.2	5.6	3.2
Real compensation per employee (GDP deflator)	1.4	7.6	5.9	3.3	4.0	-8.1	-11.8	0.2	4.8	2.7	1.4
Real compensation per employee (private consumption deflator)	0.7	7.1	6.9	4.4	5.0	-9.9	-16.0	3.6	4.0	0.1	-0.4
Nominal unit labour costs	-0.3	1.8	4.9	12.9	8.3	2.4	-4.1	11.4	5.4	5.3	3.3
Real unit labour costs	-0.9	-0.7	2.0	3.7	2.5	-8.4	-11.5	4.2	2.1	2.4	1.5

Macedonia FYR	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	2.8	4.6	4.4	5.0	6.1	5.0	-0.9	2.9	2.8	-0.4	2.9
Total employment	-1.9	-2.2	2.1	3.2	4.3	6.2	2.5	1.5	3.1	0.8	4.3
Labour productivity	4.8	6.9	2.2	1.8	1.8	-1.2	-3.4	1.4	-0.3	-1.2	-1.2
Annual average hours worked	:	:	:	:	:	:	:	:	:	:	:
Productivity per hour worked	:	:	:	:	:	:	:	:	:	:	:
Harmonized CPI	1.2	-0.4	0.5	3.2	2.3	8.3	-0.8	1.6	3.9	3.3	2.8
Price deflator GDP	3.0	0.8	3.8	3.3	7.4	7.5	0.7	2.7	3.1	0.1	:
Nominal compensation per employee	8.0	-2.9	-3.3	11.7	-4.8	9.0	6.9	6.0	-3.9	2.8	2.4
Real compensation per employee (GDP deflator)	4.8	-3.6	-6.8	8.1	-11.4	1.4	6.2	3.2	-6.8	2.7	2.1
Real compensation per employee (private consumption deflator)	0.6	-1.4	-3.9	9.3	-8.0	-0.8	7.1	5.0	-7.2	0.4	0.3
Nominal unit labour costs	3.0	-9.2	-5.4	9.7	-6.5	10.3	10.6	4.6	-3.6	4.1	3.6
Real unit labour costs	0.0	-9.9	-8.8	6.2	-12.9	2.6	9.9	1.8	-6.5	3.9	3.3

Turkey	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Real GDP	5.3	9.4	8.4	6.9	4.7	0.7	-4.8	9.2	8.8	2.1	4.0
Total employment	-1.0	-7.2	2.2	1.8	1.5	2.2	0.4	6.2	6.7	3.0	3.0
Labour productivity	6.3	17.8	6.1	5.0	3.1	-1.5	-5.2	2.8	1.9	-0.9	1.0
Annual average hours worked	:	:	:	:	:	:	:	:	:	:	:
Productivity per hour worked	:	:	:	:	:	:	:	:	:	:	:
Harmonized CPI	25.3	10.1	8.1	9.3	8.8	10.4	6.3	8.6	6.5	9.0	7.5
Price deflator GDP	23.3	12.4	7.1	9.3	6.2	12.0	5.3	5.8	:	:	:
Nominal compensation per employee	27.9	16.5	7.1	10.8	9.4	7.5	4.7	7.0	-2.1	11.8	10.7
Real compensation per employee (GDP deflator)	3.7	3.6	0.0	1.4	3.0	-4.0	-0.6	1.3	-9.8	4.6	4.5
Real compensation per employee (private consumption deflator)	3.7	5.1	-1.1	0.9	2.7	-2.9	-0.3	-1.3	-10.1	3.4	4.0
Nominal unit labour costs	20.3	-1.1	1.0	5.5	6.1	9.2	10.4	4.1	-3.9	12.7	9.6
Real unit labour costs	-2.4	-12.0	-5.7	-3.5	-0.1	-2.5	4.8	-1.5	-11.5	5.5	3.4

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Indicator 1: MK: break in series 2011, 2013.

Indicator 2: LV: break in series 2007-2013; PL: break in series 2010.

Indicator 3: EL: break in series 2005; LV: break in series 2007-2013; PL: break in series 2005, 2010, 2012; JP: forecast 2009-2011.

Indicator 7: MK: estimate 2011.

Indicator 8, 9, 10: LV: break in series 2007-2013; PL: break in series 2010; MK: estimate 2011, 2013.

Indicator 11: LV: break in series 2007-2013; PL: break in series 2010; MK: estimate 2011.

Indicator 12: LV: break in series 2007-2013; PL: break in series 2010.

2. LABOUR MARKET INDICATORS

Labour market indicators: European Union 28

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	484 726	486 269	488 577	490 770	492 771	494 885	496 600	497 256	498 336	499 598	500 457
2. Population aged 15-64	326 015	326 855	329 024	330 712	332 023	333 197	333 735	333 335	333 406	332 854	331 890
3. Total employment (000)	216 152	217 563	219 763	223 355	227 360	229 610	225 530	223 946	224 505	223 973	223 250
4. Population in employment aged 15-64	203 804	205 553	208 535	212 811	216 714	219 032	215 145	213 476	213 947	213 327	212 702
5. Employment rate (% population aged 20-64)	67.0	67.4	67.9	68.9	69.8	70.3	69.0	68.5	68.5	68.4	68.4
6. Employment rate (% population aged 15-64)	62.5	62.9	63.4	64.3	65.3	65.7	64.5	64.0	64.2	64.1	64.1
7. Employment rate (% population aged 15-24)	36.0	36.1	35.9	36.5	37.3	37.3	34.9	33.9	33.5	32.7	32.3
8. Employment rate (% population aged 25-54)	76.2	76.6	77.0	78.1	79.0	79.4	78.0	77.6	77.6	77.2	76.8
9. Employment rate (% population aged 55-64)	39.9	40.6	42.2	43.4	44.5	45.5	45.9	46.2	47.3	48.8	50.1
10. FTE employment rate (% population aged 15-64)	58.0	57.8	:	:	59.9	60.4	59.0	58.5	58.5	58.3	58.2
11. Self-employed (% total employment)	16.4	16.1	16.0	15.7	15.5	15.3	15.4	15.6	15.4	15.5	15.4
12. Part-time employment (% total employment)	16.5	17.2	17.8	18.0	18.1	18.1	18.7	19.2	19.5	19.9	20.3
13. Fixed term contracts (% total employees)	12.7	13.3	14.0	14.5	14.6	14.1	13.6	13.9	14.1	13.7	13.8
14. Employment in Services (% total employment)	67.8	68.4	68.8	69.2	69.5	69.8	70.8	71.5	71.8	72.1	72.5
15. Employment in Industry (% total employment)	25.7	25.4	25.2	25.0	25.0	24.8	23.8	23.1	23.0	22.7	22.4
16. Employment in Agriculture (% total employment)	6.6	6.2	6.1	5.7	5.5	5.4	5.4	5.4	5.2	5.2	5.1
17. Activity rate (% population aged 15-64)	68.9	69.3	69.7	70.2	70.4	70.7	70.9	70.9	71.1	71.7	72.0
18. Activity rate (% population aged 15-24)	44.3	44.3	44.2	44.2	44.1	44.2	43.6	42.9	42.6	42.4	42.2
19. Activity rate (% population aged 25-54)	82.9	83.4	83.6	84.1	84.3	84.6	84.7	84.9	85.0	85.3	85.3
20. Activity rate (% population aged 55-64)	42.6	43.5	45.1	46.2	47.1	48.0	49.0	49.7	50.8	52.6	54.3
21. Total unemployment (000)	20 840	21 335	21 027	19 399	17 059	16 836	21 493	23 149	23 230	25 382	26 388
22. Unemployment rate (% labour force)	9.1	9.3	9.0	8.2	7.2	7.0	9.0	9.6	9.6	10.4	10.8
23. Youth unemployment rate (% labour force 15-24)	18.7	19.1	18.9	17.6	15.7	15.8	20.1	21.1	21.5	23.0	23.5
24. Long term unemployment rate (% labour force)	4.2	4.3	4.1	3.7	3.1	2.6	3.0	3.9	4.1	4.7	5.1
25. Youth unemployment ratio (% population aged 15-24)	8.3	8.3	8.3	7.7	6.8	6.9	8.7	9.0	9.1	9.7	9.8

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	236 073	236 851	238 115	239 358	240 382	241 455	242 362	242 856	243 483	244 217	244 710
2. Population aged 15-64	162 444	162 919	164 054	165 010	165 651	166 231	166 479	166 415	166 475	166 260	165 777
3. Total employment (000)	121 232	121 522	122 566	124 181	126 146	126 905	123 498	122 415	122 521	121 896	121 157
4. Population in employment aged 15-64	114 137	114 599	116 070	118 074	119 981	120 782	117 547	116 430	116 470	115 765	115 069
5. Employment rate (% population aged 20-64)	75.4	75.5	76.0	76.8	77.7	77.9	75.7	75.0	74.9	74.5	74.2
6. Employment rate (% population aged 15-64)	70.3	70.3	70.8	71.6	72.4	72.7	70.6	70.0	70.0	69.6	69.4
7. Employment rate (% population aged 15-24)	38.9	39.0	38.9	39.5	40.3	40.3	37.0	36.1	35.6	34.7	34.2
8. Employment rate (% population aged 25-54)	84.7	84.7	85.1	85.9	86.7	86.8	84.6	83.8	83.8	83.1	82.5
9. Employment rate (% population aged 55-64)	49.7	50.3	51.5	52.5	53.8	54.9	54.7	54.5	55.1	56.3	57.5
10. FTE employment rate (% population aged 15-64)	68.8	68.5	:	:	70.4	70.6	68.4	67.7	67.5	67.0	66.7
11. Self-employed (% total employment)	19.3	19.1	18.9	18.7	18.5	18.3	18.6	18.8	18.7	18.8	18.7
12. Part-time employment (% total employment)	6.7	7.1	7.4	7.7	7.7	7.8	8.3	8.7	9.0	9.4	9.8
13. Fixed term contracts (% total employees)	12.0	12.7	13.5	14.0	13.9	13.4	12.8	13.4	13.6	13.2	13.3
14. Employment in Services (% total employment)	57.6	58.0	58.3	58.6	58.8	58.9	59.8	60.6	61.0	61.4	61.8
15. Employment in Industry (% total employment)	35.1	35.0	34.8	34.9	35.0	35.0	34.1	33.2	32.9	32.5	32.1
16. Employment in Agriculture (% total employment)	7.3	7.0	6.8	6.5	6.3	6.0	6.1	6.2	6.1	6.1	6.1
17. Activity rate (% population aged 15-64)	76.9	77.0	77.3	77.5	77.6	77.8	77.7	77.5	77.5	77.9	78.0
18. Activity rate (% population aged 15-24)	47.9	47.8	47.7	47.6	47.5	47.7	46.8	46.0	45.6	45.3	44.9
19. Activity rate (% population aged 25-54)	91.4	91.4	91.7	91.9	91.9	91.9	91.7	91.6	91.5	91.7	91.4
20. Activity rate (% population aged 55-64)	53.2	53.9	55.2	56.0	56.9	57.8	58.5	58.8	59.5	61.1	62.6
21. Total unemployment (000)	10 768	11 021	10 865	9 928	8 680	8 744	11 861	12 717	12 570	13 746	14 272
22. Unemployment rate (% labour force)	8.5	8.6	8.4	7.6	6.6	6.6	9.0	9.7	9.6	10.4	10.8
23. Youth unemployment rate (% labour force 15-24)	18.6	18.8	18.8	17.2	15.4	15.8	21.2	21.9	22.0	23.6	24.1
24. Long term unemployment rate (% labour force)	3.8	3.9	3.8	3.5	2.9	2.5	2.9	3.9	4.2	4.7	5.2
25. Youth unemployment ratio (% population aged 15-24)	8.9	8.8	8.8	8.1	7.2	7.5	9.8	10.0	10.0	10.7	10.8

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	248 652	249 417	250 460	251 412	252 389	253 430	254 238	254 401	254 853	255 381	255 748
2. Population aged 15-64	163 571	163 936	164 970	165 702	166 373	166 966	167 256	166 920	166 931	166 595	166 113
3. Total employment (000)	94 920	96 041	97 197	99 174	101 214	102 705	102 032	101 531	101 984	102 077	102 093
4. Population in employment aged 15-64	89 667	90 954	92 465	94 737	96 733	98 251	97 598	97 047	97 477	97 562	97 633
5. Employment rate (% population aged 20-64)	58.6	59.3	59.9	61.1	62.1	62.8	62.3	62.0	62.2	62.4	62.5
6. Employment rate (% population aged 15-64)	54.8	55.5	56.0	57.2	58.1	58.8	58.4	58.1	58.4	58.6	58.8
7. Employment rate (% population aged 15-24)	33.0	33.1	32.9	33.4	34.1	34.3	32.8	31.7	31.3	30.7	30.4
8. Employment rate (% population aged 25-54)	67.7	68.5	68.9	70.2	71.3	72.1	71.5	71.3	71.3	71.2	71.1
9. Employment rate (% population aged 55-64)	30.6	31.5	33.5	34.8	35.8	36.7	37.7	38.5	40.1	41.7	43.3
10. FTE employment rate (% population aged 15-64)	47.6	47.6	:	:	49.8	50.5	50.0	49.7	49.9	49.9	50.0
11. Self-employed (% total employment)	12.7	12.4	12.3	12.0	11.8	11.6	11.6	11.7	11.5	11.6	11.5
12. Part-time employment (% total employment)	28.9	29.9	30.8	31.0	31.0	30.9	31.3	31.8	32.0	32.4	32.7
13. Fixed term contracts (% total employees)	13.4	13.9	14.5	15.1	15.3	15.0	14.5	14.6	14.6	14.2	14.3
14. Employment in Services (% total employment)	80.4	81.1	81.6	82.1	82.4	82.8	83.7	84.3	84.4	84.6	84.9
15. Employment in Industry (% total employment)	14.0	13.7	13.3	13.1	12.9	12.6	11.8	11.3	11.3	11.3	11.2
16. Employment in Agriculture (% total employment)	5.6	5.2	5.1	4.8	4.6	4.6	4.5	4.4	4.3	4.1	4.0
17. Activity rate (% population aged 15-64)	60.9	61.7	62.2	62.9	63.2	63.7	64.1	64.4	64.8	65.5	66.0
18. Activity rate (% population aged 15-24)	40.6	40.7	40.5	40.6	40.5	40.7	40.3	39.6	39.5	39.4	39.3
19. Activity rate (% population aged 25-54)	74.4	75.4	75.6	76.4	76.7	77.3	77.7	78.1	78.4	79.0	79.1
20. Activity rate (% population aged 55-64)	32.7	33.7	35.7	37.0	37.9	38.7	40.1	41.0	42.7	44.7	46.5
21. Total unemployment (000)	10 072	10 314	10 162	9 471	8 379	8 092	9 632	10 432	10 659	11 637	12 117
22. Unemployment rate (% labour force)	9.9	10.0	9.8	9.0	7.9	7.5	8.9	9.6	9.7	10.5	10.9
23. Youth unemployment rate (% labour force 15-24)	18.7	19.3	19.1	18.0	16.1	15.8	18.8	20.2	20.8	22.2	22.7
24. Long term unemployment rate (% labour force)	4.7	4.7	4.5	4.1	3.4	2.8	3.1	3.8	4.1	4.6	5.1
25. Youth unemployment ratio (% population aged 15-24)	7.5	7.7	7.7	7.2	6.5	6.3	7.5	8.0	8.2	8.7	8.9

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Labour market indicators: European Union 27

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	480 508	482 054	484 360	486 552	488 552	490 660	492 375	493 031	494 111	495 373	496 232
2. Population aged 15-64	323 237	324 104	326 277	327 968	329 280	330 455	330 999	330 577	330 660	330 100	329 148
3. Total employment (000)	214 679	216 068	218 257	221 792	225 775	227 975	223 925	222 423	223 018	222 544	221 835
4. Population in employment aged 15-64	202 322	204 048	207 024	211 285	215 146	217 448	213 596	211 988	212 509	211 931	211 354
5. Employment rate (% population aged 20-64)	67.0	67.4	68.0	69.0	69.9	70.3	69.0	68.6	68.6	68.5	68.5
6. Employment rate (% population aged 15-64)	62.6	63.0	63.5	64.4	65.3	65.8	64.5	64.1	64.3	64.2	64.2
7. Employment rate (% population aged 15-24)	36.1	36.1	36.0	36.6	37.3	37.4	35.0	34.0	33.6	32.9	32.5
8. Employment rate (% population aged 25-54)	76.2	76.7	77.0	78.1	79.0	79.5	78.1	77.6	77.6	77.3	76.9
9. Employment rate (% population aged 55-64)	40.0	40.7	42.3	43.5	44.6	45.6	46.0	46.3	47.4	48.9	50.3
10. FTE employment rate (% population aged 15-64)	58.1	57.9	58.3	59.1	59.9	60.4	59.1	58.6	58.6	58.4	58.3
11. Self-employed (% total employment)	16.4	16.1	16.0	15.7	15.5	15.3	15.5	15.6	15.4	15.5	15.5
12. Part-time employment (% total employment)	16.6	17.2	17.8	18.1	18.1	18.2	18.7	19.3	19.5	20.0	20.4
13. Fixed term contracts (% total employees)	12.7	13.3	14.0	14.5	14.6	14.2	13.6	14.0	14.1	13.7	13.8
14. Employment in Services (% total employment)	67.8	68.4	68.8	69.2	69.5	69.8	70.8	71.5	71.8	72.1	72.5
15. Employment in Industry (% total employment)	25.7	25.4	25.2	25.0	25.0	24.8	23.8	23.1	23.0	22.7	22.4
16. Employment in Agriculture (% total employment)	6.6	6.2	6.1	5.7	5.5	5.4	5.4	5.4	5.2	5.2	5.1
17. Activity rate (% population aged 15-64)	68.9	69.3	69.7	70.2	70.4	70.8	70.9	71.0	71.2	71.8	72.1
18. Activity rate (% population aged 15-24)	44.3	44.3	44.2	44.2	44.2	44.3	43.7	43.0	42.7	42.6	42.3
19. Activity rate (% population aged 25-54)	82.9	83.4	83.7	84.2	84.3	84.7	84.8	84.9	85.0	85.4	85.3
20. Activity rate (% population aged 55-64)	42.7	43.6	45.2	46.3	47.2	48.1	49.1	49.8	50.9	52.8	54.5
21. Total unemployment (000)	20 588	21 085	20 797	19 197	16 888	16 686	21 333	22 944	22 998	25 110	26 101
22. Unemployment rate (% labour force)	9.1	9.2	9.0	8.2	7.2	7.0	9.0	9.6	9.6	10.4	10.8
23. Youth unemployment rate (% labour force 15-24)	18.5	18.9	18.8	17.5	15.7	15.8	20.1	21.0	21.4	22.9	23.3
24. Long term unemployment rate (% labour force)	4.2	4.2	4.1	3.7	3.1	2.6	3.0	3.8	4.1	4.6	5.1
25. Youth unemployment ratio (% population aged 15-24)	8.2	8.2	8.2	7.6	6.8	6.9	8.7	9.0	9.1	9.7	9.8

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	234 073	234 839	236 109	237 349	238 387	239 455	240 367	240 864	241 474	242 193	242 703
2. Population aged 15-64	161 083	161 563	162 699	163 657	164 292	164 874	165 133	165 063	165 120	164 882	164 415
3. Total employment (000)	120 418	120 694	121 737	123 326	125 265	126 000	122 629	121 595	121 711	121 118	120 400
4. Population in employment aged 15-64	113 316	113 761	115 235	117 236	119 105	119 900	116 707	115 627	115 685	115 005	114 350
5. Employment rate (% population aged 20-64)	75.5	75.6	76.0	76.9	77.7	77.9	75.8	75.1	75.0	74.6	74.4
6. Employment rate (% population aged 15-64)	70.3	70.4	70.8	71.6	72.5	72.7	70.7	70.1	70.1	69.7	69.5
7. Employment rate (% population aged 15-24)	39.0	39.1	38.9	39.6	40.4	40.3	37.0	36.1	35.7	34.8	34.3
8. Employment rate (% population aged 25-54)	84.8	84.8	85.2	86.0	86.8	86.8	84.6	83.9	83.9	83.2	82.6
9. Employment rate (% population aged 55-64)	49.8	50.4	51.6	52.6	53.8	54.9	54.8	54.6	55.2	56.4	57.6
10. FTE employment rate (% population aged 15-64)	68.8	68.5	68.9	69.5	70.4	70.6	68.5	67.7	67.6	67.1	66.8
11. Self-employed (% total employment)	19.3	19.1	18.9	18.7	18.5	18.3	18.6	18.9	18.7	18.8	18.8
12. Part-time employment (% total employment)	6.7	7.1	7.4	7.7	7.7	7.8	8.3	8.7	9.0	9.4	9.9
13. Fixed term contracts (% total employees)	12.0	12.8	13.5	14.0	14.0	13.4	12.8	13.4	13.6	13.2	13.3
14. Employment in Services (% total employment)	57.5	58.0	58.3	58.6	58.7	58.9	59.8	60.6	61.0	61.4	61.8
15. Employment in Industry (% total employment)	35.1	35.0	34.9	34.9	35.0	35.1	34.1	33.2	32.9	32.5	32.1
16. Employment in Agriculture (% total employment)	7.4	7.0	6.9	6.5	6.3	6.0	6.1	6.2	6.1	6.1	6.1
17. Activity rate (% population aged 15-64)	76.9	77.0	77.3	77.6	77.7	77.9	77.7	77.6	77.6	78.0	78.1
18. Activity rate (% population aged 15-24)	47.9	47.8	47.7	47.6	47.6	47.8	46.8	46.1	45.7	45.5	45.1
19. Activity rate (% population aged 25-54)	91.5	91.5	91.7	92.0	91.9	92.0	91.8	91.7	91.6	91.7	91.5
20. Activity rate (% population aged 55-64)	53.3	54.0	55.2	56.1	57.0	57.9	58.6	58.9	59.5	61.2	62.8
21. Total unemployment (000)	10 643	10 901	10 751	9 832	8 599	8 676	11 785	12 611	12 442	13 595	14 112
22. Unemployment rate (% labour force)	8.4	8.6	8.4	7.6	6.6	6.6	9.0	9.7	9.5	10.4	10.8
23. Youth unemployment rate (% labour force 15-24)	18.5	18.8	18.7	17.2	15.3	15.8	21.2	21.8	21.9	23.5	23.9
24. Long term unemployment rate (% labour force)	3.8	3.9	3.8	3.5	2.8	2.4	2.9	3.9	4.1	4.6	5.1
25. Youth unemployment ratio (% population aged 15-24)	8.9	8.8	8.8	8.1	7.2	7.5	9.8	10.0	10.0	10.6	10.7

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	246 434	247 213	248 249	249 203	250 165	251 205	252 008	252 167	252 637	253 180	253 530
2. Population aged 15-64	162 154	162 542	163 578	164 311	164 988	165 581	165 866	165 515	165 540	165 218	164 733
3. Total employment (000)	94 261	95 375	96 520	98 466	100 510	101 975	101 296	100 828	101 307	101 426	101 435
4. Population in employment aged 15-64	89 006	90 287	91 789	94 049	96 041	97 548	96 890	96 360	96 824	96 926	97 004
5. Employment rate (% population aged 20-64)	58.7	59.4	60.0	61.2	62.1	62.8	62.3	62.1	62.3	62.5	62.7
6. Employment rate (% population aged 15-64)	54.9	55.5	56.1	57.2	58.2	58.9	58.4	58.2	58.5	58.7	58.9
7. Employment rate (% population aged 15-24)	33.1	33.1	33.0	33.5	34.2	34.4	32.9	31.8	31.4	30.8	30.6
8. Employment rate (% population aged 25-54)	67.7	68.5	68.9	70.2	71.3	72.1	71.5	71.3	71.4	71.3	71.1
9. Employment rate (% population aged 55-64)	30.7	31.6	33.6	34.9	35.9	36.8	37.8	38.6	40.2	41.9	43.4
10. FTE employment rate (% population aged 15-64)	47.7	47.6	48.0	48.9	49.8	50.5	50.0	49.7	49.9	49.9	50.1
11. Self-employed (% total employment)	12.7	12.4	12.3	12.0	11.8	11.6	11.6	11.7	11.5	11.5	11.5
12. Part-time employment (% total employment)	29.1	30.1	30.9	31.1	31.2	31.0	31.4	31.9	32.2	32.6	32.9
13. Fixed term contracts (% total employees)	13.4	13.9	14.5	15.1	15.3	15.1	14.5	14.6	14.6	14.2	14.3
14. Employment in Services (% total employment)	80.4	81.1	81.6	82.2	82.5	82.9	83.8	84.3	84.4	84.6	84.9
15. Employment in Industry (% total employment)	14.0	13.7	13.3	13.1	12.9	12.5	11.8	11.3	11.3	11.2	11.2
16. Employment in Agriculture (% total employment)	5.6	5.2	5.1	4.8	4.6	4.6	4.5	4.4	4.2	4.1	4.0
17. Activity rate (% population aged 15-64)	61.0	61.7	62.2	62.9	63.2	63.7	64.2	64.4	64.8	65.6	66.1
18. Activity rate (% population aged 15-24)	40.6	40.8	40.6	40.7	40.6	40.8	40.4	39.7	39.6	39.6	39.4
19. Activity rate (% population aged 25-54)	74.4	75.4	75.6	76.4	76.7	77.3	77.7	78.1	78.4	79.0	79.2
20. Activity rate (% population aged 55-64)	32.8	33.8	35.8	37.1	38.0	38.8	40.2	41.2	42.8	44.8	46.7
21. Total unemployment (000)	9 945	10 184	10 046	9 365	8 289	8 010	9 548	10 333	10 556	11 516	11 988
22. Unemployment rate (% labour force)	9.9	10.0	9.7	9.0	7.9	7.5	8.9	9.5	9.7	10.4	10.8
23. Youth unemployment rate (% labour force 15-24)	18.6	19.2	19.0	17.9	16.0	15.7	18.8	20.1	20.7	22.1	22.6
24. Long term unemployment rate (% labour force)	4.6	4.7	4.5	4.0	3.3	2.8	3.1	3.7	4.1	4.6	5.1
25. Youth unemployment ratio (% population aged 15-24)	7.5	7.6	7.6	7.2	6.4	6.3	7.5	8.0	8.2	8.7	8.9

Source: Eurostat.

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Labour market indicators: European Union 15

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	0	379 339	381 805	384 179	386 496	388 732	390 447	391 826	393 387	394 803	395 836
2. Population aged 15-64	252 262	252 908	254 934	256 496	257 920	259 101	259 649	259 893	260 336	260 207	259 711
3. Total employment (000)	172 632	173 966	175 718	178 365	181 288	182 693	179 415	178 828	179 392	178 819	178 086
4. Population in employment aged 15-64	162 596	163 996	166 375	169 553	172 445	173 954	170 769	169 970	170 526	169 704	169 053
5. Employment rate (% population aged 20-64)	68.4	68.9	69.4	70.3	71.0	71.3	70.0	69.6	69.7	69.4	69.3
6. Employment rate (% population aged 15-64)	64.5	64.8	65.3	66.1	66.9	67.1	65.8	65.4	65.5	65.2	65.1
7. Employment rate (% population aged 15-24)	40.0	40.0	39.9	40.4	41.0	40.8	38.0	36.9	36.5	35.4	34.9
8. Employment rate (% population aged 25-54)	77.3	77.7	78.0	78.9	79.6	79.9	78.3	77.9	77.9	77.4	76.9
9. Employment rate (% population aged 55-64)	41.7	42.6	44.2	45.3	46.4	47.4	47.9	48.4	49.5	50.9	52.3
10. FTE employment rate (% population aged 15-64)	58.8	58.6	58.9	59.5	60.3	60.5	59.1	58.7	58.6	58.2	57.9
11. Self-employed (% total employment)	14.2	14.2	14.2	14.1	14.0	13.8	13.8	13.9	13.8	14.0	14.0
12. Part-time employment (% total employment)	18.6	19.4	20.3	20.7	20.8	21.0	21.6	22.1	22.4	23.1	23.6
13. Fixed term contracts (% total employees)	13.2	13.6	14.3	14.9	14.9	14.5	13.8	14.1	14.2	13.8	13.8
14. Employment in Services (% total employment)	72.1	72.6	73.0	73.3	73.5	73.9	74.8	75.4	75.7	76.1	76.5
15. Employment in Industry (% total employment)	24.4	24.0	23.7	23.4	23.3	23.0	22.1	21.5	21.2	20.9	20.6
16. Employment in Agriculture (% total employment)	3.6	3.5	3.4	3.3	3.2	3.1	3.1	3.1	3.0	3.0	2.9
17. Activity rate (% population aged 15-64)	70.2	70.6	71.1	71.7	72.0	72.3	72.4	72.4	72.6	73.0	73.3
18. Activity rate (% population aged 15-24)	47.5	47.6	47.9	48.1	48.1	48.2	47.2	46.2	45.9	45.6	45.1
19. Activity rate (% population aged 25-54)	83.3	83.8	84.0	84.6	84.8	85.2	85.2	85.3	85.3	85.7	85.6
20. Activity rate (% population aged 55-64)	44.6	45.5	47.2	48.3	49.2	50.0	51.2	51.9	53.1	55.0	56.7
21. Total unemployment (000)	14 554	15 055	15 209	14 512	13 303	13 647	17 367	18 268	18 441	20 456	21 406
22. Unemployment rate (% labour force)	8.1	8.3	8.2	7.8	7.1	7.2	9.1	9.5	9.6	10.6	11.0
23. Youth unemployment rate (% labour force 15-24)	15.8	16.5	16.9	16.2	15.1	15.7	19.9	20.4	20.7	22.3	22.9
24. Long term unemployment rate (% labour force)	3.3	3.5	3.4	3.2	2.8	2.6	3.0	3.8	4.1	4.6	5.2
25. Youth unemployment ratio (% population aged 15-24)	7.5	7.6	7.9	7.6	7.2	7.4	9.3	9.3	9.4	10.1	10.2

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	184 468	185 336	186 660	187 988	189 210	190 358	191 265	191 967	192 791	193 584	194 173
2. Population aged 15-64	126 055	126 372	127 378	128 265	128 969	129 553	129 794	129 880	130 073	130 044	129 787
3. Total employment (000)	97 562	97 780	98 422	99 538	100 871	101 132	98 290	97 735	97 789	97 140	96 380
4. Population in employment aged 15-64	91 697	91 936	92 939	94 365	95 683	96 004	93 283	92 623	92 649	91 840	91 117
5. Employment rate (% population aged 20-64)	77.4	77.5	77.7	78.4	79.0	78.9	76.7	76.1	76.0	75.3	74.9
6. Employment rate (% population aged 15-64)	72.7	72.7	73.0	73.6	74.2	74.1	71.9	71.3	71.2	70.6	70.2
7. Employment rate (% population aged 15-24)	42.9	43.0	42.8	43.3	43.8	43.4	39.6	38.6	38.2	36.9	36.2
8. Employment rate (% population aged 25-54)	86.6	86.5	86.7	87.3	87.8	87.5	85.1	84.5	84.3	83.4	82.6
9. Employment rate (% population aged 55-64)	51.6	52.2	53.3	54.0	55.2	56.1	56.1	56.2	56.8	57.9	59.1
10. FTE employment rate (% population aged 15-64)	70.8	70.4	70.6	71.0	71.6	71.5	69.2	68.5	68.3	67.5	66.9
11. Self-employed (% total employment)	17.2	17.3	17.2	17.2	17.0	16.9	17.2	17.3	17.2	17.4	17.4
12. Part-time employment (% total employment)	6.8	7.2	7.7	8.1	8.2	8.5	8.9	9.4	9.8	10.4	10.9
13. Fixed term contracts (% total employees)	12.2	12.9	13.7	14.2	14.1	13.6	12.8	13.3	13.6	13.2	13.2
14. Employment in Services (% total employment)	61.4	61.9	62.2	62.4	62.6	62.8	63.7	64.4	64.9	65.4	65.9
15. Employment in Industry (% total employment)	34.2	33.9	33.7	33.6	33.5	33.4	32.5	31.7	31.2	30.8	30.2
16. Employment in Agriculture (% total employment)	4.3	4.2	4.1	4.0	3.9	3.8	3.9	3.9	3.9	3.8	3.9
17. Activity rate (% population aged 15-64)	78.6	78.6	79.0	79.2	79.3	79.5	79.1	78.9	78.8	79.1	79.1
18. Activity rate (% population aged 15-24)	51.0	50.9	51.2	51.3	51.3	51.4	50.0	48.9	48.4	48.0	47.3
19. Activity rate (% population aged 25-54)	92.5	92.4	92.6	92.8	92.8	92.8	92.4	92.2	92.1	92.2	91.8
20. Activity rate (% population aged 55-64)	55.1	55.9	56.9	57.5	58.4	59.2	60.1	60.6	61.2	62.9	64.4
21. Total unemployment (000)	7 455	7 692	7 833	7 365	6 704	7 067	9 580	10 020	9 964	11 078	11 580
22. Unemployment rate (% labour force)	7.4	7.6	7.6	7.1	6.4	6.7	9.2	9.6	9.5	10.5	11.0
23. Youth unemployment rate (% labour force 15-24)	15.8	16.3	16.7	15.9	14.8	15.9	21.1	21.3	21.4	23.2	23.7
24. Long term unemployment rate (% labour force)	3.0	3.2	3.1	3.0	2.6	2.4	2.9	3.9	4.1	4.7	5.2
25. Youth unemployment ratio (% population aged 15-24)	8.0	7.9	8.4	8.0	7.5	8.0	10.4	10.3	10.3	11.1	11.1

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	193 104	194 003	195 145	196 191	197 287	198 375	199 182	199 860	200 596	201 219	201 663
2. Population aged 15-64	126 207	126 536	127 556	128 231	128 952	129 548	129 855	130 013	130 263	130 162	129 924
3. Total employment (000)	75 071	76 186	77 296	78 827	80 417	81 561	81 125	81 093	81 604	81 679	81 706
4. Population in employment aged 15-64	70 899	72 060	73 436	75 188	76 762	77 951	77 486	77 347	77 877	77 864	77 936
5. Employment rate (% population aged 20-64)	59.5	60.3	61.1	62.2	63.1	63.8	63.3	63.2	63.4	63.5	63.7
6. Employment rate (% population aged 15-64)	56.2	56.9	57.6	58.6	59.5	60.2	59.7	59.5	59.8	59.8	60.0
7. Employment rate (% population aged 15-24)	37.1	37.1	36.9	37.4	38.0	38.1	36.3	35.0	34.8	33.9	33.5
8. Employment rate (% population aged 25-54)	68.0	68.9	69.3	70.5	71.4	72.1	71.6	71.4	71.5	71.3	71.1
9. Employment rate (% population aged 55-64)	32.2	33.2	35.5	36.8	38.0	39.0	40.1	40.9	42.5	44.3	45.9
10. FTE employment rate (% population aged 15-64)	47.2	47.1	47.7	48.5	49.3	50.0	49.4	49.2	49.4	49.3	49.3
11. Self-employed (% total employment)	10.3	10.3	10.3	10.2	10.1	10.0	9.8	9.9	9.8	9.9	9.9
12. Part-time employment (% total employment)	33.9	35.1	36.2	36.5	36.6	36.5	36.9	37.3	37.6	38.1	38.5
13. Fixed term contracts (% total employees)	14.2	14.5	15.1	15.8	15.8	15.5	14.9	14.9	14.9	14.5	14.5
14. Employment in Services (% total employment)	85.3	85.8	86.2	86.6	86.7	87.1	87.8	88.2	88.3	88.4	88.6
15. Employment in Industry (% total employment)	12.1	11.7	11.4	11.1	11.0	10.6	10.0	9.7	9.7	9.6	9.6
16. Employment in Agriculture (% total employment)	2.6	2.5	2.4	2.3	2.3	2.3	2.2	2.1	2.1	2.0	1.9
17. Activity rate (% population aged 15-64)	61.7	62.7	63.3	64.2	64.6	65.2	65.6	65.8	66.3	67.0	67.5
18. Activity rate (% population aged 15-24)	44.0	44.2	44.4	44.7	44.9	45.0	44.4	43.4	43.4	43.0	42.8
19. Activity rate (% population aged 25-54)	74.0	75.2	75.5	76.4	76.8	77.5	78.0	78.3	78.6	79.2	79.4
20. Activity rate (% population aged 55-64)	34.4	35.6	37.9	39.3	40.4	41.2	42.6	43.6	45.3	47.4	49.3
21. Total unemployment (000)	7 099	7 363	7 376	7 147	6 599	6 580	7 787	8 248	8 477	9 378	9 826
22. Unemployment rate (% labour force)	9.0	9.1	9.0	8.6	7.8	7.7	9.0	9.5	9.7	10.6	11.0
23. Youth unemployment rate (% labour force 15-24)	15.9	16.8	17.1	16.5	15.5	15.4	18.5	19.4	19.8	21.3	21.9
24. Long term unemployment rate (% labour force)	3.8	4.0	3.8	3.6	3.1	2.8	3.1	3.7	4.0	4.6	5.1
25. Youth unemployment ratio (% population aged 15-24)	6.9	7.2	7.5	7.3	6.8	6.8	8.1	8.3	8.6	9.2	9.3

Source: Eurostat.

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Labour market indicators: Euro area 18

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	316871	318292	320372	322332	324126	325824	326990	327915	328933	329888	330371
2. Population aged 15-64	212741	213126	214814	215979	216973	217860	218142	218232	218440	218242	217612
3. Total employment (000)	142399	143507	145001	147413	150034	151237	148369	147611	148017	147068	145878
4. Population in employment aged 15-64	133198	134370	136521	139536	142233	143552	140760	139971	140369	139287	138276
5. Employment rate (% population aged 20-64)	66.8	67.3	67.9	69.0	69.9	70.2	68.8	68.4	68.5	68.1	67.7
6. Employment rate (% population aged 15-64)	62.6	63.0	63.6	64.6	65.6	65.9	64.5	64.1	64.3	63.8	63.5
7. Employment rate (% population aged 15-24)	36.3	36.2	36.3	36.9	37.7	37.5	34.9	33.6	33.4	32.0	31.4
8. Employment rate (% population aged 25-54)	76.4	76.9	77.1	78.2	79.1	79.4	77.8	77.3	77.3	76.5	75.8
9. Employment rate (% population aged 55-64)	37.8	38.6	40.5	41.7	43.3	44.4	45.1	45.8	47.1	48.7	50.1
10. FTE employment rate (% population aged 15-64)	57.9	57.6	58.0	58.8	59.7	60.0	58.6	58.1	58.0	57.4	57.0
11. Self-employed (% total employment)	14.9	15.0	15.0	14.8	14.6	14.5	14.5	14.5	14.4	14.5	14.5
12. Part-time employment (% total employment)	16.4	17.4	18.5	19.0	19.2	19.3	19.9	20.3	20.8	21.4	22.1
13. Fixed term contracts (% total employees)	14.5	15.1	16.0	16.6	16.5	16.1	15.3	15.5	15.7	15.2	15.2
14. Employment in Services (% total employment)	70.1	70.6	70.9	71.3	71.6	72.0	73.0	73.6	74.0	74.4	74.7
15. Employment in Industry (% total employment)	25.7	25.3	25.1	24.8	24.7	24.4	23.5	22.8	22.5	22.2	21.9
16. Employment in Agriculture (% total employment)	4.2	4.1	4.0	3.8	3.7	3.6	3.6	3.6	3.5	3.4	3.4
17. Activity rate (% population aged 15-64)	68.8	69.4	69.9	70.5	70.9	71.3	71.4	71.4	71.6	72.1	72.2
18. Activity rate (% population aged 15-24)	43.9	43.9	44.2	44.2	44.4	44.4	43.6	42.4	42.1	41.6	41.2
19. Activity rate (% population aged 25-54)	83.1	83.8	83.9	84.5	84.7	85.1	85.1	85.2	85.2	85.6	85.5
20. Activity rate (% population aged 55-64)	40.8	41.8	43.7	45.0	46.2	47.1	48.5	49.5	50.9	52.9	54.7
21. Total unemployment (000)	13373	13918	13951	12982	11743	11940	15122	16005	16040	18078	19123
22. Unemployment rate (% labour force)	9.0	9.2	9.1	8.4	7.5	7.6	9.6	10.1	10.1	11.3	11.9
23. Youth unemployment rate (% labour force 15-24)	17.3	18.2	18.2	17.0	15.4	15.9	20.3	21.0	20.9	23.1	24.0
24. Long term unemployment rate (% labour force)	4.1	4.3	4.1	3.9	3.3	3.0	3.4	4.3	4.6	5.3	6.0
25. Youth unemployment ratio (% population aged 15-24)	7.6	7.7	7.9	7.3	6.7	6.9	8.7	8.8	8.7	9.6	9.8

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	154556	155227	156340	157442	158388	159257	159846	160281	160813	161357	161646
2. Population aged 15-64	106301	106488	107333	108028	108523	108966	109054	109051	109123	109047	108719
3. Total employment (000)	81301	81439	81971	82973	84105	84284	81806	81088	81066	80205	79240
4. Population in employment aged 15-64	75919	76072	76991	78350	79541	79796	77406	76694	76649	75699	74832
5. Employment rate (% population aged 20-64)	76.3	76.4	76.7	77.5	78.3	78.2	75.8	75.1	75.0	74.2	73.5
6. Employment rate (% population aged 15-64)	71.4	71.4	71.7	72.5	73.3	73.2	71.0	70.3	70.2	69.4	68.8
7. Employment rate (% population aged 15-24)	39.6	39.6	39.6	40.4	41.0	40.5	37.0	35.7	35.4	34.0	33.1
8. Employment rate (% population aged 25-54)	86.3	86.2	86.3	87.0	87.7	87.4	84.8	84.1	83.8	82.6	81.6
9. Employment rate (% population aged 55-64)	48.1	48.7	49.9	50.8	52.3	53.3	53.5	53.7	54.6	55.8	56.8
10. FTE employment rate (% population aged 15-64)	69.9	69.5	69.8	70.4	71.1	71.1	68.7	68.0	67.7	66.7	65.9
11. Self-employed (% total employment)	17.7	17.9	17.8	17.7	17.6	17.4	17.7	17.8	17.8	17.9	17.9
12. Part-time employment (% total employment)	5.8	6.2	6.9	7.3	7.4	7.5	8.0	8.4	8.9	9.4	10.0
13. Fixed term contracts (% total employees)	13.5	14.3	15.2	15.8	15.7	15.2	14.2	14.7	15.0	14.5	14.6
14. Employment in Services (% total employment)	59.6	60.0	60.2	60.4	60.5	60.8	61.7	62.5	63.0	63.4	63.9
15. Employment in Industry (% total employment)	35.4	35.1	35.0	35.0	35.0	34.9	33.9	33.1	32.7	32.2	31.7
16. Employment in Agriculture (% total employment)	5.0	4.9	4.8	4.6	4.5	4.3	4.4	4.4	4.4	4.4	4.4
17. Activity rate (% population aged 15-64)	77.7	77.8	78.2	78.4	78.6	78.7	78.4	78.2	78.1	78.3	78.2
18. Activity rate (% population aged 15-24)	47.6	47.5	47.8	47.9	47.8	47.8	46.7	45.4	44.8	44.3	43.7
19. Activity rate (% population aged 25-54)	92.8	92.8	92.9	93.0	93.0	93.0	92.6	92.4	92.2	92.2	91.8
20. Activity rate (% population aged 55-64)	51.7	52.6	53.8	54.6	55.6	56.5	57.5	58.2	59.1	60.9	62.5
21. Total unemployment (000)	6720	7003	7087	6477	5812	6062	8206	8669	8580	9721	10285
22. Unemployment rate (% labour force)	8.0	8.3	8.3	7.5	6.7	6.9	9.4	10.0	9.9	11.2	11.9
23. Youth unemployment rate (% labour force 15-24)	16.8	17.4	17.6	16.1	14.6	15.6	21.1	21.6	21.1	23.5	24.4
24. Long term unemployment rate (% labour force)	3.5	3.8	3.7	3.5	3.0	2.7	3.2	4.3	4.5	5.2	5.9
25. Youth unemployment ratio (% population aged 15-24)	8.0	7.9	8.2	7.5	6.8	7.3	9.7	9.6	9.4	10.3	10.5

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	162316	163064	164032	164891	165739	166567	167145	167634	168120	168531	168725
2. Population aged 15-64	106440	106638	107481	107951	108451	108894	109088	109181	109317	109195	108894
3. Total employment (000)	61098	62068	63030	64440	65930	66952	66562	66523	66952	66863	66638
4. Population in employment aged 15-64	57279	58297	59530	61186	62692	63756	63355	63277	63720	63587	63444
5. Employment rate (% population aged 20-64)	57.4	58.4	59.1	60.5	61.6	62.3	61.9	61.8	62.0	62.0	62.0
6. Employment rate (% population aged 15-64)	53.8	54.7	55.4	56.7	57.8	58.5	58.1	58.0	58.3	58.2	58.3
7. Employment rate (% population aged 15-24)	33.0	32.8	32.9	33.3	34.3	34.4	32.7	31.5	31.2	30.0	29.5
8. Employment rate (% population aged 25-54)	66.5	67.6	68.0	69.4	70.5	71.3	70.7	70.6	70.7	70.4	70.0
9. Employment rate (% population aged 55-64)	27.9	29.0	31.5	33.0	34.6	35.9	37.2	38.2	40.1	42.0	43.7
10. FTE employment rate (% population aged 15-64)	46.1	46.0	46.5	47.6	48.5	49.3	48.8	48.6	48.8	48.6	48.4
11. Self-employed (% total employment)	11.2	11.3	11.3	11.1	10.9	10.8	10.5	10.5	10.4	10.4	10.4
12. Part-time employment (% total employment)	30.5	32.1	33.6	34.0	34.2	34.1	34.5	34.9	35.3	35.9	36.5
13. Fixed term contracts (% total employees)	15.7	16.1	16.8	17.6	17.5	17.3	16.5	16.4	16.5	15.9	15.9
14. Employment in Services (% total employment)	83.4	83.9	84.4	84.9	85.2	85.7	86.3	86.7	86.9	87.1	87.3
15. Employment in Industry (% total employment)	13.4	13.0	12.6	12.3	12.1	11.6	11.1	10.7	10.7	10.6	10.5
16. Employment in Agriculture (% total employment)	3.2	3.1	3.0	2.8	2.7	2.7	2.6	2.5	2.4	2.3	2.2
17. Activity rate (% population aged 15-64)	60.0	61.0	61.7	62.7	63.2	63.9	64.4	64.7	65.1	65.9	66.3
18. Activity rate (% population aged 15-24)	40.2	40.2	40.5	40.5	40.9	40.9	40.4	39.4	39.3	38.8	38.5
19. Activity rate (% population aged 25-54)	73.5	74.8	74.9	76.0	76.4	77.2	77.6	78.0	78.3	79.0	79.1
20. Activity rate (% population aged 55-64)	30.3	31.5	34.2	35.8	37.2	38.2	40.0	41.1	43.1	45.4	47.3
21. Total unemployment (000)	6653	6915	6864	6505	5931	5877	6916	7336	7460	8357	8839
22. Unemployment rate (% labour force)	10.2	10.5	10.2	9.5	8.5	8.3	9.7	10.2	10.3	11.4	12.1
23. Youth unemployment rate (% labour force 15-24)	17.9	19.1	19.1	18.0	16.3	16.2	19.4	20.3	20.6	22.8	23.6
24. Long term unemployment rate (% labour force)	4.7	4.9	4.7	4.4	3.8	3.3	3.7	4.3	4.7	5.3	6.0
25. Youth unemployment ratio (% population aged 15-24)	7.2	7.4	7.6	7.2	6.5	6.5	7.7	7.9	8.1	8.8	9.0

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Source: Eurostat.

Labour market indicators: Euro area 17

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	0	315 973	318 066	320 038	321 946	323 661	324 856	325 822	326 883	327 873	328 375
2. Population aged 15-64	211 153	211 539	213 231	214 399	215 483	216 381	216 688	216 815	217 058	216 890	216 280
3. Total employment (000)	141 399	142 495	143 973	146 334	148 970	150 181	147 465	146 768	147 161	146 199	144 989
4. Population in employment aged 15-64	132 216	133 381	135 519	138 489	141 218	142 543	139 883	139 143	139 528	138 435	137 410
5. Employment rate (% population aged 20-64)	66.8	67.3	67.9	68.9	69.9	70.2	68.9	68.4	68.5	68.1	67.7
6. Employment rate (% population aged 15-64)	62.6	63.1	63.6	64.6	65.5	65.9	64.6	64.2	64.3	63.8	63.5
7. Employment rate (% population aged 15-24)	36.4	36.3	36.3	36.9	37.7	37.5	35.0	33.7	33.4	32.0	31.4
8. Employment rate (% population aged 25-54)	76.4	76.9	77.1	78.2	79.1	79.4	77.8	77.4	77.3	76.5	75.8
9. Employment rate (% population aged 55-64)	37.7	38.6	40.4	41.6	43.2	44.3	45.1	45.8	47.1	48.7	50.0
10. FTE employment rate (% population aged 15-64)	57.8	57.6	57.9	58.8	59.6	60.0	58.6	58.1	58.0	57.4	56.9
11. Self-employed (% total employment)	15.0	15.1	15.0	14.9	14.7	14.5	14.5	14.5	14.4	14.5	14.5
12. Part-time employment (% total employment)	16.5	17.5	18.6	19.1	19.3	19.4	19.9	20.4	20.9	21.5	22.2
13. Fixed term contracts (% total employees)	14.5	15.2	16.0	16.7	16.6	16.2	15.4	15.6	15.8	15.2	15.3
14. Employment in Services (% total employment)	70.1	70.6	71.0	71.4	71.7	72.1	73.0	73.6	74.0	74.4	74.8
15. Employment in Industry (% total employment)	25.7	25.3	25.1	24.8	24.7	24.4	23.5	22.8	22.5	22.2	21.9
16. Employment in Agriculture (% total employment)	4.2	4.0	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.4	3.4
17. Activity rate (% population aged 15-64)	68.8	69.4	69.9	70.5	70.9	71.3	71.4	71.4	71.6	72.1	72.2
18. Activity rate (% population aged 15-24)	44.0	44.0	44.2	44.3	44.4	44.4	43.6	42.4	42.1	41.6	41.2
19. Activity rate (% population aged 25-54)	83.1	83.8	83.9	84.5	84.7	85.1	85.1	85.2	85.2	85.6	85.5
20. Activity rate (% population aged 55-64)	40.7	41.8	43.7	44.9	46.1	47.0	48.4	49.4	50.8	52.9	54.7
21. Total unemployment (000)	13 246	13 790	13 843	12 904	11 675	11 851	14 929	15 799	15 874	17 923	19 003
22. Unemployment rate (% labour force)	9.0	9.2	9.1	8.4	7.5	7.6	9.5	10.0	10.1	11.3	12.0
23. Youth unemployment rate (% labour force 15-24)	17.3	18.2	18.3	17.0	15.4	15.9	20.2	20.9	20.8	23.1	24.0
24. Long term unemployment rate (% labour force)	4.1	4.3	4.1	3.9	3.3	3.0	3.4	4.3	4.5	5.2	6.0
25. Youth unemployment ratio (% population aged 15-24)	7.6	7.7	7.9	7.4	6.7	6.9	8.7	8.7	8.7	9.6	9.8

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	153 484	154 159	155 278	156 385	157 392	158 268	158 870	159 327	159 880	160 439	160 735
2. Population aged 15-64	105 540	105 724	106 570	107 265	107 809	108 256	108 356	108 372	108 461	108 399	108 077
3. Total employment (000)	80 792	80 924	81 443	82 423	83 563	83 755	81 376	80 692	80 655	79 782	78 804
4. Population in employment aged 15-64	75 416	75 566	76 476	77 813	79 022	79 288	76 985	76 301	76 242	75 282	74 403
5. Employment rate (% population aged 20-64)	76.3	76.4	76.7	77.5	78.2	78.1	75.9	75.2	75.1	74.2	73.5
6. Employment rate (% population aged 15-64)	71.5	71.5	71.8	72.5	73.3	73.2	71.0	70.4	70.3	69.4	68.8
7. Employment rate (% population aged 15-24)	39.6	39.6	39.6	40.3	41.0	40.5	37.1	35.8	35.5	34.0	33.1
8. Employment rate (% population aged 25-54)	86.3	86.2	86.3	87.0	87.7	87.4	84.9	84.1	83.9	82.7	81.6
9. Employment rate (% population aged 55-64)	48.0	48.6	49.9	50.8	52.3	53.3	53.5	53.8	54.6	55.8	56.9
10. FTE employment rate (% population aged 15-64)	69.9	69.6	69.8	70.4	71.1	71.1	68.8	68.0	67.7	66.7	65.9
11. Self-employed (% total employment)	17.7	17.9	17.8	17.7	17.6	17.5	17.7	17.8	17.8	17.9	17.9
12. Part-time employment (% total employment)	5.8	6.2	6.9	7.3	7.4	7.5	8.0	8.4	8.9	9.4	10.0
13. Fixed term contracts (% total employees)	13.5	14.3	15.3	15.8	15.8	15.2	14.2	14.8	15.1	14.6	14.7
14. Employment in Services (% total employment)	59.7	60.1	60.3	60.5	60.6	60.8	61.7	62.5	63.0	63.5	63.9
15. Employment in Industry (% total employment)	35.4	35.1	35.0	35.0	35.0	34.9	33.9	33.1	32.7	32.2	31.7
16. Employment in Agriculture (% total employment)	4.9	4.8	4.7	4.6	4.4	4.3	4.3	4.4	4.3	4.3	4.4
17. Activity rate (% population aged 15-64)	77.7	77.8	78.2	78.4	78.6	78.7	78.4	78.2	78.1	78.3	78.2
18. Activity rate (% population aged 15-24)	47.7	47.6	47.8	47.9	47.8	47.8	46.7	45.4	44.8	44.3	43.7
19. Activity rate (% population aged 25-54)	92.8	92.8	92.9	93.0	93.0	93.0	92.6	92.4	92.2	92.2	91.8
20. Activity rate (% population aged 55-64)	51.7	52.5	53.8	54.5	55.6	56.4	57.4	58.2	59.1	60.9	62.5
21. Total unemployment (000)	6 656	6 939	7 031	6 435	5 775	6 014	8 091	8 551	8 485	9 638	10 221
22. Unemployment rate (% labour force)	8.0	8.3	8.3	7.5	6.7	6.9	9.4	9.9	9.8	11.1	11.9
23. Youth unemployment rate (% labour force 15-24)	16.8	17.5	17.6	16.1	14.7	15.6	21.0	21.4	21.0	23.4	24.4
24. Long term unemployment rate (% labour force)	3.5	3.8	3.7	3.5	3.0	2.7	3.2	4.2	4.5	5.2	5.9
25. Youth unemployment ratio (% population aged 15-24)	8.0	8.0	8.2	7.5	6.8	7.3	9.6	9.6	9.3	10.3	10.6

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	161 057	161 813	162 789	163 654	164 555	165 393	165 985	166 495	167 003	167 433	167 640
2. Population aged 15-64	105 613	105 815	106 661	107 134	107 674	108 125	108 332	108 443	108 597	108 491	108 202
3. Total employment (000)	60 607	61 571	62 530	63 911	65 408	66 427	66 089	66 076	66 507	66 417	66 185
4. Population in employment aged 15-64	56 801	57 816	59 044	60 676	62 196	63 255	62 898	62 842	63 287	63 153	63 006
5. Employment rate (% population aged 20-64)	57.3	58.3	59.1	60.4	61.5	62.3	61.9	61.7	62.0	62.0	62.0
6. Employment rate (% population aged 15-64)	53.8	54.6	55.4	56.6	57.8	58.5	58.1	57.9	58.3	58.2	58.2
7. Employment rate (% population aged 15-24)	33.0	32.9	33.0	33.4	34.3	34.4	32.8	31.5	31.3	30.0	29.5
8. Employment rate (% population aged 25-54)	66.5	67.6	67.9	69.4	70.4	71.2	70.6	70.5	70.6	70.3	70.0
9. Employment rate (% population aged 55-64)	27.8	28.9	31.4	32.9	34.5	35.7	37.1	38.1	40.0	41.9	43.6
10. FTE employment rate (% population aged 15-64)	46.0	45.9	46.4	47.5	48.4	49.2	48.7	48.6	48.7	48.5	48.3
11. Self-employed (% total employment)	11.2	11.3	11.3	11.1	10.9	10.8	10.6	10.5	10.4	10.4	10.4
12. Part-time employment (% total employment)	30.7	32.3	33.8	34.2	34.4	34.3	34.7	35.1	35.5	36.1	36.7
13. Fixed term contracts (% total employees)	15.7	16.2	16.9	17.7	17.7	17.4	16.6	16.5	16.5	16.0	16.0
14. Employment in Services (% total employment)	83.5	84.0	84.4	85.0	85.2	85.7	86.4	86.8	86.9	87.1	87.3
15. Employment in Industry (% total employment)	13.3	13.0	12.6	12.2	12.1	11.6	11.0	10.7	10.7	10.6	10.5
16. Employment in Agriculture (% total employment)	3.2	3.1	2.9	2.8	2.7	2.7	2.6	2.5	2.4	2.3	2.2
17. Activity rate (% population aged 15-64)	60.0	61.0	61.7	62.6	63.2	63.9	64.3	64.6	65.1	65.8	66.2
18. Activity rate (% population aged 15-24)	40.2	40.3	40.6	40.6	40.9	40.9	40.5	39.4	39.4	38.8	38.6
19. Activity rate (% population aged 25-54)	73.4	74.7	74.9	75.9	76.4	77.1	77.6	78.0	78.2	78.9	79.1
20. Activity rate (% population aged 55-64)	30.2	31.4	34.1	35.6	37.1	38.1	39.8	41.0	43.0	45.3	47.2
21. Total unemployment (000)	6 590	6 850	6 812	6 468	5 900	5 838	6 838	7 248	7 389	8 284	8 782
22. Unemployment rate (% labour force)	10.2	10.5	10.2	9.5	8.6	8.4	9.7	10.2	10.3	11.4	12.1
23. Youth unemployment rate (% labour force 15-24)	17.9	19.1	19.1	18.0	16.4	16.2	19.3	20.2	20.6	22.7	23.6
24. Long term unemployment rate (% labour force)	4.7	4.9	4.7	4.4	3.8	3.3	3.7	4.3	4.6	5.3	6.0
25. Youth unemployment ratio (% population aged 15-24)	7.2	7.4	7.6	7.2	6.6	6.5	7.7	7.9	8.1	8.8	9.0

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Source: Eurostat.

Labour market indicators: Belgium

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	10 356	10 396	10 477	10 546	10 614	10 708	10 796	10 892	10 989	11 063	11 125
2. Population aged 15-64	6 791	6 818	6 876	6 941	7 008	7 073	7 126	7 177	7 220	7 242	7 257
3. Total employment (000)	4 161	4 204	4 264	4 311	4 383	4 461	4 453	4 483	4 546	4 555	4 546
4. Population in employment aged 15-64	4 047	4 114	4 199	4 233	4 348	4 414	4 389	4 451	4 471	4 479	4 485
5. Employment rate (% population aged 20-64)	64.7	65.6	66.5	66.5	67.7	68.0	67.1	67.6	67.3	67.2	67.2
6. Employment rate (% population aged 15-64)	59.6	60.3	61.1	61.0	62.0	62.4	61.6	62.0	61.9	61.8	61.8
7. Employment rate (% population aged 15-24)	27.4	27.8	27.5	27.6	27.5	27.4	25.3	25.2	26.0	25.3	23.6
8. Employment rate (% population aged 25-54)	76.5	77.3	78.3	78.4	79.7	80.5	79.8	80.0	79.3	79.3	79.0
9. Employment rate (% population aged 55-64)	28.1	30.0	31.8	32.0	34.4	34.5	35.3	37.3	38.7	39.5	41.7
10. FTE employment rate (% population aged 15-64)	54.7	55.8	56.2	56.5	57.6	57.8	56.9	57.3	56.7	56.6	56.8
11. Self-employed (% total employment)	16.6	16.5	16.3	16.2	16.1	16.0	16.2	16.2	16.2	16.4	16.5
12. Part-time employment (% total employment)	20.5	21.4	22.0	22.2	22.1	22.6	23.4	24.0	25.1	25.1	24.7
13. Fixed term contracts (% total employees)	8.4	8.7	8.9	8.7	8.6	8.3	8.2	8.1	9.0	8.1	8.2
14. Employment in Services (% total employment)	76.5	77.1	77.5	77.6	77.9	78.1	78.7	79.3	79.6	79.7	80.1
15. Employment in Industry (% total employment)	21.6	21.1	20.7	20.7	20.5	20.3	19.8	19.3	19.1	19.0	18.6
16. Employment in Agriculture (% total employment)	1.8	1.8	1.8	1.7	1.6	1.6	1.5	1.4	1.3	1.3	1.3
17. Activity rate (% population aged 15-64)	64.9	65.9	66.7	66.5	67.1	67.1	66.9	67.7	66.7	66.9	67.5
18. Activity rate (% population aged 15-24)	35.0	35.3	35.0	34.7	33.9	33.4	32.4	32.5	32.0	31.5	31.0
19. Activity rate (% population aged 25-54)	82.3	83.4	84.6	84.5	85.3	85.7	85.6	86.3	84.7	85.0	85.3
20. Activity rate (% population aged 55-64)	28.9	31.2	33.3	33.6	35.9	36.1	37.2	39.2	40.3	41.4	44.1
21. Total unemployment (000)	362	379	390	383	353	333	380	406	347	369	417
22. Unemployment rate (% labour force)	8.2	8.4	8.5	8.3	7.5	7.0	7.9	8.3	7.2	7.6	8.4
23. Youth unemployment rate (% labour force 15-24)	21.8	21.2	21.5	20.5	18.8	18.0	21.9	22.4	18.7	19.8	23.7
24. Long term unemployment rate (% labour force)	3.7	4.1	4.4	4.2	3.8	3.3	3.5	4.1	3.5	3.4	3.9
25. Youth unemployment ratio (% population aged 15-24)	7.6	7.5	7.5	7.1	6.4	6.0	7.1	7.3	6.0	6.2	7.3

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	5 067	5 086	5 127	5 162	5 197	5 246	5 291	5 340	5 390	5 429	5 461
2. Population aged 15-64	3 420	3 443	3 459	3 491	3 524	3 557	3 582	3 607	3 628	3 639	3 646
3. Total employment (000)	2 369	2 391	2 403	2 418	2 445	2 469	2 447	2 454	2 482	2 483	2 459
4. Population in employment aged 15-64	2 300	2 337	2 361	2 371	2 421	2 439	2 406	2 433	2 435	2 433	2 420
5. Employment rate (% population aged 20-64)	73.1	73.8	74.3	74.0	75.0	74.7	73.2	73.5	73.0	72.7	72.3
6. Employment rate (% population aged 15-64)	67.3	67.9	68.3	67.9	68.7	68.6	67.2	67.4	67.1	66.9	66.4
7. Employment rate (% population aged 15-24)	29.9	30.1	29.7	30.4	29.9	29.7	27.4	27.3	27.7	27.8	25.3
8. Employment rate (% population aged 25-54)	85.0	85.8	86.1	85.9	87.0	87.0	85.7	85.5	84.9	84.5	84.0
9. Employment rate (% population aged 55-64)	37.8	39.1	41.7	40.9	42.9	42.8	42.9	45.6	46.0	46.0	47.7
10. FTE employment rate (% population aged 15-64)	66.7	67.6	67.4	67.7	68.5	68.2	66.7	67.0	66.2	65.9	65.6
11. Self-employed (% total employment)	18.5	18.9	18.7	19.0	18.9	19.2	19.3	19.5	19.8	20.0	20.6
12. Part-time employment (% total employment)	6.4	6.8	7.6	7.4	7.5	7.9	8.6	9.0	9.8	9.7	9.4
13. Fixed term contracts (% total employees)	6.2	6.4	6.8	6.9	6.8	6.6	6.5	6.8	7.7	7.1	7.3
14. Employment in Services (% total employment)	66.8	67.1	67.7	67.2	67.8	67.3	68.1	69.1	69.1	69.2	69.5
15. Employment in Industry (% total employment)	30.9	30.6	30.1	30.6	30.1	30.7	30.0	29.0	29.1	29.0	28.8
16. Employment in Agriculture (% total employment)	2.3	2.3	2.2	2.2	2.0	2.0	2.0	1.9	1.7	1.8	1.7
17. Activity rate (% population aged 15-64)	72.9	73.4	73.9	73.4	73.6	73.3	72.8	73.4	72.3	72.5	72.7
18. Activity rate (% population aged 15-24)	38.4	37.7	37.6	37.4	36.1	36.0	34.9	35.2	34.1	35.0	33.7
19. Activity rate (% population aged 25-54)	90.9	91.8	92.2	91.9	92.5	92.3	91.8	92.2	90.7	90.7	90.9
20. Activity rate (% population aged 55-64)	38.9	40.4	43.4	42.7	44.4	44.4	45.2	47.6	47.8	47.9	50.5
21. Total unemployment (000)	192	191	196	191	174	170	204	217	188	204	232
22. Unemployment rate (% labour force)	7.7	7.5	7.6	7.4	6.7	6.5	7.8	8.1	7.1	7.7	8.7
23. Youth unemployment rate (% labour force 15-24)	22.2	20.2	21.0	18.8	17.1	17.3	21.5	22.4	18.7	20.4	24.7
24. Long term unemployment rate (% labour force)	3.4	3.7	3.9	3.7	3.3	3.0	3.4	4.0	3.4	3.5	4.0
25. Youth unemployment ratio (% population aged 15-24)	8.5	7.6	7.9	7.0	6.2	6.2	7.5	7.9	6.4	7.1	8.3

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	5 289	5 310	5 350	5 384	5 417	5 462	5 505	5 553	5 600	5 635	5 664
2. Population aged 15-64	3 371	3 375	3 417	3 450	3 484	3 517	3 543	3 570	3 592	3 603	3 611
3. Total employment (000)	1 793	1 813	1 861	1 893	1 938	1 992	2 006	2 028	2 064	2 072	2 087
4. Population in employment aged 15-64	1 746	1 777	1 838	1 862	1 927	1 975	1 984	2 018	2 036	2 046	2 065
5. Employment rate (% population aged 20-64)	56.2	57.2	58.6	58.8	60.3	61.3	61.0	61.6	61.5	61.7	62.1
6. Employment rate (% population aged 15-64)	51.8	52.6	53.8	54.0	55.3	56.2	56.0	56.5	56.7	56.8	57.2
7. Employment rate (% population aged 15-24)	24.7	25.4	25.2	24.7	25.0	25.0	23.2	23.1	24.2	22.6	21.9
8. Employment rate (% population aged 25-54)	67.8	68.5	70.4	70.7	72.3	73.8	73.8	74.4	73.8	73.9	74.0
9. Employment rate (% population aged 55-64)	18.7	21.1	22.1	23.2	26.0	26.3	27.7	29.2	31.6	33.1	35.8
10. FTE employment rate (% population aged 15-64)	42.9	44.4	45.2	45.6	47.1	47.6	47.4	47.9	47.7	47.7	48.4
11. Self-employed (% total employment)	14.0	13.2	13.1	12.7	12.5	12.1	12.3	12.2	11.9	12.0	11.7
12. Part-time employment (% total employment)	39.1	40.5	40.5	41.1	40.6	40.9	41.5	42.3	43.4	43.6	42.7
13. Fixed term contracts (% total employees)	11.1	11.7	11.4	10.9	10.8	10.2	10.2	9.6	10.3	9.3	9.2
14. Employment in Services (% total employment)	88.9	89.6	89.5	90.2	89.9	90.8	91.0	91.0	91.4	91.8	92.0
15. Employment in Industry (% total employment)	9.8	9.2	9.3	8.7	9.0	8.2	8.0	8.1	7.7	7.4	7.2
16. Employment in Agriculture (% total employment)	1.2	1.2	1.2	1.1	1.1	1.0	1.0	0.9	0.9	0.8	0.8
17. Activity rate (% population aged 15-64)	56.9	58.2	59.5	59.5	60.4	60.8	60.9	61.8	61.1	61.3	62.3
18. Activity rate (% population aged 15-24)	31.4	32.8	32.3	31.9	31.6	30.8	29.9	29.8	29.8	27.9	28.2
19. Activity rate (% population aged 25-54)	73.6	74.8	76.8	77.0	78.0	79.0	79.2	80.4	78.7	79.1	79.7
20. Activity rate (% population aged 55-64)	19.2	22.1	23.4	24.6	27.5	27.9	29.3	30.9	33.0	34.9	37.8
21. Total unemployment (000)	170	188	194	192	179	163	176	189	158	165	185
22. Unemployment rate (% labour force)	8.9	9.5	9.5	9.3	8.5	7.6	8.1	8.5	7.2	7.4	8.2
23. Youth unemployment rate (% labour force 15-24)	21.3	22.4	22.1	22.6	20.9	18.7	22.5	22.4	18.7	18.9	22.5
24. Long term unemployment rate (% labour force)	4.2	4.7	5.0	4.9	4.3	3.7	3.6	4.1	3.6	3.2	3.7
25. Youth unemployment ratio (% population aged 15-24)	6.7	7.3	7.1	7.2	6.6	5.8	6.7	6.7	5.6	5.3	6.3

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Source: Eurostat.

Labour market indicators: Bulgaria

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	7821	7786	7747	7706	7673	7640	7607	7564	7333	7278	7242
2. Population aged 15-64	5308	5306	5283	5238	5198	5169	5122	5046	5010	4924	4859
3. Total employment (000)	3317	3403	3495	3612	3727	3815	3749	3604	3525	3436	3422
4. Population in employment aged 15-64	2785	2877	2947	3072	3209	3306	3205	3010	2928	2895	2889
5. Employment rate (% population aged 20-64)	58.0	60.1	61.9	65.1	68.4	70.7	68.8	65.4	62.9	63.0	63.5
6. Employment rate (% population aged 15-64)	52.5	54.2	55.8	58.6	61.7	64.0	62.6	59.7	58.4	58.8	59.5
7. Employment rate (% population aged 15-24)	20.7	21.5	21.6	23.2	24.5	26.3	24.8	22.2	22.1	21.9	21.2
8. Employment rate (% population aged 25-54)	69.2	71.2	73.0	75.7	79.4	81.3	79.2	75.7	73.3	73.1	73.3
9. Employment rate (% population aged 55-64)	30.0	32.5	34.7	39.6	42.6	46.0	46.1	43.5	44.6	45.7	47.4
10. FTE employment rate (% population aged 15-64)	52.5	54.5	55.3	58.2	61.4	63.5	61.9	59.0	57.8	58.1	58.7
11. Self-employed (% total employment)	28.7	28.5	27.8	27.2	26.5	26.4	26.7	27.1	26.6	26.1	26.6
12. Part-time employment (% total employment)	2.3	2.4	2.1	2.0	1.7	2.3	2.3	2.4	2.4	2.4	2.7
13. Fixed term contracts (% total employees)	6.5	7.4	6.4	6.2	5.2	5.0	4.7	4.5	4.1	4.5	5.7
14. Employment in Services (% total employment)	50.1	50.9	51.4	51.4	51.4	50.6	52.5	54.1	54.6	55.3	55.7
15. Employment in Industry (% total employment)	27.0	27.0	27.4	28.3	29.2	30.1	27.9	26.2	25.9	25.8	25.1
16. Employment in Agriculture (% total employment)	22.9	22.1	21.2	20.3	19.4	19.3	19.6	19.7	19.6	18.9	19.2
17. Activity rate (% population aged 15-64)	60.9	61.8	62.1	64.5	66.3	67.8	67.2	66.5	65.9	67.1	68.4
18. Activity rate (% population aged 15-24)	28.8	28.9	27.9	28.9	28.9	30.1	29.5	28.9	29.5	30.4	29.6
19. Activity rate (% population aged 25-54)	79.1	79.9	80.2	82.3	84.5	85.5	84.3	83.4	81.9	82.3	83.1
20. Activity rate (% population aged 55-64)	33.9	36.2	38.0	43.0	45.7	48.7	49.2	47.9	48.9	51.1	54.1
21. Total unemployment (000)	453	404	338	309	242	202	240	352	376	410	436
22. Unemployment rate (% labour force)	13.7	12.1	10.1	9.0	6.9	5.6	6.8	10.3	11.3	12.3	13.0
23. Youth unemployment rate (% labour force 15-24)	26.6	24.3	21.0	18.3	14.1	11.9	15.1	21.8	25.0	28.1	28.4
24. Long term unemployment rate (% labour force)	9.0	7.2	6.1	5.0	4.1	2.9	3.0	4.8	6.3	6.8	7.4
25. Youth unemployment ratio (% population aged 15-24)	8.1	7.5	6.2	5.6	4.4	3.8	4.8	6.7	7.4	8.5	8.4

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	3792	3775	3754	3731	3714	3700	3681	3659	3567	3538	3519
2. Population aged 15-64	2616	2623	2614	2590	2578	2562	2540	2508	2517	2476	2446
3. Total employment (000)	1756	1805	1866	1920	1984	2035	1996	1899	1863	1806	1803
4. Population in employment aged 15-64	1466	1520	1569	1626	1701	1756	1699	1579	1541	1517	1518
5. Employment rate (% population aged 20-64)	62.2	64.4	66.8	69.9	73.4	76.1	73.8	69.1	66.0	65.8	66.4
6. Employment rate (% population aged 15-64)	56.0	57.9	60.0	62.8	66.0	68.5	66.9	63.0	61.2	61.3	62.1
7. Employment rate (% population aged 15-24)	21.7	23.2	23.9	25.4	27.1	29.3	28.0	25.4	25.1	24.9	24.0
8. Employment rate (% population aged 25-54)	71.4	73.5	75.7	78.6	82.5	84.7	82.7	77.9	74.7	74.3	75.0
9. Employment rate (% population aged 55-64)	40.5	42.2	45.5	49.5	51.8	55.8	54.1	50.3	50.5	50.8	51.9
10. FTE employment rate (% population aged 15-64)	56.3	58.3	59.6	62.5	65.7	68.2	66.3	62.3	60.6	60.7	61.4
11. Self-employed (% total employment)	34.7	34.4	32.9	32.8	32.1	31.2	31.7	31.7	31.9	31.7	32.7
12. Part-time employment (% total employment)	1.9	2.1	1.7	1.5	1.3	2.0	2.0	2.2	2.1	2.2	2.2
13. Fixed term contracts (% total employees)	7.0	7.7	6.7	6.3	5.0	5.6	5.2	5.0	4.5	4.9	6.2
14. Employment in Services (% total employment)	43.6	44.3	44.5	43.7	43.4	42.3	43.6	45.0	45.7	46.9	47.2
15. Employment in Industry (% total employment)	29.3	29.6	30.5	32.2	33.4	35.1	33.0	31.6	30.4	29.4	28.8
16. Employment in Agriculture (% total employment)	27.1	26.1	25.0	24.1	23.1	22.6	23.4	23.4	23.9	23.7	24.0
17. Activity rate (% population aged 15-64)	65.4	66.4	67.0	68.8	70.6	72.5	72.0	70.8	69.9	71.0	72.2
18. Activity rate (% population aged 15-24)	31.5	31.8	31.1	31.3	31.7	34.0	34.0	33.5	33.9	35.3	34.3
19. Activity rate (% population aged 25-54)	81.8	82.9	83.3	85.1	87.5	88.8	88.0	86.3	84.5	84.8	85.7
20. Activity rate (% population aged 55-64)	45.6	47.2	49.9	53.6	55.3	58.7	57.4	55.7	55.8	57.3	59.9
21. Total unemployment (000)	249	225	185	159	123	105	132	199	219	241	250
22. Unemployment rate (% labour force)	14.0	12.5	10.3	8.6	6.5	5.5	6.9	10.8	12.3	13.5	13.9
23. Youth unemployment rate (% labour force 15-24)	29.4	25.5	22.0	17.7	13.5	12.8	16.7	22.8	26.0	29.5	30.2
24. Long term unemployment rate (% labour force)	9.2	7.2	6.0	4.7	3.7	2.7	2.8	5.0	7.0	7.7	8.1
25. Youth unemployment ratio (% population aged 15-24)	9.8	8.6	7.3	5.9	4.6	4.7	6.0	8.1	8.8	10.4	10.4

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	4030	4010	3993	3975	3958	3941	3925	3904	3767	3740	3723
2. Population aged 15-64	2692	2683	2669	2647	2621	2607	2582	2538	2493	2448	2414
3. Total employment (000)	1561	1598	1629	1692	1743	1780	1753	1705	1662	1631	1618
4. Population in employment aged 15-64	1319	1357	1378	1446	1508	1551	1506	1431	1386	1378	1372
5. Employment rate (% population aged 20-64)	54.0	56.0	57.1	60.4	63.5	65.4	64.0	61.7	59.8	60.2	60.7
6. Employment rate (% population aged 15-64)	49.0	50.6	51.7	54.6	57.6	59.5	58.3	56.4	55.6	56.3	56.8
7. Employment rate (% population aged 15-24)	19.6	19.6	19.4	21.0	21.8	23.1	21.4	18.9	19.0	18.7	18.4
8. Employment rate (% population aged 25-54)	67.1	68.8	70.3	72.8	76.2	77.9	75.8	73.6	71.9	71.8	71.5
9. Employment rate (% population aged 55-64)	21.0	24.2	25.5	31.1	34.5	37.7	39.2	37.7	39.4	41.3	43.4
10. FTE employment rate (% population aged 15-64)	48.8	50.8	51.1	54.0	57.1	58.9	57.7	55.8	54.9	55.6	56.0
11. Self-employed (% total employment)	22.0	21.9	21.9	20.8	20.0	20.9	21.0	21.9	20.7	19.8	19.9
12. Part-time employment (% total employment)	2.6	2.7	2.5	2.5	2.1	2.7	2.7	2.6	2.6	2.7	3.2
13. Fixed term contracts (% total employees)	6.0	7.0	6.2	6.1	5.5	4.4	4.2	4.0	3.7	4.0	5.1
14. Employment in Services (% total employment)	57.9	58.7	59.6	60.5	61.0	60.4	63.0	64.5	65.3	65.4	66.0
15. Employment in Industry (% total employment)	24.3	23.9	23.7	23.7	24.0	24.3	21.7	20.0	20.4	21.5	20.7
16. Employment in Agriculture (% total employment)	17.8	17.4	16.7	15.8	15.0	15.4	15.2	15.5	14.4	13.1	13.3
17. Activity rate (% population aged 15-64)	56.5	57.2	57.3	60.2	62.1	63.1	62.5	62.3	61.9	63.2	64.5
18. Activity rate (% population aged 15-24)	26.1	25.9	24.5	26.4	26.0	26.1	24.8	24.2	24.8	25.3	24.7
19. Activity rate (% population aged 25-54)	76.4	76.8	77.2	79.4	81.4	82.1	80.6	80.5	79.3	79.8	80.3
20. Activity rate (% population aged 55-64)	23.8	26.8	27.8	33.9	37.2	40.2	42.1	41.3	42.8	45.5	49.0
21. Total unemployment (000)	204	178	152	150	120	96	108	152	157	169	187
22. Unemployment rate (% labour force)	13.4	11.6	10.0	9.4	7.4	5.8	6.7	9.6	10.1	10.8	11.8
23. Youth unemployment rate (% labour force 15-24)	23.3	22.8	19.7	18.9	14.8	10.5	12.8	20.3	23.6	26.0	25.7
24. Long term unemployment rate (% labour force)	8.7	7.1	6.1	5.3	4.5	3.1	3.1	4.5	5.5	5.7	6.6
25. Youth unemployment ratio (% population aged 15-24)	6.5	6.3	5.2	5.3	4.1	3.0	3.4	5.3	5.9	6.6	6.3

Source: Eurostat.

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Labour market indicators: Czech Republic

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	10 179	10 196	10 229	10 265	10 320	10 422	10 499	10 522	10 497	10 515	10 521
2. Population aged 15-64	7 182	7 231	7 270	7 307	7 347	7 410	7 431	7 400	7 296	7 229	7 154
3. Total employment (000)	4 830	4 815	4 915	4 981	5 086	5 204	5 111	5 059	5 057	5 077	5 124
4. Population in employment aged 15-64	4 647	4 639	4 710	4 769	4 856	4 934	4 857	4 810	4 796	4 810	4 846
5. Employment rate (% population aged 20-64)	70.7	70.1	70.7	71.2	72.0	72.4	70.9	70.4	70.9	71.5	72.5
6. Employment rate (% population aged 15-64)	64.7	64.2	64.8	65.3	66.1	66.6	65.4	65.0	65.7	66.5	67.7
7. Employment rate (% population aged 15-24)	30.0	27.8	27.5	27.7	28.5	28.1	26.5	25.2	24.5	25.2	25.6
8. Employment rate (% population aged 25-54)	81.7	81.4	82.0	82.5	83.5	83.8	82.5	82.2	82.8	82.9	83.5
9. Employment rate (% population aged 55-64)	42.3	42.7	44.5	45.2	46.0	47.6	46.8	46.5	47.7	49.3	51.6
10. FTE employment rate (% population aged 15-64)	64.1	63.3	64.0	64.4	65.1	65.6	64.2	63.8	64.7	65.3	66.2
11. Self-employed (% total employment)	17.9	17.5	16.6	16.7	16.6	16.4	17.0	17.5	17.5	17.9	17.4
12. Part-time employment (% total employment)	5.0	4.9	4.9	5.0	5.0	4.9	5.5	5.9	5.5	5.8	6.6
13. Fixed term contracts (% total employees)	9.2	9.1	8.6	8.7	8.6	8.0	8.5	8.9	8.5	8.8	9.6
14. Employment in Services (% total employment)	57.8	57.2	57.5	58.0	58.4	58.6	60.1	60.8	60.2	60.3	60.7
15. Employment in Industry (% total employment)	38.2	38.7	38.8	38.3	38.2	38.0	36.6	36.0	36.4	36.5	36.2
16. Employment in Agriculture (% total employment)	4.0	4.1	3.8	3.7	3.4	3.4	3.3	3.2	3.3	3.3	3.2
17. Activity rate (% population aged 15-64)	70.2	70.0	70.4	70.3	69.9	69.7	70.1	70.2	70.5	71.6	72.9
18. Activity rate (% population aged 15-24)	36.8	35.2	34.0	33.5	31.9	31.1	31.8	30.9	29.9	31.3	31.5
19. Activity rate (% population aged 25-54)	87.8	87.8	88.3	88.2	87.8	87.3	87.7	87.8	88.0	88.4	89.1
20. Activity rate (% population aged 55-64)	44.2	45.1	46.9	47.7	48.2	49.5	49.6	49.7	50.6	52.4	54.8
21. Total unemployment (000)	399	426	410	371	276	230	352	384	351	367	370
22. Unemployment rate (% labour force)	7.8	8.3	7.9	7.1	5.3	4.4	6.7	7.3	6.7	7.0	7.0
23. Youth unemployment rate (% labour force 15-24)	17.6	20.4	19.3	17.5	10.7	9.9	16.6	18.3	18.1	19.5	18.9
24. Long term unemployment rate (% labour force)	3.8	4.2	4.2	3.9	2.8	2.2	2.0	3.0	2.7	3.0	3.0
25. Youth unemployment ratio (% population aged 15-24)	6.8	7.4	6.5	5.9	3.4	3.1	5.3	5.7	5.4	6.1	6.0

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	4 941	4 959	4 987	5 012	5 045	5 107	5 156	5 166	5 153	5 163	5 167
2. Population aged 15-64	3 582	3 616	3 646	3 671	3 696	3 739	3 760	3 744	3 691	3 660	3 624
3. Total employment (000)	2 727	2 717	2 792	2 829	2 900	2 978	2 925	2 898	2 883	2 885	2 900
4. Population in employment aged 15-64	2 619	2 615	2 671	2 704	2 764	2 820	2 777	2 753	2 733	2 732	2 742
5. Employment rate (% population aged 20-64)	80.1	79.2	80.1	80.4	81.5	82.0	80.2	79.6	79.9	80.2	81.0
6. Employment rate (% population aged 15-64)	73.1	72.3	73.3	73.7	74.8	75.4	73.8	73.5	74.0	74.6	75.7
7. Employment rate (% population aged 15-24)	32.3	30.1	31.3	31.5	32.8	32.4	31.1	29.6	29.0	29.2	29.9
8. Employment rate (% population aged 25-54)	89.7	89.2	89.8	90.4	91.7	92.1	90.5	90.5	90.9	90.9	91.2
9. Employment rate (% population aged 55-64)	57.5	57.2	59.3	59.5	59.6	61.9	59.6	58.4	58.9	60.3	62.5
10. FTE employment rate (% population aged 15-64)	73.2	72.1	73.2	73.5	74.5	75.2	73.5	73.2	73.8	74.3	75.2
11. Self-employed (% total employment)	22.5	22.3	21.0	20.8	21.0	20.6	21.0	21.6	21.3	21.6	20.6
12. Part-time employment (% total employment)	2.3	2.3	2.1	2.2	2.3	2.2	2.8	2.9	2.5	2.9	3.3
13. Fixed term contracts (% total employees)	7.9	7.8	7.6	7.5	7.3	6.5	7.0	7.5	7.2	7.4	8.0
14. Employment in Services (% total employment)	47.1	46.4	46.7	47.5	47.5	47.6	48.6	48.9	48.5	48.2	48.8
15. Employment in Industry (% total employment)	48.0	48.6	48.7	48.1	48.3	48.2	47.3	46.9	47.2	47.6	47.2
16. Employment in Agriculture (% total employment)	4.9	5.0	4.6	4.4	4.2	4.1	4.1	4.1	4.3	4.2	4.0
17. Activity rate (% population aged 15-64)	78.0	77.9	78.4	78.3	78.1	78.1	78.5	78.6	78.7	79.5	80.5
18. Activity rate (% population aged 15-24)	39.6	38.7	38.9	37.7	36.7	35.9	37.3	36.2	35.5	36.4	36.8
19. Activity rate (% population aged 25-54)	94.4	94.6	94.8	94.8	95.0	94.8	95.1	95.5	95.3	95.5	95.8
20. Activity rate (% population aged 55-64)	59.9	60.2	62.1	62.7	62.5	64.2	63.2	62.5	62.6	64.0	66.1
21. Total unemployment (000)	174	201	187	169	124	103	175	191	171	178	176
22. Unemployment rate (% labour force)	6.1	7.0	6.5	5.8	4.2	3.5	5.9	6.4	5.8	6.0	5.9
23. Youth unemployment rate (% labour force 15-24)	16.6	21.1	19.4	16.6	10.6	9.8	16.6	18.2	18.2	19.9	18.7
24. Long term unemployment rate (% labour force)	2.8	3.4	3.4	3.1	2.1	1.7	1.6	2.6	2.4	2.6	2.5
25. Youth unemployment ratio (% population aged 15-24)	7.3	8.6	7.5	6.3	3.9	3.5	6.2	6.6	6.4	7.2	6.9

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	5 238	5 237	5 242	5 252	5 275	5 315	5 343	5 356	5 344	5 351	5 354
2. Population aged 15-64	3 601	3 615	3 624	3 636	3 651	3 671	3 671	3 656	3 605	3 569	3 530
3. Total employment (000)	2 103	2 098	2 124	2 152	2 187	2 225	2 186	2 161	2 175	2 192	2 224
4. Population in employment aged 15-64	2 028	2 024	2 039	2 065	2 092	2 114	2 081	2 057	2 064	2 079	2 104
5. Employment rate (% population aged 20-64)	61.4	61.1	61.3	61.8	62.4	62.5	61.4	60.9	61.7	62.5	63.8
6. Employment rate (% population aged 15-64)	56.3	56.0	56.3	56.8	57.3	57.6	56.7	56.3	57.2	58.2	59.6
7. Employment rate (% population aged 15-24)	27.6	25.4	23.4	23.7	23.9	23.5	21.7	20.6	19.8	21.0	21.0
8. Employment rate (% population aged 25-54)	73.5	73.4	74.0	74.5	74.9	75.2	74.1	73.4	74.3	74.6	75.5
9. Employment rate (% population aged 55-64)	28.4	29.4	30.9	32.1	33.5	34.4	35.0	35.5	37.2	39.0	41.4
10. FTE employment rate (% population aged 15-64)	55.1	54.6	54.8	55.2	55.5	55.8	54.8	54.2	55.3	56.2	57.1
11. Self-employed (% total employment)	11.9	11.3	10.8	11.2	10.8	10.8	11.5	12.0	12.5	13.1	13.1
12. Part-time employment (% total employment)	8.5	8.3	8.6	8.7	8.5	8.5	9.2	9.9	9.4	9.5	11.0
13. Fixed term contracts (% total employees)	10.7	10.7	9.8	10.1	10.2	9.8	10.2	10.6	10.1	10.5	11.5
14. Employment in Services (% total employment)	71.5	71.1	71.5	71.7	72.5	72.8	75.1	76.3	75.5	75.8	75.9
15. Employment in Industry (% total employment)	25.7	26.0	25.9	25.6	25.2	24.7	22.5	21.8	22.4	22.1	21.9
16. Employment in Agriculture (% total employment)	2.8	2.9	2.7	2.7	2.4	2.4	2.3	2.0	2.1	2.0	2.2
17. Activity rate (% population aged 15-64)	62.5	62.2	62.4	62.3	61.5	61.0	61.5	61.5	62.2	63.5	65.1
18. Activity rate (% population aged 15-24)	34.0	31.5	28.9	29.2	26.9	26.1	26.1	25.3	24.1	25.9	26.1
19. Activity rate (% population aged 25-54)	81.0	80.9	81.6	81.3	80.3	79.6	79.9	79.8	80.4	80.9	81.9
20. Activity rate (% population aged 55-64)	30.0	31.3	32.9	34.0	35.2	36.1	37.2	38.0	39.4	41.5	44.2
21. Total unemployment (000)	224	225	223	202	153	127	177	193	180	189	194
22. Unemployment rate (% labour force)	9.9	9.9	9.8	8.8	6.7	5.6	7.7	8.5	7.9	8.2	8.3
23. Youth unemployment rate (% labour force 15-24)	18.8	19.5	19.1	18.7	11.0	9.9	16.7	18.5	18.0	19.0	19.3
24. Long term unemployment rate (% labour force)	5.0	5.3	5.3	4.9	3.6	2.8	2.5	3.5	3.2	3.6	3.7
25. Youth unemployment ratio (% population aged 15-24)	6.4	6.1	5.5	5.4	2.9	2.6	4.4	4.7	4.3	4.9	5.1

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Source: Eurostat.

LFS indicators: Break in series 2011.

Labour market indicators: Denmark

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	5 359	5 379	5 396	5 415	5 438	5 485	5 517	5 542	5 566	5 586	5 609
2. Population aged 15-64	3 548	3 559	3 566	3 569	3 582	3 605	3 616	3 619	3 613	3 611	3 615
3. Total employment (000)	2 756	2 739	2 767	2 825	2 903	2 952	2 853	2 782	2 776	2 767	2 772
4. Population in employment aged 15-64	2 666	2 693	2 706	2 762	2 759	2 807	2 724	2 654	2 643	2 621	2 622
5. Employment rate (% population aged 20-64)	77.3	77.6	78.0	79.4	79.0	79.7	77.5	75.8	75.7	75.4	75.6
6. Employment rate (% population aged 15-64)	75.1	75.7	75.9	77.4	77.0	77.9	75.3	73.3	73.1	72.6	72.5
7. Employment rate (% population aged 15-24)	59.6	62.3	62.3	64.6	65.3	66.4	62.5	58.1	57.5	55.0	53.7
8. Employment rate (% population aged 25-54)	83.5	83.7	84.5	86.1	86.1	87.5	84.7	82.8	82.3	81.9	82.0
9. Employment rate (% population aged 55-64)	60.2	60.3	59.5	60.7	58.9	58.4	58.2	58.4	59.5	60.8	61.7
10. FTE employment rate (% population aged 15-64)	68.4	68.6	68.6	69.2	69.6	70.0	67.1	65.0	64.7	64.3	64.2
11. Self-employed (% total employment)	6.7	6.4	6.3	6.2	6.0	5.9	6.0	6.0	5.9	5.9	5.9
12. Part-time employment (% total employment)	21.3	22.2	22.1	23.6	23.7	24.4	25.9	26.3	25.9	25.7	25.4
13. Fixed term contracts (% total employees)	9.3	9.5	9.8	8.9	9.1	8.5	8.7	8.4	8.8	8.5	8.8
14. Employment in Services (% total employment)	75.9	76.5	76.7	76.9	76.9	77.0	78.6	79.8	79.8	79.8	80.0
15. Employment in Industry (% total employment)	21.0	20.5	20.4	20.4	20.5	20.5	18.9	17.8	17.8	17.8	17.6
16. Employment in Agriculture (% total employment)	3.1	3.0	2.9	2.7	2.6	2.5	2.5	2.4	2.4	2.4	2.5
17. Activity rate (% population aged 15-64)	79.5	80.1	79.8	80.6	80.1	80.7	80.2	79.4	79.3	78.6	78.1
18. Activity rate (% population aged 15-24)	65.6	67.9	68.1	69.9	70.6	72.2	70.9	67.5	67.1	64.1	61.7
19. Activity rate (% population aged 25-54)	87.8	88.2	88.1	88.9	88.9	89.9	89.4	88.7	88.2	87.8	87.5
20. Activity rate (% population aged 55-64)	63.3	63.9	62.8	63.2	61.0	59.9	60.8	61.8	63.2	64.4	65.0
21. Total unemployment (000)	155	160	140	114	110	103	177	219	221	219	203
22. Unemployment rate (% labour force)	5.4	5.5	4.8	3.9	3.8	3.5	6.0	7.5	7.6	7.5	7.0
23. Youth unemployment rate (% labour force 15-24)	9.2	8.2	8.6	7.7	7.3	8.1	11.8	13.9	14.3	14.0	13.0
24. Long term unemployment rate (% labour force)	1.1	1.2	1.1	0.8	0.6	0.5	0.6	1.5	1.8	2.1	1.8
25. Youth unemployment ratio (% population aged 15-24)	6.0	5.6	5.9	5.4	5.3	5.8	8.4	9.4	9.6	9.1	8.1

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	2 650	2 662	2 671	2 682	2 692	2 717	2 734	2 747	2 758	2 770	2 782
2. Population aged 15-64	1 794	1 798	1 799	1 803	1 807	1 819	1 823	1 823	1 820	1 820	1 820
3. Total employment (000)	1 483	1 465	1 478	1 506	1 545	1 570	1 497	1 454	1 459	1 454	1 454
4. Population in employment aged 15-64	1 429	1 433	1 436	1 464	1 460	1 484	1 421	1 378	1 381	1 368	1 365
5. Employment rate (% population aged 20-64)	82.2	82.1	82.3	83.8	83.2	83.9	80.5	78.6	79.0	78.6	78.7
6. Employment rate (% population aged 15-64)	79.6	79.7	79.8	81.2	80.8	81.6	78.0	75.6	75.9	75.2	75.0
7. Employment rate (% population aged 15-24)	61.5	63.4	63.9	65.0	66.5	67.4	62.2	56.7	56.6	54.6	52.3
8. Employment rate (% population aged 25-54)	87.9	87.6	88.3	90.1	89.8	90.9	86.9	85.3	85.7	84.6	85.0
9. Employment rate (% population aged 55-64)	67.3	67.3	65.6	67.1	64.9	65.2	64.9	63.3	63.8	65.9	66.5
10. FTE employment rate (% population aged 15-64)	75.4	75.7	75.3	76.2	76.2	76.4	72.5	70.2	70.2	69.4	69.2
11. Self-employed (% total employment)	9.0	8.7	8.5	8.1	8.2	8.1	8.3	8.1	8.1	8.0	7.9
12. Part-time employment (% total employment)	11.6	12.1	12.7	13.3	13.3	14.3	15.3	15.1	15.3	16.0	15.9
13. Fixed term contracts (% total employees)	8.2	8.7	8.5	8.0	7.8	7.7	7.9	8.1	8.3	7.8	8.1
14. Employment in Services (% total employment)	65.0	65.7	66.2	66.0	66.9	66.8	68.4	69.4	69.6	69.7	69.8
15. Employment in Industry (% total employment)	30.4	29.9	29.6	29.9	29.4	29.4	27.8	26.7	26.6	26.5	26.3
16. Employment in Agriculture (% total employment)	4.6	4.4	4.2	4.0	3.7	3.8	3.8	3.9	3.8	3.7	3.9
17. Activity rate (% population aged 15-64)	83.8	84.0	83.6	84.1	83.7	84.3	83.6	82.6	82.3	81.4	80.6
18. Activity rate (% population aged 15-24)	67.7	69.7	70.0	70.5	72.0	72.8	71.7	67.6	67.1	64.1	61.1
19. Activity rate (% population aged 25-54)	91.8	91.5	91.7	92.3	92.3	93.3	92.2	92.0	91.5	90.6	90.2
20. Activity rate (% population aged 55-64)	70.4	71.3	68.7	69.6	66.9	66.9	68.1	67.8	68.3	69.9	70.2
21. Total unemployment (000)	74	78	68	52	53	50	103	129	118	115	102
22. Unemployment rate (% labour force)	4.8	5.1	4.4	3.3	3.4	3.2	6.6	8.3	7.7	7.5	6.7
23. Youth unemployment rate (% labour force 15-24)	:	:	:	:	7.4	7.5	13.2	15.9	15.8	14.6	14.1
24. Long term unemployment rate (% labour force)	1.2	1.1	1.1	0.7	0.5	0.4	0.6	1.8	2.0	2.1	1.6
25. Youth unemployment ratio (% population aged 15-24)	6.2	6.2	6.1	5.6	5.5	5.4	9.5	10.9	10.5	9.5	8.7

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	2 708	2 717	2 725	2 733	2 746	2 768	2 783	2 796	2 807	2 816	2 827
2. Population aged 15-64	1 753	1 762	1 767	1 767	1 775	1 786	1 793	1 795	1 793	1 791	1 795
3. Total employment (000)	1 273	1 274	1 290	1 318	1 358	1 382	1 355	1 328	1 316	1 313	1 318
4. Population in employment aged 15-64	1 237	1 261	1 270	1 297	1 299	1 323	1 303	1 276	1 262	1 254	1 257
5. Employment rate (% population aged 20-64)	72.4	73.0	73.7	74.8	74.7	75.5	74.5	73.0	72.4	72.2	72.4
6. Employment rate (% population aged 15-64)	70.5	71.6	71.9	73.4	73.2	74.1	72.7	71.1	70.4	70.0	70.0
7. Employment rate (% population aged 15-24)	57.6	61.1	60.5	64.1	64.0	65.3	62.8	59.5	58.5	55.4	55.0
8. Employment rate (% population aged 25-54)	79.0	79.8	80.6	82.0	82.3	84.0	82.5	80.3	78.9	79.1	79.0
9. Employment rate (% population aged 55-64)	52.9	53.3	53.5	54.3	52.9	51.5	51.7	53.6	55.3	55.8	56.8
10. FTE employment rate (% population aged 15-64)	61.8	61.9	62.3	62.6	63.3	63.8	62.0	60.0	59.4	59.5	59.5
11. Self-employed (% total employment)	4.1	3.8	3.8	4.0	3.5	3.3	3.5	3.7	3.5	3.6	3.6
12. Part-time employment (% total employment)	32.7	33.8	33.0	35.4	35.5	36.0	37.5	38.4	37.6	36.4	35.8
13. Fixed term contracts (% total employees)	10.4	10.3	11.3	10.0	10.4	9.4	9.6	8.7	9.4	9.3	9.5
14. Employment in Services (% total employment)	88.1	88.4	88.2	88.8	87.9	88.3	89.6	90.9	90.9	90.5	90.9
15. Employment in Industry (% total employment)	10.5	10.2	10.4	9.9	10.8	10.7	9.3	8.3	8.3	8.5	8.2
16. Employment in Agriculture (% total employment)	1.4	1.4	1.4	1.3	1.3	1.1	1.1	0.8	0.9	1.0	0.9
17. Activity rate (% population aged 15-64)	75.1	76.2	75.9	77.0	76.4	77.0	76.8	76.0	76.1	75.8	75.6
18. Activity rate (% population aged 15-24)	63.5	66.0	66.2	69.3	69.1	71.5	70.0	67.4	67.1	64.0	62.4
19. Activity rate (% population aged 25-54)	83.7	84.8	84.5	85.4	85.3	86.4	86.5	85.3	84.7	84.9	84.8
20. Activity rate (% population aged 55-64)	55.9	56.5	56.8	56.7	55.1	53.0	53.5	55.9	58.0	58.9	59.9
21. Total unemployment (000)	81	81	71	62	57	52	74	90	103	104	101
22. Unemployment rate (% labour force)	6.1	6.0	5.3	4.5	4.2	3.8	5.3	6.5	7.4	7.6	7.3
23. Youth unemployment rate (% labour force 15-24)	:	:	:	:	7.3	8.8	10.3	11.8	12.7	13.4	11.8
24. Long term unemployment rate (% labour force)	1.0	1.3	1.2	0.9	0.7	0.5	0.5	1.2	1.7	2.1	2.0
25. Youth unemployment ratio (% population aged 15-24)	5.9	4.9	5.7	5.2	5.1	6.2	7.2	7.9	8.5	8.6	7.4

Source: Eurostat.

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Labour market indicators: **Germany**

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	81 598	81 589	81 529	81 489	81 363	81 265	80 967	80 760	80 805	81 027	81 179
2. Population aged 15-64	54 675	54 450	54 764	54 543	54 229	54 066	53 763	53 546	53 729	53 894	53 938
3. Total employment (000)	38 918	39 034	38 976	39 192	39 857	40 348	40 372	40 587	41 152	41 608	41 847
4. Population in employment aged 15-64	35 512	35 413	35 845	36 633	37 397	37 902	37 808	38 073	38 978	39 256	39 538
5. Employment rate (% population aged 20-64)	68.4	68.8	69.4	71.1	72.9	74.0	74.2	74.9	76.3	76.7	77.1
6. Employment rate (% population aged 15-64)	65.0	65.0	65.5	67.2	69.0	70.1	70.3	71.1	72.5	72.8	73.3
7. Employment rate (% population aged 15-24)	44.2	41.9	41.9	43.5	45.4	46.6	46.0	46.2	47.9	46.6	46.8
8. Employment rate (% population aged 25-54)	77.9	78.1	77.4	78.8	80.3	80.9	80.8	81.5	82.8	83.2	83.3
9. Employment rate (% population aged 55-64)	39.9	41.8	45.5	48.1	51.3	53.7	56.1	57.7	59.9	61.5	63.5
10. FTE employment rate (% population aged 15-64)	57.5	56.6	57.1	58.0	59.5	60.7	60.9	61.6	62.6	63.0	63.2
11. Self-employed (% total employment)	10.6	10.9	11.3	11.4	11.3	11.1	11.1	11.0	11.1	10.9	10.7
12. Part-time employment (% total employment)	21.7	22.3	24.0	25.8	26.1	25.9	26.1	26.2	26.6	26.7	27.3
13. Fixed term contracts (% total employees)	12.2	12.4	14.2	14.5	14.6	14.7	14.5	14.7	14.7	13.9	13.4
14. Employment in Services (% total employment)	71.3	71.9	72.4	72.8	72.9	72.9	73.4	73.8	73.7	73.7	73.8
15. Employment in Industry (% total employment)	26.9	26.4	25.8	25.5	25.4	25.5	25.0	24.6	24.7	24.7	24.7
16. Employment in Agriculture (% total employment)	1.8	1.8	1.7	1.6	1.7	1.7	1.7	1.6	1.6	1.6	1.5
17. Activity rate (% population aged 15-64)	72.1	72.6	73.8	74.9	75.6	75.9	76.3	76.6	77.2	77.1	77.5
18. Activity rate (% population aged 15-24)	50.0	48.0	49.6	50.4	51.5	52.2	51.8	51.3	52.5	50.7	50.9
19. Activity rate (% population aged 25-54)	86.0	86.5	86.4	87.1	87.2	87.0	87.1	87.3	87.7	87.7	87.6
20. Activity rate (% population aged 55-64)	45.5	47.8	52.1	54.9	57.2	58.7	61.0	62.5	64.0	65.4	67.4
21. Total unemployment (000)	3 916	4 251	4 653	4 245	3 601	3 136	3 228	2 946	2 501	2 316	2 270
22. Unemployment rate (% labour force)	9.8	10.5	11.3	10.3	8.7	7.5	7.8	7.1	5.9	5.5	5.3
23. Youth unemployment rate (% labour force 15-24)	11.6	13.8	15.6	13.8	11.9	10.6	11.2	9.9	8.6	8.1	7.9
24. Long term unemployment rate (% labour force)	4.9	5.9	6.0	5.8	4.9	4.0	3.5	3.4	2.8	2.5	2.4
25. Youth unemployment ratio (% population aged 15-24)	5.8	6.0	7.7	6.9	6.1	5.5	5.8	5.1	4.5	4.1	4.0

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	39 931	39 947	39 938	39 952	39 904	39 857	39 738	39 645	39 716	39 899	40 028
2. Population aged 15-64	27 549	27 451	27 558	27 482	27 297	27 213	27 055	26 943	27 057	27 176	27 213
3. Total employment (000)	21 447	21 480	21 399	21 441	21 765	22 019	21 844	21 889	22 165	22 445	22 472
4. Population in employment aged 15-64	19 540	19 434	19 636	20 000	20 378	20 631	20 401	20 481	20 926	21 101	21 148
5. Employment rate (% population aged 20-64)	74.7	74.9	75.6	77.2	79.1	80.1	79.6	80.1	81.4	81.8	81.9
6. Employment rate (% population aged 15-64)	70.9	70.8	71.3	72.8	74.7	75.8	75.4	76.0	77.3	77.6	77.7
7. Employment rate (% population aged 15-24)	45.4	43.6	43.6	45.3	47.2	48.7	47.5	47.9	49.7	48.6	48.3
8. Employment rate (% population aged 25-54)	84.3	83.9	83.7	84.8	86.4	87.1	86.1	86.5	87.7	88.1	87.9
9. Employment rate (% population aged 55-64)	48.2	50.7	53.6	56.1	59.4	61.7	63.8	65.0	67.0	68.5	69.8
10. FTE employment rate (% population aged 15-64)	68.9	67.8	68.7	69.6	71.4	72.6	72.1	72.7	73.8	74.0	73.9
11. Self-employed (% total employment)	12.9	13.3	13.5	13.6	13.4	13.3	13.6	13.6	13.6	13.5	13.2
12. Part-time employment (% total employment)	6.1	6.5	7.8	9.3	9.4	9.3	9.6	9.7	10.3	10.5	11.0
13. Fixed term contracts (% total employees)	12.1	12.7	14.4	14.7	14.7	14.7	14.4	14.5	14.6	13.9	13.4
14. Employment in Services (% total employment)	59.8	60.4	61.3	61.8	61.6	61.3	61.7	62.2	62.0	62.0	62.2
15. Employment in Industry (% total employment)	38.0	37.3	36.5	36.1	36.3	36.6	36.2	35.7	35.9	36.0	35.9
16. Employment in Agriculture (% total employment)	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0
17. Activity rate (% population aged 15-64)	79.1	79.2	80.6	81.3	81.7	82.0	82.2	82.3	82.5	82.4	82.4
18. Activity rate (% population aged 15-24)	52.7	50.8	52.4	53.1	54.0	54.7	54.3	53.7	54.8	53.2	52.9
19. Activity rate (% population aged 25-54)	93.2	93.0	93.6	93.8	93.8	93.5	93.2	93.1	93.1	93.0	92.7
20. Activity rate (% population aged 55-64)	54.9	57.8	61.2	63.7	65.8	67.2	69.3	70.8	71.7	73.0	74.4
21. Total unemployment (000)	2 230	2 397	2 620	2 338	1 938	1 686	1 836	1 696	1 407	1 299	1 294
22. Unemployment rate (% labour force)	10.1	10.7	11.6	10.3	8.6	7.4	8.1	7.5	6.2	5.7	5.6
23. Youth unemployment rate (% labour force 15-24)	13.9	15.3	16.9	14.8	12.6	11.0	12.5	10.9	9.3	8.8	8.6
24. Long term unemployment rate (% labour force)	4.8	5.9	6.1	5.8	4.9	4.0	3.6	3.6	3.1	2.7	2.6
25. Youth unemployment ratio (% population aged 15-24)	7.2	7.2	8.8	7.9	6.8	6.0	6.8	5.8	5.1	4.7	4.5

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	41 668	41 642	41 590	41 537	41 460	41 408	41 229	41 115	41 089	41 129	41 151
2. Population aged 15-64	27 126	26 999	27 206	27 061	26 932	26 854	26 708	26 604	26 672	26 718	26 724
3. Total employment (000)	17 471	17 554	17 577	17 752	18 091	18 329	18 528	18 698	18 987	19 162	19 375
4. Population in employment aged 15-64	15 972	15 979	16 209	16 633	17 019	17 271	17 407	17 591	18 052	18 155	18 390
5. Employment rate (% population aged 20-64)	61.9	62.6	63.1	65.0	66.7	67.8	68.7	69.6	71.1	71.5	72.3
6. Employment rate (% population aged 15-64)	58.9	59.2	59.6	61.5	63.2	64.3	65.2	66.1	67.7	68.0	68.8
7. Employment rate (% population aged 15-24)	43.0	40.2	40.2	41.6	43.5	44.5	44.4	44.6	46.1	44.6	45.2
8. Employment rate (% population aged 25-54)	71.4	72.1	71.0	72.7	74.0	74.7	75.4	76.3	77.8	78.2	78.6
9. Employment rate (% population aged 55-64)	31.6	33.0	37.6	40.3	43.4	46.0	48.6	50.5	53.0	54.8	57.5
10. FTE employment rate (% population aged 15-64)	46.2	45.5	45.7	46.6	47.9	49.0	49.8	50.6	51.8	52.1	52.8
11. Self-employed (% total employment)	7.7	8.0	8.6	8.7	8.7	8.4	8.1	8.0	8.0	7.9	7.7
12. Part-time employment (% total employment)	40.8	41.6	43.8	45.8	46.1	45.7	45.4	45.5	45.7	45.6	46.1
13. Fixed term contracts (% total employees)	12.3	12.2	14.0	14.3	14.6	14.8	14.7	14.9	14.8	13.8	13.5
14. Employment in Services (% total employment)	84.7	85.0	85.3	85.5	85.7	86.1	86.5	86.7	86.7	86.7	86.7
15. Employment in Industry (% total employment)	14.0	13.8	13.5	13.4	13.2	12.7	12.3	12.1	12.2	12.2	12.2
16. Employment in Agriculture (% total employment)	1.3	1.2	1.2	1.1	1.2	1.2	1.2	1.1	1.1	1.1	1.1
17. Activity rate (% population aged 15-64)	65.1	65.8	66.9	68.5	69.4	69.7	70.4	70.8	71.8	71.7	72.5
18. Activity rate (% population aged 15-24)	47.3	45.0	46.7	47.6	49.0	49.5	49.2	48.9	50.0	48.1	48.7
19. Activity rate (% population aged 25-54)	78.6	79.7	79.1	80.3	80.6	80.5	81.0	81.3	82.1	82.2	82.4
20. Activity rate (% population aged 55-64)	36.2	37.8	43.2	46.3	48.9	50.5	52.9	54.5	56.7	58.0	60.7
21. Total unemployment (000)	1 686	1 854	2 033	1 907	1 663	1 450	1 393	1 250	1 095	1 017	976
22. Unemployment rate (% labour force)	9.4	10.2	11.0	10.2	8.8	7.7	7.3	6.6	5.6	5.2	5.0
23. Youth unemployment rate (% labour force 15-24)	8.9	12.2	14.1	12.6	11.1	10.0	9.8	8.8	7.8	7.3	7.1
24. Long term unemployment rate (% labour force)	4.9	5.9	5.8	5.8	5.0	4.0	3.4	3.0	2.6	2.3	2.2
25. Youth unemployment ratio (% population aged 15-24)	4.3	4.9	6.6	6.0	5.4	4.9	4.8	4.3	3.9	3.5	3.5

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Source: Eurostat.

LFS indicators: Break in series 2005.

Labour market indicators: Estonia

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	1 366	1 354	1 348	1 345	1 338	1 334	1 331	1 329	1 326	1 320	1 316
2. Population aged 15-64	925	918	916	915	907	902	899	895	890	880	871
3. Total employment (000)	593	592	604	637	641	643	579	551	590	602	613
4. Population in employment aged 15-64	582	580	594	626	632	632	574	548	582	591	597
5. Employment rate (% population aged 20-64)	69.6	70.3	72.0	75.9	76.9	77.1	70.0	66.8	70.6	72.2	73.3
6. Employment rate (% population aged 15-64)	63.0	63.1	64.8	68.4	69.8	70.1	63.8	61.2	65.3	67.1	68.5
7. Employment rate (% population aged 15-24)	30.8	28.5	30.7	31.4	34.1	35.9	28.3	25.3	31.1	32.3	32.4
8. Employment rate (% population aged 25-54)	77.1	77.7	79.1	84.1	84.8	83.9	76.5	74.9	78.2	79.5	80.4
9. Employment rate (% population aged 55-64)	50.9	53.0	55.7	58.4	59.9	62.3	60.3	53.8	57.5	60.5	62.6
10. FTE employment rate (% population aged 15-64)	61.4	62.0	63.4	66.9	68.1	68.5	61.7	59.2	63.3	65.1	66.3
11. Self-employed (% total employment)	8.9	9.7	8.1	8.1	9.1	7.8	8.2	8.3	8.5	8.8	9.0
12. Part-time employment (% total employment)	8.8	8.4	8.0	7.9	8.2	7.2	10.6	11.1	10.8	10.5	10.2
13. Fixed term contracts (% total employees)	2.6	2.7	2.7	2.7	2.1	2.4	2.5	3.7	4.5	3.7	3.5
14. Employment in Services (% total employment)	61.5	59.4	61.4	62.4	61.0	61.6	65.2	66.7	64.5	65.6	66.4
15. Employment in Industry (% total employment)	32.4	34.8	33.4	32.9	34.5	34.6	30.9	29.2	31.1	29.8	29.3
16. Employment in Agriculture (% total employment)	6.1	5.7	5.1	4.7	4.6	3.9	3.9	4.2	4.4	4.7	4.3
17. Activity rate (% population aged 15-64)	70.5	70.5	70.7	72.8	73.2	74.2	74.0	73.9	74.7	74.8	75.1
18. Activity rate (% population aged 15-24)	38.9	37.5	36.2	35.7	37.9	40.8	39.0	37.8	40.0	40.8	39.8
19. Activity rate (% population aged 25-54)	85.2	85.6	85.8	89.0	88.5	88.2	87.8	88.3	88.4	87.8	87.6
20. Activity rate (% population aged 55-64)	55.2	56.3	58.9	61.0	62.2	65.0	66.5	64.3	65.1	65.1	66.6
21. Total unemployment (000)	70	68	54	41	32	38	93	114	85	68	59
22. Unemployment rate (% labour force)	10.3	10.1	8.0	5.9	4.6	5.5	13.5	16.7	12.3	10.0	8.6
23. Youth unemployment rate (% labour force 15-24)	20.9	23.9	15.1	12.1	10.1	12.0	27.4	32.9	22.4	20.9	18.7
24. Long term unemployment rate (% labour force)	4.9	5.2	4.4	2.9	2.3	1.7	3.7	7.6	7.1	5.5	3.8
25. Youth unemployment ratio (% population aged 15-24)	8.1	8.9	5.5	4.3	3.8	4.9	10.7	12.4	9.0	8.5	7.4

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	634	626	623	624	621	618	617	617	617	614	613
2. Population aged 15-64	447	443	442	445	441	439	438	437	435	430	427
3. Total employment (000)	300	296	299	322	327	328	284	269	296	303	311
4. Population in employment aged 15-64	296	291	295	317	324	323	282	269	295	300	305
5. Employment rate (% population aged 20-64)	73.5	73.5	74.6	79.5	81.4	81.5	71.0	67.8	73.5	75.1	76.7
6. Employment rate (% population aged 15-64)	66.3	65.7	66.7	71.4	73.5	73.7	64.3	61.7	67.8	69.7	71.4
7. Employment rate (% population aged 15-24)	37.2	34.3	34.5	36.8	38.2	38.9	30.0	26.5	33.1	34.2	34.0
8. Employment rate (% population aged 25-54)	79.2	79.7	80.8	87.3	89.6	88.2	77.4	75.8	81.6	83.1	84.7
9. Employment rate (% population aged 55-64)	54.9	54.0	56.5	57.3	59.0	64.7	59.3	51.9	57.2	59.2	61.4
10. FTE employment rate (% population aged 15-64)	65.2	64.8	66.1	70.8	72.6	73.1	63.1	60.5	67.1	68.8	70.1
11. Self-employed (% total employment)	12.1	13.3	11.2	11.3	12.6	10.6	11.4	11.5	12.0	12.4	12.1
12. Part-time employment (% total employment)	5.6	6.1	5.2	4.4	4.3	4.1	7.1	7.0	5.6	5.9	6.2
13. Fixed term contracts (% total employees)	3.5	3.6	3.5	3.3	2.7	3.4	3.0	4.8	5.6	4.7	4.1
14. Employment in Services (% total employment)	49.3	47.5	49.4	49.1	46.5	47.5	51.3	52.4	49.4	50.5	51.7
15. Employment in Industry (% total employment)	42.0	44.3	43.5	44.5	47.3	47.2	43.4	41.9	44.1	42.8	41.9
16. Employment in Agriculture (% total employment)	8.7	8.2	7.1	6.5	6.2	5.3	5.3	5.7	6.4	6.7	6.4
17. Activity rate (% population aged 15-64)	74.5	74.1	73.6	76.2	77.8	78.4	77.7	76.8	78.2	78.4	78.6
18. Activity rate (% population aged 15-24)	45.2	45.2	41.2	40.9	43.5	44.5	43.8	41.2	43.4	44.3	41.4
19. Activity rate (% population aged 25-54)	88.1	88.3	88.4	92.6	93.5	92.8	91.9	91.8	92.1	92.1	92.3
20. Activity rate (% population aged 55-64)	60.8	58.0	60.5	61.5	63.4	68.3	67.3	64.3	67.0	65.3	66.9
21. Total unemployment (000)	37	38	31	22	19	20	58	66	45	38	31
22. Unemployment rate (% labour force)	10.8	11.1	9.2	6.2	5.4	5.8	16.7	19.3	13.1	10.9	9.1
23. Youth unemployment rate (% labour force 15-24)	17.6	24.0	16.1	10.0	12.2	12.6	31.6	35.6	23.8	22.8	17.7
24. Long term unemployment rate (% labour force)	5.4	5.9	4.5	3.2	2.9	2.0	4.4	9.3	7.9	6.1	4.2
25. Youth unemployment ratio (% population aged 15-24)	8.0	10.9	6.6	4.1	5.3	5.6	13.8	14.7	10.3	10.1	7.3

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	732	728	725	721	717	716	714	712	709	706	703
2. Population aged 15-64	477	475	473	471	466	464	462	459	455	450	444
3. Total employment (000)	293	296	306	315	315	315	295	282	294	299	303
4. Population in employment aged 15-64	286	289	299	309	309	309	292	279	287	291	292
5. Employment rate (% population aged 20-64)	66.0	67.3	69.7	72.5	72.6	72.9	69.0	65.9	67.8	69.4	70.1
6. Employment rate (% population aged 15-64)	59.9	60.7	63.1	65.6	66.2	66.6	63.2	60.8	63.0	64.7	65.7
7. Employment rate (% population aged 15-24)	24.1	22.5	26.8	25.8	29.8	32.9	26.7	24.1	29.0	30.3	30.7
8. Employment rate (% population aged 25-54)	75.0	75.8	77.6	80.9	80.1	79.7	75.7	74.0	75.0	75.8	76.1
9. Employment rate (% population aged 55-64)	47.8	52.2	55.1	59.3	60.7	60.5	61.1	55.3	57.8	61.5	63.6
10. FTE employment rate (% population aged 15-64)	57.9	59.4	61.0	63.3	63.8	64.3	60.4	58.0	59.7	61.6	62.7
11. Self-employed (% total employment)	5.6	6.0	5.0	4.7	5.5	4.9	5.2	5.3	5.1	5.1	5.8
12. Part-time employment (% total employment)	12.0	10.7	10.8	11.5	12.1	10.5	14.0	15.0	16.0	15.3	14.2
13. Fixed term contracts (% total employees)	1.8	1.8	1.9	2.1	1.6	1.4	2.0	2.7	3.5	2.7	3.0
14. Employment in Services (% total employment)	74.0	71.5	73.1	76.0	75.8	76.0	78.5	80.0	79.4	80.6	81.2
15. Employment in Industry (% total employment)	22.4	25.3	23.7	21.1	21.3	21.6	19.0	17.2	18.1	16.8	16.5
16. Employment in Agriculture (% total employment)	3.5	3.2	3.2	2.9	2.9	2.4	2.5	2.8	2.4	2.6	2.3
17. Activity rate (% population aged 15-64)	66.7	67.0	67.9	69.6	68.9	70.3	70.6	71.1	71.5	71.4	71.8
18. Activity rate (% population aged 15-24)	32.4	29.5	31.1	30.4	32.1	37.1	34.1	34.3	36.5	37.2	38.2
19. Activity rate (% population aged 25-54)	82.4	83.0	83.3	85.5	83.6	83.7	83.8	84.8	84.7	83.5	82.9
20. Activity rate (% population aged 55-64)	50.9	55.0	57.7	60.6	61.2	62.4	66.0	64.3	63.5	65.0	66.5
21. Total unemployment (000)	33	30	23	19	13	17	35	48	39	31	27
22. Unemployment rate (% labour force)	9.9	9.1	6.9	5.6	3.8	5.1	10.3	14.1	11.6	9.1	8.2
23. Youth unemployment rate (% labour force 15-24)	25.7	23.6	13.8	15.1	7.2	11.3	21.8	29.5	20.7	18.5	19.8
24. Long term unemployment rate (% labour force)	4.3	4.4	4.2	2.6	1.7	1.3	2.9	5.8	6.2	4.9	3.4
25. Youth unemployment ratio (% population aged 15-24)	8.3	7.0	4.3	4.6	2.3	4.2	7.4	10.1	7.5	6.9	7.5

Source: Eurostat.

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Labour market indicators: Ireland

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	3 991	4 059	4 149	4 253	4 357	4 440	4 539	4 560	4 577	4 590	4 602
2. Population aged 15-64	2 711	2 761	2 831	2 919	2 997	3 041	3 096	3 081	3 064	3 042	3 022
3. Total employment (000)	1 809	1 870	1 962	2 053	2 143	2 129	1 962	1 883	1 849	1 839	1 882
4. Population in employment aged 15-64	1 776	1 830	1 915	2 005	2 073	2 055	1 917	1 838	1 804	1 790	1 828
5. Employment rate (% population aged 20-64)	70.6	71.5	72.6	73.4	73.8	72.3	66.9	64.6	63.8	63.7	65.5
6. Employment rate (% population aged 15-64)	65.5	66.3	67.6	68.7	69.2	67.6	61.9	59.6	58.9	58.8	60.5
7. Employment rate (% population aged 15-24)	47.5	47.7	48.7	50.3	50.4	45.9	36.9	31.5	29.5	28.2	29.0
8. Employment rate (% population aged 25-54)	75.9	76.8	77.9	78.3	78.6	77.3	72.3	70.3	69.3	69.5	71.0
9. Employment rate (% population aged 55-64)	49.0	49.5	51.6	53.1	53.8	53.7	51.3	50.2	50.0	49.3	51.3
10. FTE employment rate (% population aged 15-64)	60.6	61.0	62.8	64.0	64.1	62.3	55.8	53.3	52.4	52.3	54.0
11. Self-employed (% total employment)	17.6	17.7	16.9	16.3	16.9	17.5	17.6	16.9	16.4	16.5	17.3
12. Part-time employment (% total employment)	16.9	16.8	:	:	17.7	18.6	21.5	22.7	23.6	24.0	24.1
13. Fixed term contracts (% total employees)	5.2	4.1	3.7	6.0	8.1	8.5	8.8	9.6	10.2	10.2	10.0
14. Employment in Services (% total employment)	66.9	67.1	67.3	67.3	68.1	69.6	73.6	75.8	76.5	76.9	76.0
15. Employment in Industry (% total employment)	26.7	26.8	27.0	27.3	26.7	25.0	21.5	19.6	19.0	18.4	18.3
16. Employment in Agriculture (% total employment)	6.4	6.1	5.7	5.4	5.2	5.4	4.9	4.5	4.5	4.7	5.7
17. Activity rate (% population aged 15-64)	68.8	69.5	70.8	71.9	72.5	72.0	70.6	69.4	69.2	69.2	69.8
18. Activity rate (% population aged 15-24)	52.3	52.4	53.3	55.0	55.4	52.5	48.5	43.6	41.5	40.5	39.7
19. Activity rate (% population aged 25-54)	79.1	79.9	80.9	81.4	81.9	81.6	81.1	80.5	80.2	80.4	80.8
20. Activity rate (% population aged 55-64)	50.2	50.8	53.1	54.4	55.1	55.5	54.9	55.0	55.4	55.1	57.4
21. Total unemployment (000)	87	88	90	97	105	146	268	303	317	316	282
22. Unemployment rate (% labour force)	4.6	4.5	4.4	4.5	4.7	6.4	12.0	13.9	14.7	14.7	13.1
23. Youth unemployment rate (% labour force 15-24)	8.7	8.7	8.6	8.7	9.1	13.3	24.0	27.6	29.1	30.4	26.8
24. Long term unemployment rate (% labour force)	1.5	1.6	1.5	1.4	1.4	1.7	3.5	6.8	8.7	9.1	7.9
25. Youth unemployment ratio (% population aged 15-24)	4.8	4.7	4.6	4.7	5.0	6.7	11.7	12.0	12.1	12.3	10.6

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	1 983	2 018	2 067	2 127	2 180	2 215	2 259	2 264	2 270	2 271	2 279
2. Population aged 15-64	1 361	1 387	1 425	1 476	1 515	1 531	1 551	1 538	1 527	1 510	1 501
3. Total employment (000)	1 050	1 084	1 130	1 184	1 223	1 197	1 064	1 010	989	981	1 016
4. Population in employment aged 15-64	1 024	1 053	1 095	1 149	1 174	1 146	1 031	977	956	946	978
5. Employment rate (% population aged 20-64)	81.3	82.1	82.8	83.4	83.0	80.4	72.1	69.1	68.2	68.1	70.9
6. Employment rate (% population aged 15-64)	75.2	75.9	76.9	77.9	77.5	74.9	66.5	63.5	62.6	62.7	65.1
7. Employment rate (% population aged 15-24)	50.5	50.7	51.5	53.9	53.0	46.7	34.6	29.6	27.8	26.3	28.5
8. Employment rate (% population aged 25-54)	87.0	87.8	88.4	88.4	87.7	85.5	77.8	75.1	74.0	74.5	76.7
9. Employment rate (% population aged 55-64)	64.6	65.0	65.7	66.9	67.8	66.1	61.2	58.2	57.1	55.8	59.3
10. FTE employment rate (% population aged 15-64)	74.4	74.9	76.4	77.5	76.9	73.8	64.0	60.6	59.4	59.3	61.9
11. Self-employed (% total employment)	24.8	25.0	24.2	23.3	24.2	25.2	26.2	24.9	24.2	24.3	25.1
12. Part-time employment (% total employment)	6.6	6.1	:	:	7.0	7.8	10.9	12.1	13.1	14.1	14.3
13. Fixed term contracts (% total employees)	4.4	3.7	3.1	5.1	6.7	7.2	7.7	8.9	9.8	9.9	10.1
14. Employment in Services (% total employment)	52.9	52.8	52.5	52.1	52.5	54.8	60.2	63.5	64.7	65.6	64.3
15. Employment in Industry (% total employment)	37.2	37.6	38.6	39.4	39.2	36.6	31.6	28.9	27.8	26.7	26.4
16. Employment in Agriculture (% total employment)	9.8	9.6	9.0	8.5	8.2	8.6	8.2	7.6	7.5	7.7	9.3
17. Activity rate (% population aged 15-64)	79.3	79.9	80.6	81.7	81.6	80.7	78.5	77.0	76.6	76.6	77.0
18. Activity rate (% population aged 15-24)	56.0	55.9	56.6	59.3	58.8	55.2	49.9	44.6	42.7	41.3	40.6
19. Activity rate (% population aged 25-54)	91.0	91.8	92.1	92.1	91.6	91.3	90.3	89.5	89.0	89.3	89.2
20. Activity rate (% population aged 55-64)	66.3	66.9	67.7	68.6	69.6	68.6	66.6	65.3	65.0	64.6	67.8
21. Total unemployment (000)	54	55	54	58	64	97	187	207	213	210	179
22. Unemployment rate (% labour force)	4.9	4.8	4.6	4.7	5.0	7.6	15.0	17.1	17.8	17.7	15.0
23. Youth unemployment rate (% labour force 15-24)	9.4	9.1	9.2	9.0	9.9	16.0	30.7	33.7	35.0	36.4	29.8
24. Long term unemployment rate (% labour force)	1.9	2.0	1.9	1.8	1.7	2.3	4.8	9.2	11.6	12.1	10.1
25. Youth unemployment ratio (% population aged 15-24)	5.5	5.2	5.1	5.3	5.8	8.5	15.3	15.0	14.9	15.1	12.1

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	2 008	2 041	2 081	2 126	2 177	2 225	2 280	2 296	2 307	2 319	2 323
2. Population aged 15-64	1 350	1 375	1 406	1 443	1 482	1 510	1 545	1 543	1 537	1 532	1 521
3. Total employment (000)	759	787	833	869	920	933	898	873	861	857	866
4. Population in employment aged 15-64	752	777	820	855	898	909	886	860	847	844	851
5. Employment rate (% population aged 20-64)	59.8	60.8	62.4	63.3	64.4	64.1	61.8	60.2	59.4	59.4	60.3
6. Employment rate (% population aged 15-64)	55.7	56.5	58.3	59.3	60.6	60.2	57.4	55.8	55.1	55.1	55.9
7. Employment rate (% population aged 15-24)	44.4	44.7	45.9	46.5	47.8	45.0	39.1	33.5	31.2	30.2	29.6
8. Employment rate (% population aged 25-54)	64.8	65.8	67.3	68.0	69.3	69.0	66.8	65.5	64.6	64.6	65.6
9. Employment rate (% population aged 55-64)	33.1	33.7	37.3	39.0	39.6	41.1	41.1	42.1	42.9	42.7	43.4
10. FTE employment rate (% population aged 15-64)	46.7	47.1	49.2	50.3	51.2	50.8	47.8	46.2	45.7	45.6	46.3
11. Self-employed (% total employment)	7.6	7.5	7.1	6.7	7.2	7.6	7.5	7.6	7.4	7.5	8.2
12. Part-time employment (% total employment)	31.0	31.5	:	:	32.0	32.4	34.0	34.9	35.7	35.4	35.6
13. Fixed term contracts (% total employees)	6.0	4.6	4.2	7.0	9.5	9.8	9.8	10.3	10.6	10.4	9.8
14. Employment in Services (% total employment)	85.9	86.4	87.2	87.7	88.4	88.6	89.5	90.1	90.2	90.0	89.7
15. Employment in Industry (% total employment)	12.4	12.3	11.6	11.1	10.4	10.0	9.5	8.8	8.8	8.8	8.8
16. Employment in Agriculture (% total employment)	1.6	1.3	1.2	1.2	1.2	1.4	1.1	1.1	1.0	1.2	1.5
17. Activity rate (% population aged 15-64)	58.3	59.0	60.8	61.9	63.3	63.1	62.6	61.9	61.9	62.0	62.7
18. Activity rate (% population aged 15-24)	48.5	48.8	49.9	50.6	51.9	49.9	47.1	42.5	40.3	39.7	38.7
19. Activity rate (% population aged 25-54)	67.2	68.0	69.6	70.5	71.9	71.8	71.8	71.6	71.5	71.7	72.5
20. Activity rate (% population aged 55-64)	33.8	34.4	38.2	40.0	40.4	42.2	42.9	44.6	45.7	45.6	47.1
21. Total unemployment (000)	32	33	35	39	41	49	80	95	104	106	104
22. Unemployment rate (% labour force)	4.1	4.0	4.1	4.3	4.3	4.9	8.2	9.9	10.8	11.0	10.7
23. Youth unemployment rate (% labour force 15-24)	7.8	8.3	7.9	8.3	8.0	10.3	17.0	21.2	22.7	24.0	23.5
24. Long term unemployment rate (% labour force)	0.9	1.0	0.9	0.9	0.9	1.0	1.8	3.8	5.1	5.4	5.3
25. Youth unemployment ratio (% population aged 15-24)	4.1	4.2	4.0	4.1	4.2	4.9	8.0	9.0	9.1	9.5	9.1

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Source: Eurostat.

LFS indicators: Break in series 2009.

Labour market indicators: Greece

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	10578	10616	10657	10710	10754	10780	10839	10882	10925	10963	10999
2. Population aged 15-64	7119	7129	7132	7158	7208	7232	7222	7231	7230	7223	7221
3. Total employment (000)	4408	4514	4650	4739	4807	4866	4836	4712	4447	4076	3910
4. Population in employment aged 15-64	4181	4235	4287	4365	4424	4474	4423	4307	4017	3705	3560
5. Employment rate (% population aged 20-64)	63.6	64.0	64.6	65.7	66.0	66.5	65.8	64.0	59.9	55.3	53.2
6. Employment rate (% population aged 15-64)	58.7	59.4	60.1	61.0	61.4	61.9	61.2	59.6	55.6	51.3	49.3
7. Employment rate (% population aged 15-24)	25.3	26.8	25.0	24.2	24.0	23.5	22.9	20.4	16.3	13.1	11.9
8. Employment rate (% population aged 25-54)	72.9	73.5	74.0	75.3	75.6	76.1	75.4	73.3	69.0	64.1	61.5
9. Employment rate (% population aged 55-64)	41.3	39.4	41.6	42.3	42.4	42.8	42.2	42.3	39.4	36.4	35.6
10. FTE employment rate (% population aged 15-64)	58.4	58.8	59.3	59.8	60.3	60.9	60.0	58.2	54.0	49.5	47.4
11. Self-employed (% total employment)	36.5	35.7	35.6	35.1	34.3	33.7	34.0	34.1	34.2	34.6	34.9
12. Part-time employment (% total employment)	4.3	4.6	5.0	5.7	5.6	5.6	6.0	6.4	6.8	7.7	8.4
13. Fixed term contracts (% total employees)	11.2	11.9	11.8	10.7	10.9	11.5	12.1	12.4	11.6	10.0	10.0
14. Employment in Services (% total employment)	65.2	67.5	68.4	69.1	69.2	69.2	69.6	70.3	71.7	72.2	72.4
15. Employment in Industry (% total employment)	20.2	19.8	19.7	19.4	19.7	19.9	19.2	18.2	16.6	15.6	14.7
16. Employment in Agriculture (% total employment)	14.6	12.6	11.8	11.4	11.1	10.9	11.2	11.6	11.6	12.2	12.9
17. Activity rate (% population aged 15-64)	65.2	66.5	66.8	67.0	67.0	67.1	67.8	68.2	67.7	67.9	68.0
18. Activity rate (% population aged 15-24)	34.6	36.7	33.7	32.4	31.1	30.2	30.9	30.3	29.2	29.2	28.4
19. Activity rate (% population aged 25-54)	79.8	81.1	81.5	82.0	81.9	82.0	82.8	83.3	83.2	83.9	84.0
20. Activity rate (% population aged 55-64)	42.7	41.3	43.2	43.9	43.9	44.2	44.2	45.1	43.1	42.2	42.5
21. Total unemployment (000)	:	:	:	:	:	:	:	:	:	:	:
22. Unemployment rate (% labour force)	:	:	:	:	:	:	:	:	:	:	:
23. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	:	:	:
24. Long term unemployment rate (% labour force)	5.3	5.6	5.2	4.9	4.2	3.7	3.9	5.7	8.9	14.5	18.6
25. Youth unemployment ratio (% population aged 15-24)	9.3	9.9	8.8	8.2	7.1	6.7	8.0	10.0	13.0	16.1	16.6

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	5190	5207	5227	5255	5285	5300	5330	5354	5377	5399	5420
2. Population aged 15-64	3537	3545	3551	3570	3603	3617	3615	3623	3626	3626	3629
3. Total employment (000)	2747	2796	2870	2903	2942	2962	2915	2820	2654	2426	2334
4. Population in employment aged 15-64	2595	2613	2636	2663	2698	2713	2658	2570	2390	2199	2120
5. Employment rate (% population aged 20-64)	79.6	79.5	79.8	80.3	80.4	80.4	78.8	76.2	71.1	65.3	62.9
6. Employment rate (% population aged 15-64)	73.4	73.7	74.2	74.6	74.9	75.0	73.5	70.9	65.9	60.6	58.4
7. Employment rate (% population aged 15-24)	30.9	32.3	30.1	29.7	29.2	28.5	27.7	24.5	19.6	16.1	14.6
8. Employment rate (% population aged 25-54)	89.3	89.3	89.5	90.0	90.1	90.2	88.4	85.3	80.0	74.0	71.5
9. Employment rate (% population aged 55-64)	58.7	56.4	58.8	59.2	59.1	59.1	57.7	56.5	52.3	47.6	45.8
10. FTE employment rate (% population aged 15-64)	73.9	74.1	74.4	74.6	74.9	75.2	73.5	70.6	65.1	59.5	57.2
11. Self-employed (% total employment)	38.5	38.4	38.2	37.8	37.1	36.4	37.1	37.1	37.3	38.1	38.3
12. Part-time employment (% total employment)	2.2	2.2	2.3	2.9	2.7	2.8	3.2	3.7	4.5	4.9	5.5
13. Fixed term contracts (% total employees)	9.7	10.5	10.1	9.1	9.3	9.9	10.6	10.9	10.5	8.8	9.2
14. Employment in Services (% total employment)	59.5	61.5	62.0	62.6	62.2	61.6	61.8	62.7	65.2	66.1	66.9
15. Employment in Industry (% total employment)	26.7	26.7	26.8	26.5	27.1	27.7	27.0	25.7	23.2	21.6	20.0
16. Employment in Agriculture (% total employment)	13.8	11.9	11.1	10.9	10.7	10.7	11.2	11.5	11.5	12.4	13.1
17. Activity rate (% population aged 15-64)	78.3	79.0	79.2	79.1	79.1	79.1	79.0	78.9	77.7	77.4	77.4
18. Activity rate (% population aged 15-24)	38.1	40.0	37.0	36.1	34.7	34.3	34.4	33.4	31.8	31.2	31.5
19. Activity rate (% population aged 25-54)	94.3	94.6	94.6	94.7	94.6	94.4	94.4	94.2	93.5	93.6	93.5
20. Activity rate (% population aged 55-64)	60.6	58.9	60.8	61.0	60.8	60.9	60.1	60.2	57.3	55.2	54.9
21. Total unemployment (000)	:	:	:	:	:	:	:	:	:	:	:
22. Unemployment rate (% labour force)	:	:	:	:	:	:	:	:	:	:	:
23. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	:	:	:
24. Long term unemployment rate (% labour force)	3.0	3.0	2.6	2.6	2.2	2.1	2.4	3.9	6.8	12.2	16.3
25. Youth unemployment ratio (% population aged 15-24)	7.2	7.6	6.9	6.4	5.5	5.8	6.6	8.9	12.2	15.1	16.9

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	5388	5409	5431	5455	5469	5480	5509	5528	5548	5564	5580
2. Population aged 15-64	3583	3584	3581	3588	3605	3615	3607	3608	3604	3597	3593
3. Total employment (000)	1662	1719	1780	1836	1865	1904	1921	1892	1793	1650	1576
4. Population in employment aged 15-64	1586	1621	1651	1702	1725	1761	1766	1737	1626	1507	1440
5. Employment rate (% population aged 20-64)	47.9	48.8	49.6	51.2	51.6	52.5	52.7	51.7	48.6	45.2	43.3
6. Employment rate (% population aged 15-64)	44.3	45.2	46.1	47.4	47.9	48.7	48.9	48.1	45.1	41.9	40.1
7. Employment rate (% population aged 15-24)	19.8	21.3	19.8	18.7	18.7	18.5	18.1	16.2	12.9	10.0	9.1
8. Employment rate (% population aged 25-54)	56.4	57.6	58.5	60.5	60.8	61.9	62.2	61.1	57.7	53.8	51.3
9. Employment rate (% population aged 55-64)	25.5	24.0	25.8	26.6	26.9	27.5	27.7	28.9	27.3	26.0	25.9
10. FTE employment rate (% population aged 15-64)	43.2	43.8	44.3	45.3	45.7	46.6	46.7	45.9	43.0	39.5	37.6
11. Self-employed (% total employment)	33.3	31.2	31.5	30.8	29.8	29.6	29.5	29.7	29.6	29.6	30.0
12. Part-time employment (% total employment)	7.7	8.5	9.3	10.2	10.1	9.9	10.4	10.4	10.2	11.9	12.6
13. Fixed term contracts (% total employees)	13.3	14.0	14.3	13.0	13.1	13.7	14.1	14.4	12.9	11.5	11.0
14. Employment in Services (% total employment)	74.3	77.1	78.5	79.1	79.9	80.6	81.1	81.2	81.2	81.0	80.4
15. Employment in Industry (% total employment)	9.8	9.1	8.6	8.5	8.5	8.3	7.7	7.1	7.0	6.9	7.0
16. Employment in Agriculture (% total employment)	15.8	13.8	12.9	12.3	11.6	11.2	11.2	11.6	11.8	12.1	12.5
17. Activity rate (% population aged 15-64)	52.2	54.1	54.5	55.0	54.9	55.1	56.5	57.6	57.5	58.4	58.5
18. Activity rate (% population aged 15-24)	31.2	33.4	30.4	28.7	27.6	26.1	27.4	27.2	26.6	27.2	25.4
19. Activity rate (% population aged 25-54)	65.2	67.6	68.2	69.1	69.1	69.4	71.0	72.2	72.7	73.9	74.2
20. Activity rate (% population aged 55-64)	26.4	25.2	27.1	28.0	28.2	28.6	29.3	30.9	29.7	29.9	30.8
21. Total unemployment (000)	:	:	:	:	:	:	:	:	:	:	:
22. Unemployment rate (% labour force)	:	:	:	:	:	:	:	:	:	:	:
23. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	:	:	:
24. Long term unemployment rate (% labour force)	8.9	9.4	8.9	8.1	7.1	6.0	6.1	8.2	11.6	17.5	21.5
25. Youth unemployment ratio (% population aged 15-24)	11.4	12.1	10.6	9.9	8.8	7.5	9.3	11.1	13.7	17.2	16.3

Source: Eurostat.

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Labour market indicators: Spain

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	41 753	42 440	43 141	44 025	44 874	45 589	45 965	46 149	46 307	46 325	46 146
2. Population aged 15-64	28 729	29 227	29 755	30 433	31 053	31 507	31 617	31 567	31 496	31 348	31 024
3. Total employment (000)	17 916	18 565	19 335	20 105	20 713	20 687	19 344	18 918	18 563	17 778	17 252
4. Population in employment aged 15-64	17 188	17 861	18 834	19 792	20 437	20 317	18 958	18 574	18 271	17 477	17 002
5. Employment rate (% population aged 20-64)	64.0	65.2	67.2	69.0	69.7	68.5	64.0	62.8	62.0	59.6	58.6
6. Employment rate (% population aged 15-64)	59.8	61.1	63.3	65.0	65.8	64.5	60.0	58.8	58.0	55.8	54.8
7. Employment rate (% population aged 15-24)	34.4	35.2	38.3	39.6	39.2	36.0	28.0	25.0	22.0	18.4	16.8
8. Employment rate (% population aged 25-54)	71.4	72.7	74.4	76.1	77.1	75.6	71.0	70.0	69.1	66.7	65.8
9. Employment rate (% population aged 55-64)	40.7	41.3	43.1	44.1	44.5	45.5	44.0	43.5	44.5	43.9	43.2
10. FTE employment rate (% population aged 15-64)	57.3	58.3	59.4	61.1	62.0	60.7	56.1	54.9	53.9	51.4	50.2
11. Self-employed (% total employment)	14.8	14.6	14.2	13.8	13.5	13.4	13.4	13.3	13.2	14.1	14.6
12. Part-time employment (% total employment)	8.2	8.7	12.4	11.8	11.6	11.8	12.5	13.0	13.6	14.5	15.8
13. Fixed term contracts (% total employees)	31.8	32.5	33.3	34.0	31.6	29.1	25.2	24.7	25.1	23.4	23.1
14. Employment in Services (% total employment)	65.7	66.4	67.0	67.9	68.5	70.3	73.2	74.2	75.5	76.6	77.4
15. Employment in Industry (% total employment)	28.9	28.5	28.3	27.8	27.4	25.7	22.8	21.6	20.4	19.2	18.3
16. Employment in Agriculture (% total employment)	5.4	5.1	4.8	4.3	4.1	3.9	4.0	4.2	4.1	4.2	4.3
17. Activity rate (% population aged 15-64)	67.6	68.7	69.7	71.1	71.8	72.7	73.1	73.5	73.9	74.3	74.3
18. Activity rate (% population aged 15-24)	44.5	45.1	47.7	48.2	47.9	47.7	45.0	42.7	40.9	39.0	37.8
19. Activity rate (% population aged 25-54)	79.6	80.6	80.9	82.3	83.1	84.0	84.8	85.7	86.2	86.9	87.2
20. Activity rate (% population aged 55-64)	43.8	44.4	45.9	46.8	47.4	49.1	50.0	50.7	52.4	53.5	54.1
21. Total unemployment (000)	2 267	2 233	1 934	1 841	1 846	2 596	4 154	4 640	5 013	5 811	6 051
22. Unemployment rate (% labour force)	11.5	11.0	9.2	8.5	8.2	11.3	17.9	19.9	21.4	24.8	26.1
23. Youth unemployment rate (% labour force 15-24)	22.7	22.0	19.6	17.9	18.1	24.5	37.7	41.5	46.2	52.9	55.5
24. Long term unemployment rate (% labour force)	3.9	3.5	2.2	1.8	1.7	2.0	4.3	7.3	8.9	11.0	13.0
25. Youth unemployment ratio (% population aged 15-24)	10.1	9.9	9.4	8.6	8.7	11.7	17.0	17.7	18.9	20.6	21.0

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	20 532	20 894	21 268	21 753	22 198	22 575	22 749	22 819	22 876	22 853	22 729
2. Population aged 15-64	14 456	14 727	15 019	15 393	15 726	15 964	16 005	15 962	15 890	15 794	15 593
3. Total employment (000)	11 035	11 296	11 606	11 907	12 146	11 931	10 866	10 531	10 231	9 687	9 377
4. Population in employment aged 15-64	10 583	10 864	11 294	11 707	11 968	11 708	10 643	10 338	10 068	9 520	9 237
5. Employment rate (% population aged 20-64)	78.3	78.7	79.9	80.7	80.6	77.9	71.0	69.2	67.7	64.6	63.4
6. Employment rate (% population aged 15-64)	73.2	73.8	75.2	76.1	76.1	73.3	66.5	64.8	63.4	60.3	59.2
7. Employment rate (% population aged 15-24)	39.9	40.8	43.5	44.4	44.2	39.3	29.4	25.6	22.1	18.5	17.3
8. Employment rate (% population aged 25-54)	85.9	86.1	86.9	87.5	87.5	84.2	77.3	75.9	74.6	71.3	70.4
9. Employment rate (% population aged 55-64)	59.2	58.9	59.7	60.2	59.6	60.5	56.4	54.5	53.8	52.1	50.5
10. FTE employment rate (% population aged 15-64)	72.6	73.0	73.7	74.5	74.6	71.9	64.9	63.0	61.4	58.1	56.7
11. Self-employed (% total employment)	16.6	16.5	16.2	16.0	15.8	15.9	16.0	16.1	15.9	17.2	17.9
12. Part-time employment (% total employment)	2.6	2.8	4.5	4.4	4.1	4.2	4.9	5.3	5.9	6.6	7.8
13. Fixed term contracts (% total employees)	29.9	30.6	31.7	32.0	30.5	27.4	23.6	23.6	24.0	22.0	22.2
14. Employment in Services (% total employment)	54.0	54.2	54.5	54.8	55.3	57.4	60.9	62.5	64.0	65.8	66.6
15. Employment in Industry (% total employment)	39.5	39.6	39.7	39.8	39.5	37.5	33.7	31.9	30.5	28.5	27.3
16. Employment in Agriculture (% total employment)	6.5	6.2	5.9	5.3	5.2	5.1	5.4	5.6	5.5	5.8	6.1
17. Activity rate (% population aged 15-64)	80.0	80.4	80.9	81.2	81.4	81.6	80.8	80.6	80.4	80.1	79.8
18. Activity rate (% population aged 15-24)	49.5	50.2	52.3	52.2	52.2	51.5	48.2	45.0	42.6	40.3	39.6
19. Activity rate (% population aged 25-54)	92.5	92.5	92.4	92.4	92.5	92.4	92.2	92.4	92.5	92.6	92.4
20. Activity rate (% population aged 55-64)	62.9	62.7	63.2	63.3	62.8	64.7	63.6	63.7	63.5	63.6	63.3
21. Total unemployment (000)	995	989	882	801	826	1 320	2 300	2 536	2 706	3 131	3 206
22. Unemployment rate (% labour force)	8.5	8.3	7.1	6.4	6.4	10.1	17.7	19.6	21.1	24.6	25.6
23. Youth unemployment rate (% labour force 15-24)	19.5	18.7	16.7	15.0	15.2	23.6	39.1	43.1	48.2	54.1	56.2
24. Long term unemployment rate (% labour force)	2.4	2.3	1.5	1.2	1.1	1.4	3.7	7.1	8.6	10.7	12.5
25. Youth unemployment ratio (% population aged 15-24)	9.7	9.4	8.7	7.8	7.9	12.1	18.8	19.4	20.5	21.8	22.3

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	21 221	21 547	21 873	22 272	22 675	23 015	23 216	23 330	23 431	23 471	23 417
2. Population aged 15-64	14 273	14 500	14 736	15 040	15 327	15 543	15 611	15 606	15 606	15 554	15 431
3. Total employment (000)	6 881	7 269	7 729	8 198	8 568	8 757	8 478	8 386	8 333	8 091	7 875
4. Population in employment aged 15-64	6 605	6 997	7 540	8 085	8 469	8 608	8 314	8 236	8 203	7 957	7 765
5. Employment rate (% population aged 20-64)	49.5	51.5	54.4	57.1	58.6	58.9	56.8	56.3	56.1	54.6	53.8
6. Employment rate (% population aged 15-64)	46.3	48.3	51.2	53.8	55.3	55.4	53.3	52.8	52.6	51.2	50.3
7. Employment rate (% population aged 15-24)	28.6	29.3	32.8	34.5	34.0	32.6	26.7	24.3	22.0	18.3	16.3
8. Employment rate (% population aged 25-54)	56.6	58.9	61.5	64.4	66.3	66.5	64.4	63.9	63.4	62.0	61.2
9. Employment rate (% population aged 55-64)	23.3	24.6	27.4	28.9	30.2	31.2	32.1	33.1	35.6	36.0	36.3
10. FTE employment rate (% population aged 15-64)	41.9	43.5	45.0	47.6	49.1	49.3	47.3	46.7	46.5	44.8	43.7
11. Self-employed (% total employment)	11.7	11.6	11.4	10.6	10.3	10.0	10.0	9.8	9.8	10.4	10.7
12. Part-time employment (% total employment)	17.1	17.9	24.2	22.6	22.2	22.0	22.4	22.7	22.9	23.9	25.3
13. Fixed term contracts (% total employees)	34.6	35.2	35.7	36.6	32.9	31.2	27.2	26.1	26.5	24.9	24.1
14. Employment in Services (% total employment)	83.9	84.8	85.2	86.3	86.6	87.4	88.4	88.7	89.4	89.3	90.0
15. Employment in Industry (% total employment)	12.4	11.9	11.6	10.8	10.7	10.2	9.2	8.9	8.3	8.3	7.8
16. Employment in Agriculture (% total employment)	3.7	3.3	3.2	2.9	2.6	2.5	2.4	2.4	2.4	2.4	2.2
17. Activity rate (% population aged 15-64)	55.1	56.8	58.3	60.7	61.9	63.6	65.1	66.3	67.3	68.4	68.7
18. Activity rate (% population aged 15-24)	39.2	39.8	42.9	44.0	43.4	43.7	41.7	40.2	39.2	37.6	35.9
19. Activity rate (% population aged 25-54)	66.5	68.3	69.0	71.8	73.3	75.3	77.2	78.8	79.7	81.1	81.8
20. Activity rate (% population aged 55-64)	25.7	27.2	29.6	31.2	32.7	34.2	37.1	38.4	41.8	43.9	45.2
21. Total unemployment (000)	1 272	1 244	1 052	1 040	1 020	1 276	1 854	2 104	2 307	2 680	2 846
22. Unemployment rate (% labour force)	15.8	14.8	12.0	11.4	10.7	12.8	18.1	20.2	21.8	25.1	26.7
23. Youth unemployment rate (% labour force 15-24)	26.9	26.3	23.4	21.5	21.7	25.5	36.1	39.6	44.0	51.4	54.6
24. Long term unemployment rate (% labour force)	5.9	5.2	3.3	2.7	2.4	2.8	4.9	7.6	9.3	11.4	13.5
25. Youth unemployment ratio (% population aged 15-24)	10.6	10.5	10.1	9.5	9.4	11.2	15.1	15.9	17.2	19.4	19.6

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Source: Eurostat.

LFS indicators: Break in series 2005, 2006.

Labour market indicators: France

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	58922	59278	59732	60123	60503	60831	61143	61449	61753	62027	62220
2. Population aged 15-64	38461	38699	39020	39313	39568	39733	39849	39974	40016	39941	39797
3. Total employment (000)	26137	26176	26349	26634	27006	27138	26841	26853	27032	27063	27016
4. Population in employment aged 15-64	24594	24666	24843	25011	25425	25753	25505	25525	25546	25512	25508
5. Employment rate (% population aged 20-64)	69.7	69.5	69.4	69.3	69.8	70.4	69.5	69.2	69.2	69.4	69.5
6. Employment rate (% population aged 15-64)	63.9	63.7	63.7	63.6	64.3	64.8	64.0	63.9	63.8	63.9	64.1
7. Employment rate (% population aged 15-24)	31.0	30.5	30.2	29.8	31.0	31.3	30.3	30.0	29.5	28.4	28.6
8. Employment rate (% population aged 25-54)	80.5	80.5	80.7	81.2	82.0	83.0	82.0	81.8	81.4	80.8	80.7
9. Employment rate (% population aged 55-64)	37.0	37.8	38.5	38.1	38.2	38.2	39.0	39.8	41.5	44.5	45.6
10. FTE employment rate (% population aged 15-64)	59.6	59.1	59.4	59.2	59.9	60.5	59.6	59.3	59.3	59.4	59.4
11. Self-employed (% total employment)	8.7	8.8	8.9	8.9	8.8	8.9	9.0	9.2	9.4	9.5	9.6
12. Part-time employment (% total employment)	16.8	17.0	17.2	17.2	17.3	17.0	17.4	17.8	17.9	18.0	18.4
13. Fixed term contracts (% total employees)	13.4	13.3	13.9	14.8	15.1	14.9	14.3	14.9	15.2	15.1	16.5
14. Employment in Services (% total employment)	75.9	76.3	76.5	76.8	77.0	77.2	77.5	78.2	78.5	78.6	78.7
15. Employment in Industry (% total employment)	20.7	20.3	20.1	20.0	19.8	19.8	19.5	18.9	18.7	18.6	18.4
16. Employment in Agriculture (% total employment)	3.4	3.4	3.4	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.9
17. Activity rate (% population aged 15-64)	69.9	70.0	69.9	69.8	69.9	70.0	70.4	70.4	70.3	70.9	71.2
18. Activity rate (% population aged 15-24)	38.0	38.1	38.0	38.1	38.4	38.4	39.5	38.9	37.9	37.3	37.6
19. Activity rate (% population aged 25-54)	87.0	87.3	87.5	87.8	88.1	88.6	88.8	88.9	88.5	88.5	88.3
20. Activity rate (% population aged 55-64)	38.9	40.1	40.7	40.4	40.2	40.0	41.5	42.6	44.4	47.9	49.1
21. Total unemployment (000)	2356	2470	2485	2490	2275	2129	2630	2687	2658	2858	3007
22. Unemployment rate (% labour force)	8.6	8.9	8.9	8.8	8.0	7.4	9.1	9.3	9.2	9.8	10.3
23. Youth unemployment rate (% labour force 15-24)	18.9	20.5	21.0	22.0	19.5	19.0	23.6	23.3	22.6	24.4	24.8
24. Long term unemployment rate (% labour force)	3.4	3.6	3.7	3.7	3.2	2.8	3.2	3.7	3.8	4.0	4.1
25. Youth unemployment ratio (% population aged 15-24)	7.0	7.6	7.8	8.2	7.3	7.1	9.2	8.9	8.4	8.9	9.0

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	28518	28678	28880	29067	29260	29426	29585	29743	29900	30048	30153
2. Population aged 15-64	18943	19060	19197	19334	19461	19537	19590	19651	19668	19635	19563
3. Total employment (000)	14079	14056	14086	14183	14292	14328	14094	14103	14194	14166	14085
4. Population in employment aged 15-64	13239	13237	13275	13313	13447	13588	13382	13392	13401	13340	13283
5. Employment rate (% population aged 20-64)	76.1	75.7	75.3	74.9	75.0	75.5	74.2	73.8	74.0	73.8	73.7
6. Employment rate (% population aged 15-64)	69.9	69.4	69.2	68.9	69.1	69.5	68.3	68.1	68.1	67.9	67.9
7. Employment rate (% population aged 15-24)	34.3	33.8	33.7	33.4	34.1	34.3	32.5	33.0	32.5	30.8	31.3
8. Employment rate (% population aged 25-54)	87.8	87.6	87.6	87.8	88.2	89.1	87.6	87.2	86.7	85.8	85.2
9. Employment rate (% population aged 55-64)	40.9	41.6	41.5	40.5	40.5	40.6	41.5	42.2	44.1	47.5	48.3
10. FTE employment rate (% population aged 15-64)	68.2	67.9	67.7	67.3	67.6	68.0	66.8	66.4	66.4	66.1	65.9
11. Self-employed (% total employment)	10.9	11.1	11.3	11.3	11.4	11.3	11.7	12.0	12.2	12.4	12.4
12. Part-time employment (% total employment)	5.6	5.5	5.8	5.8	5.7	5.7	6.0	6.7	6.8	6.9	7.2
13. Fixed term contracts (% total employees)	11.8	12.0	13.0	14.0	14.0	13.7	12.9	14.1	14.6	14.4	15.7
14. Employment in Services (% total employment)	65.4	66.2	66.0	65.9	66.4	66.4	66.3	67.2	68.1	68.1	68.2
15. Employment in Industry (% total employment)	30.0	29.4	29.4	29.6	29.4	29.7	29.7	28.8	28.1	28.0	27.7
16. Employment in Agriculture (% total employment)	4.6	4.4	4.6	4.5	4.2	3.9	4.0	4.0	3.8	3.9	4.0
17. Activity rate (% population aged 15-64)	75.7	75.5	75.2	74.9	74.7	74.7	75.0	74.9	74.7	75.3	75.5
18. Activity rate (% population aged 15-24)	41.8	41.8	41.8	41.9	41.8	42.1	42.8	42.5	41.2	40.6	41.0
19. Activity rate (% population aged 25-54)	93.9	94.0	94.0	94.1	94.2	94.4	94.4	94.2	93.8	93.7	93.3
20. Activity rate (% population aged 55-64)	43.0	44.0	43.8	43.0	42.7	42.6	44.3	45.3	47.2	51.2	52.3
21. Total unemployment (000)	1151	1208	1213	1226	1136	1060	1363	1375	1340	1492	1579
22. Unemployment rate (% labour force)	7.8	8.2	8.2	8.2	7.6	7.1	9.0	9.1	8.8	9.8	10.3
23. Youth unemployment rate (% labour force 15-24)	18.5	20.0	20.2	21.1	19.0	19.2	24.7	22.9	22.0	24.8	24.6
24. Long term unemployment rate (% labour force)	3.1	3.3	3.3	3.5	3.1	2.7	3.2	3.8	3.7	4.0	4.2
25. Youth unemployment ratio (% population aged 15-24)	7.4	8.0	8.1	8.5	7.7	7.8	10.3	9.4	8.7	9.7	9.7

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	30404	30600	30852	31056	31242	31405	31558	31707	31854	31979	32067
2. Population aged 15-64	19518	19639	19823	19979	20107	20196	20260	20323	20348	20307	20235
3. Total employment (000)	12058	12120	12263	12450	12713	12810	12747	12750	12838	12897	12931
4. Population in employment aged 15-64	11356	11429	11568	11699	11979	12165	12123	12133	12145	12172	12225
5. Employment rate (% population aged 20-64)	63.5	63.5	63.7	63.8	64.8	65.5	64.9	64.8	64.7	65.1	65.5
6. Employment rate (% population aged 15-64)	58.2	58.2	58.4	58.6	59.6	60.2	59.8	59.7	59.7	59.9	60.4
7. Employment rate (% population aged 15-24)	27.6	27.2	26.7	26.3	27.9	28.3	28.1	26.9	26.6	25.9	25.8
8. Employment rate (% population aged 25-54)	73.4	73.7	74.0	74.7	76.0	77.2	76.6	76.6	76.2	76.0	76.2
9. Employment rate (% population aged 55-64)	33.3	34.2	35.7	35.8	36.0	35.9	36.6	37.5	39.1	41.7	43.1
10. FTE employment rate (% population aged 15-64)	51.7	51.0	51.8	51.8	52.8	53.7	53.1	52.9	52.9	53.2	53.4
11. Self-employed (% total employment)	6.1	6.1	6.0	6.1	5.9	6.2	6.0	6.1	6.3	6.4	6.6
12. Part-time employment (% total employment)	29.9	30.4	30.3	30.3	30.4	29.5	30.0	30.1	30.1	30.2	30.6
13. Fixed term contracts (% total employees)	15.1	14.7	14.8	15.6	16.1	16.1	15.7	15.8	15.8	15.9	17.3
14. Employment in Services (% total employment)	87.5	87.4	87.9	88.5	88.5	88.9	89.4	89.8	89.5	89.6	89.7
15. Employment in Industry (% total employment)	10.3	10.2	10.0	9.6	9.6	9.2	8.7	8.5	8.7	8.6	8.6
16. Employment in Agriculture (% total employment)	2.2	2.4	2.1	1.9	1.9	2.0	1.9	1.7	1.8	1.8	1.7
17. Activity rate (% population aged 15-64)	64.3	64.6	64.8	64.8	65.2	65.4	66.0	66.1	66.1	66.6	67.0
18. Activity rate (% population aged 15-24)	34.1	34.4	34.3	34.2	35.0	34.8	36.2	35.3	34.6	34.0	34.1
19. Activity rate (% population aged 25-54)	80.4	80.9	81.3	81.7	82.3	83.1	83.4	83.7	83.4	83.4	83.5
20. Activity rate (% population aged 55-64)	35.1	36.4	37.7	37.9	37.8	37.6	38.9	40.0	41.8	44.8	46.1
21. Total unemployment (000)	1205	1262	1272	1263	1140	1069	1266	1312	1319	1366	1428
22. Unemployment rate (% labour force)	9.4	9.7	9.7	9.5	8.5	7.9	9.2	9.5	9.5	9.8	10.2
23. Youth unemployment rate (% labour force 15-24)	19.4	21.1	22.0	23.2	20.1	18.8	22.4	23.8	23.3	23.8	25.1
24. Long term unemployment rate (% labour force)	3.7	4.0	4.1	3.9	3.4	2.8	3.2	3.7	3.9	3.9	4.1
25. Youth unemployment ratio (% population aged 15-24)	6.5	7.2	7.5	7.9	7.0	6.5	8.1	8.4	8.0	8.1	8.3

Source: Eurostat.

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Labour market indicators: Croatia

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	4 218	4 215	4 217	4 218	4 219	4 225	4 225	4 225	4 225	4 225	4 225
2. Population aged 15-64	2 778	2 751	2 746	2 744	2 743	2 742	2 736	2 757	2 746	2 754	2 742
3. Total employment (000)	1 473	1 495	1 506	1 564	1 586	1 635	1 605	1 523	1 487	1 430	1 415
4. Population in employment aged 15-64	1 482	1 505	1 512	1 526	1 568	1 584	1 549	1 489	1 438	1 395	1 349
5. Employment rate (% population aged 20-64)	58.3	59.6	60.0	60.6	62.3	62.9	61.7	58.7	57.0	55.4	53.9
6. Employment rate (% population aged 15-64)	53.4	54.7	55.0	55.6	57.1	57.8	56.6	54.0	52.4	50.7	49.2
7. Employment rate (% population aged 15-24)	24.9	26.5	25.8	25.5	26.5	27.1	25.6	23.0	20.1	16.9	14.5
8. Employment rate (% population aged 25-54)	70.1	70.9	71.8	72.2	74.1	75.0	73.6	71.2	70.1	68.7	67.5
9. Employment rate (% population aged 55-64)	28.4	30.1	32.6	34.3	35.8	36.7	38.5	37.6	37.1	36.7	36.5
10. FTE employment rate (% population aged 15-64)	52.2	53.8	53.7	54.3	55.8	56.4	55.2	52.5	50.8	49.5	48.0
11. Self-employed (% total employment)	16.1	15.8	15.4	15.3	15.1	14.7	14.7	14.4	13.6	12.0	12.1
12. Part-time employment (% total employment)	8.5	8.5	10.1	9.4	8.6	8.8	9.0	9.7	9.9	8.4	7.9
13. Fixed term contracts (% total employees)	11.3	12.2	12.4	12.9	12.6	12.1	11.6	12.3	12.7	12.8	14.1
14. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:
16. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:
17. Activity rate (% population aged 15-64)	62.4	63.7	63.3	62.8	63.4	63.2	62.4	61.4	60.8	60.5	59.6
18. Activity rate (% population aged 15-24)	38.7	39.6	38.1	35.9	34.9	34.7	34.1	34.2	31.4	29.6	28.9
19. Activity rate (% population aged 25-54)	79.8	80.7	80.6	80.1	80.9	80.9	79.9	79.4	79.8	80.1	79.8
20. Activity rate (% population aged 55-64)	30.4	32.3	35.1	36.5	38.3	38.8	40.8	40.5	40.5	41.1	40.7
21. Total unemployment (000)	252	249	230	202	171	149	160	206	232	272	288
22. Unemployment rate (% labour force)	14.1	13.8	12.8	11.4	9.6	8.4	9.1	11.8	13.5	15.9	17.2
23. Youth unemployment rate (% labour force 15-24)	34.7	32.8	31.9	28.8	24.0	21.9	25.1	32.6	36.1	43.0	49.7
24. Long term unemployment rate (% labour force)	8.4	7.5	7.5	6.8	5.9	5.3	5.1	6.7	8.6	10.3	11.0
25. Youth unemployment ratio (% population aged 15-24)	13.9	13.1	12.3	10.4	8.4	7.6	8.5	11.2	11.3	12.7	14.4

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	2 000	2 012	2 006	2 008	1 995	2 000	1 995	1 991	2 009	2 024	2 007
2. Population aged 15-64	1 361	1 357	1 354	1 353	1 359	1 357	1 346	1 352	1 355	1 377	1 362
3. Total employment (000)	816	829	830	856	881	905	869	820	810	779	757
4. Population in employment aged 15-64	821	838	835	839	875	882	840	802	785	759	720
5. Employment rate (% population aged 20-64)	66.0	67.5	67.5	67.6	70.3	70.7	68.2	64.7	63.2	60.6	58.3
6. Employment rate (% population aged 15-64)	60.3	61.8	61.7	62.0	64.4	65.0	62.4	59.4	57.9	55.1	52.8
7. Employment rate (% population aged 15-24)	28.6	30.9	30.0	29.1	31.6	33.2	31.0	27.7	23.9	19.7	16.9
8. Employment rate (% population aged 25-54)	77.2	77.7	77.9	78.1	80.6	80.9	78.0	74.6	74.1	71.8	70.2
9. Employment rate (% population aged 55-64)	38.1	40.9	43.0	44.4	48.4	49.0	50.1	49.3	48.4	46.7	43.7
10. FTE employment rate (% population aged 15-64)	60.1	61.6	61.0	61.1	63.6	64.1	61.7	58.5	56.9	54.3	51.8
11. Self-employed (% total employment)	16.8	16.3	15.7	16.2	15.9	15.3	15.5	14.8	14.0	12.8	13.3
12. Part-time employment (% total employment)	6.3	6.3	7.3	7.5	6.4	6.7	6.9	7.3	7.9	7.0	6.8
13. Fixed term contracts (% total employees)	11.8	12.1	12.4	13.1	12.2	11.9	11.4	12.1	12.7	12.9	14.6
14. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:
16. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:
17. Activity rate (% population aged 15-64)	69.5	70.5	70.0	68.9	70.4	70.0	68.0	67.2	67.4	66.1	64.5
18. Activity rate (% population aged 15-24)	43.4	43.8	43.0	39.9	39.9	40.7	40.3	40.2	37.1	34.1	32.9
19. Activity rate (% population aged 25-54)	86.2	86.6	85.9	84.9	86.4	85.6	83.2	82.4	84.2	83.7	83.1
20. Activity rate (% population aged 55-64)	41.1	44.0	47.2	47.7	52.2	52.3	53.2	53.4	53.3	52.5	49.7
21. Total unemployment (000)	125	120	114	96	81	68	76	107	129	151	159
22. Unemployment rate (% labour force)	12.8	12.3	11.6	9.9	8.4	7.0	8.0	11.4	13.8	16.2	17.8
23. Youth unemployment rate (% labour force 15-24)	33.4	29.5	29.6	26.6	20.9	18.5	23.1	31.1	35.6	42.3	48.8
24. Long term unemployment rate (% labour force)	7.4	6.1	6.5	5.9	4.8	4.3	4.1	6.2	8.6	10.4	11.3
25. Youth unemployment ratio (% population aged 15-24)	14.8	12.9	13.0	10.9	8.3	7.5	9.3	12.5	13.2	14.4	16.1

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	2 218	2 203	2 211	2 209	2 225	2 225	2 230	2 234	2 216	2 201	2 218
2. Population aged 15-64	1 417	1 394	1 392	1 391	1 385	1 385	1 390	1 406	1 391	1 377	1 380
3. Total employment (000)	658	666	676	708	704	730	736	703	677	651	659
4. Population in employment aged 15-64	661	667	676	687	692	703	708	687	653	636	629
5. Employment rate (% population aged 20-64)	50.9	51.9	52.8	53.7	54.5	55.2	55.4	53.0	50.9	50.2	49.7
6. Employment rate (% population aged 15-64)	46.7	47.8	48.6	49.4	50.0	50.7	51.0	48.8	47.0	46.2	45.6
7. Employment rate (% population aged 15-24)	21.0	21.7	21.3	21.8	21.1	20.6	19.4	17.9	15.8	13.6	12.0
8. Employment rate (% population aged 25-54)	63.2	64.3	65.7	66.3	67.7	69.2	69.4	67.9	66.2	65.5	64.9
9. Employment rate (% population aged 55-64)	20.3	21.0	23.8	25.7	24.2	25.5	28.1	27.4	27.0	27.8	29.7
10. FTE employment rate (% population aged 15-64)	44.5	46.2	46.7	47.7	48.1	48.9	49.0	46.7	45.0	44.7	44.2
11. Self-employed (% total employment)	15.3	15.2	15.0	14.1	14.1	13.8	13.7	13.9	13.1	11.1	10.6
12. Part-time employment (% total employment)	11.2	11.2	13.4	11.7	11.3	11.5	11.6	12.5	12.4	10.0	9.3
13. Fixed term contracts (% total employees)	10.7	12.4	12.3	12.6	13.2	12.3	11.9	12.6	12.7	12.7	13.6
14. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:
16. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:
17. Activity rate (% population aged 15-64)	55.6	57.1	56.7	56.9	56.4	56.6	57.0	55.9	54.4	55.0	54.8
18. Activity rate (% population aged 15-24)	33.9	35.1	32.9	31.6	29.5	28.3	27.1	27.6	25.0	24.3	24.5
19. Activity rate (% population aged 25-54)	73.5	74.9	75.3	75.2	75.4	76.3	76.7	76.5	75.5	76.4	76.6
20. Activity rate (% population aged 55-64)	21.3	22.3	24.9	26.9	25.5	26.7	29.7	29.1	29.2	30.9	32.2
21. Total unemployment (000)	127	129	116	107	89	81	84	99	103	121	128
22. Unemployment rate (% labour force)	15.7	15.7	14.2	13.1	11.2	10.1	10.3	12.3	13.2	15.6	16.6
23. Youth unemployment rate (% labour force 15-24)	36.4	37.1	35.0	31.8	28.5	27.2	28.4	35.1	36.8	44.3	51.1
24. Long term unemployment rate (% labour force)	9.6	9.0	8.6	8.0	7.3	6.5	6.3	7.4	8.6	10.2	10.6
25. Youth unemployment ratio (% population aged 15-24)	12.9	13.4	11.6	9.8	8.4	7.7	7.7	9.7	9.2	10.8	12.5

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Source: Eurostat.

Labour market indicators: Italy

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	57 399	57 442	58 077	58 435	58 880	59 336	59 752	60 051	60 328	60 515	60 668
2. Population aged 15-64	38 692	38 292	38 588	38 726	38 946	39 182	39 406	39 546	39 659	39 603	39 525
3. Total employment (000)	24 150	24 256	24 396	24 874	25 187	25 256	24 839	24 660	24 739	24 662	24 173
4. Population in employment aged 15-64	21 710	22 060	22 214	22 619	22 846	23 011	22 650	22 497	22 583	22 481	21 985
5. Employment rate (% population aged 20-64)	60.0	61.5	61.6	62.5	62.8	63.0	61.7	61.1	61.2	61.0	59.8
6. Employment rate (% population aged 15-64)	56.1	57.6	57.6	58.4	58.7	58.7	57.5	56.9	56.9	56.8	55.6
7. Employment rate (% population aged 15-24)	25.2	27.6	25.7	25.5	24.7	24.4	21.7	20.5	19.4	18.6	16.3
8. Employment rate (% population aged 25-54)	70.7	72.2	72.3	73.3	73.5	73.5	71.9	71.1	71.1	70.3	68.5
9. Employment rate (% population aged 55-64)	30.3	30.5	31.4	32.5	33.8	34.4	35.7	36.6	37.9	40.4	42.7
10. FTE employment rate (% population aged 15-64)	54.3	54.3	54.1	54.8	55.0	55.0	53.9	53.2	53.1	52.5	51.1
11. Self-employed (% total employment)	25.6	25.7	24.7	24.4	24.1	23.6	23.2	23.4	23.2	23.1	23.0
12. Part-time employment (% total employment)	8.5	12.7	12.8	13.3	13.6	14.3	14.3	15.0	15.5	17.1	17.9
13. Fixed term contracts (% total employees)	9.9	11.8	12.3	13.1	13.2	13.3	12.5	12.8	13.4	13.8	13.2
14. Employment in Services (% total employment)	66.9	67.1	67.1	67.3	67.4	67.7	68.3	68.9	69.3	70.1	70.6
15. Employment in Industry (% total employment)	28.9	28.7	28.8	28.6	28.6	28.4	27.8	27.2	26.8	26.2	25.7
16. Employment in Agriculture (% total employment)	4.2	4.2	4.1	4.1	4.0	3.9	3.9	4.0	3.9	3.8	3.7
17. Activity rate (% population aged 15-64)	61.5	62.7	62.5	62.7	62.5	63.0	62.4	62.2	62.2	63.7	63.5
18. Activity rate (% population aged 15-24)	34.6	36.1	33.8	32.5	30.9	30.9	29.1	28.4	27.4	28.7	27.2
19. Activity rate (% population aged 25-54)	76.3	77.5	77.4	77.8	77.6	78.1	77.2	76.9	76.9	77.9	77.1
20. Activity rate (% population aged 55-64)	31.5	31.8	32.6	33.4	34.6	35.5	37.0	38.0	39.5	42.6	45.3
21. Total unemployment (000)	2 050	1 960	1 889	1 673	1 506	1 692	1 945	2 102	2 108	2 744	3 113
22. Unemployment rate (% labour force)	8.4	8.0	7.7	6.8	6.1	6.7	7.8	8.4	8.4	10.7	12.2
23. Youth unemployment rate (% labour force 15-24)	23.6	23.5	24.0	21.6	20.3	21.3	25.4	27.8	29.1	35.3	40.0
24. Long term unemployment rate (% labour force)	4.9	4.0	3.9	3.4	2.9	3.1	3.5	4.1	4.4	5.7	6.9
25. Youth unemployment ratio (% population aged 15-24)	9.4	8.5	8.1	7.0	6.3	6.6	7.4	7.9	8.0	10.1	10.9

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	27 873	27 830	28 192	28 406	28 629	28 849	29 047	29 181	29 304	29 401	29 488
2. Population aged 15-64	19 309	19 047	19 248	19 355	19 467	19 574	19 670	19 719	19 755	19 724	19 689
3. Total employment (000)	14 990	14 747	14 854	15 083	15 247	15 176	14 876	14 699	14 669	14 475	14 114
4. Population in employment aged 15-64	13 438	13 353	13 460	13 647	13 762	13 755	13 500	13 347	13 327	13 119	12 761
5. Employment rate (% population aged 20-64)	74.6	74.9	74.8	75.5	75.8	75.4	73.8	72.8	72.6	71.6	69.8
6. Employment rate (% population aged 15-64)	69.6	70.1	69.9	70.5	70.7	70.3	68.6	67.7	67.5	66.5	64.8
7. Employment rate (% population aged 15-24)	29.7	32.1	30.4	30.6	29.6	29.1	26.1	24.3	23.1	21.9	18.8
8. Employment rate (% population aged 25-54)	86.5	86.7	86.6	87.2	87.3	86.7	84.7	83.5	83.4	81.6	79.1
9. Employment rate (% population aged 55-64)	42.8	42.2	42.7	43.7	45.1	45.5	46.7	47.6	48.4	50.4	52.9
10. FTE employment rate (% population aged 15-64)	69.0	68.9	68.5	69.0	69.2	68.9	67.3	66.3	65.9	64.6	62.6
11. Self-employed (% total employment)	29.1	29.1	28.4	28.0	27.8	27.4	27.2	27.6	27.5	27.4	27.3
12. Part-time employment (% total employment)	3.2	4.8	4.6	4.7	5.0	5.3	5.1	5.5	5.9	7.2	7.9
13. Fixed term contracts (% total employees)	8.2	9.9	10.5	11.2	11.2	11.6	10.8	11.4	12.3	12.9	12.4
14. Employment in Services (% total employment)	59.3	58.4	58.1	58.2	58.1	58.1	58.2	58.5	59.1	59.7	60.4
15. Employment in Industry (% total employment)	36.0	36.8	37.1	37.1	37.3	37.4	37.2	36.8	36.3	35.7	35.0
16. Employment in Agriculture (% total employment)	4.7	4.8	4.8	4.8	4.6	4.5	4.6	4.7	4.6	4.6	4.6
17. Activity rate (% population aged 15-64)	74.7	74.9	74.6	74.6	74.4	74.4	73.7	73.3	73.1	73.9	73.4
18. Activity rate (% population aged 15-24)	39.2	40.5	38.7	37.8	36.1	35.9	34.0	33.2	31.6	33.1	30.8
19. Activity rate (% population aged 25-54)	91.5	91.4	91.2	91.3	91.0	91.0	90.0	89.4	89.2	89.4	88.3
20. Activity rate (% population aged 55-64)	44.4	44.0	44.3	45.0	46.3	47.0	48.5	49.6	50.7	53.6	56.7
21. Total unemployment (000)	937	925	902	801	722	820	1 000	1 114	1 114	1 469	1 702
22. Unemployment rate (% labour force)	6.5	6.4	6.2	5.4	4.9	5.5	6.8	7.6	7.6	9.9	11.5
23. Youth unemployment rate (% labour force 15-24)	:	20.6	21.5	19.1	18.2	18.9	23.3	26.8	27.1	33.7	39.0
24. Long term unemployment rate (% labour force)	3.8	2.9	2.9	2.6	2.2	2.4	2.8	3.6	3.9	5.1	6.5
25. Youth unemployment ratio (% population aged 15-24)	9.5	8.4	8.3	7.2	6.6	6.8	7.9	8.9	8.6	11.1	12.0

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	29 525	29 612	29 885	30 030	30 251	30 488	30 705	30 871	31 024	31 114	31 181
2. Population aged 15-64	19 384	19 245	19 340	19 371	19 479	19 608	19 736	19 827	19 904	19 879	19 836
3. Total employment (000)	9 159	9 509	9 542	9 791	9 941	10 080	9 964	9 960	10 070	10 186	10 059
4. Population in employment aged 15-64	8 272	8 706	8 754	8 971	9 084	9 256	9 151	9 150	9 256	9 362	9 225
5. Employment rate (% population aged 20-64)	45.6	48.3	48.4	49.6	49.9	50.6	49.7	49.5	49.9	50.5	49.9
6. Employment rate (% population aged 15-64)	42.7	45.2	45.3	46.3	46.6	47.2	46.4	46.1	46.5	47.1	46.5
7. Employment rate (% population aged 15-24)	20.6	23.1	20.8	20.1	19.5	19.4	17.0	16.5	15.5	15.0	13.7
8. Employment rate (% population aged 25-54)	54.9	57.8	57.9	59.3	59.6	60.2	59.1	58.7	58.9	59.1	57.8
9. Employment rate (% population aged 55-64)	18.5	19.6	20.8	21.9	23.0	24.0	25.4	26.2	28.1	30.9	33.1
10. FTE employment rate (% population aged 15-64)	39.9	40.2	40.1	41.0	41.3	41.7	40.9	40.6	40.9	40.9	40.1
11. Self-employed (% total employment)	19.8	20.3	19.1	18.9	18.5	17.9	17.2	17.2	17.0	17.0	16.9
12. Part-time employment (% total employment)	17.3	25.0	25.6	26.5	26.9	27.9	27.9	29.0	29.3	31.1	31.9
13. Fixed term contracts (% total employees)	12.2	14.5	14.7	15.8	15.9	15.6	14.6	14.5	14.7	14.9	14.2
14. Employment in Services (% total employment)	79.0	80.2	80.7	81.1	81.5	82.1	83.2	84.0	84.0	84.5	84.6
15. Employment in Industry (% total employment)	17.7	16.6	16.1	15.7	15.4	15.0	14.0	13.2	13.3	12.9	12.9
16. Employment in Agriculture (% total employment)	3.3	3.3	3.2	3.2	3.0	3.0	2.8	2.8	2.7	2.6	2.5
17. Activity rate (% population aged 15-64)	48.3	50.6	50.4	50.8	50.7	51.6	51.1	51.1	51.5	53.5	53.6
18. Activity rate (% population aged 15-24)	29.9	31.7	28.7	26.9	25.5	25.7	23.9	23.4	22.9	24.0	23.4
19. Activity rate (% population aged 25-54)	60.9	63.6	63.6	64.3	64.1	65.2	64.5	64.4	64.6	66.4	66.0
20. Activity rate (% population aged 55-64)	19.3	20.4	21.5	22.5	23.5	24.7	26.1	27.0	28.9	32.2	34.6
21. Total unemployment (000)	1 114	1 036	986	873	784	872	944	989	994	1 275	1 411
22. Unemployment rate (% labour force)	11.3	10.5	10.1	8.8	7.9	8.5	9.3	9.7	9.6	11.9	13.1
23. Youth unemployment rate (% labour force 15-24)	:	27.2	27.4	25.3	23.3	24.7	28.7	29.4	32.0	37.5	41.4
24. Long term unemployment rate (% labour force)	6.6	5.5	5.2	4.5	3.9	4.1	4.4	4.8	5.0	6.5	7.5
25. Youth unemployment ratio (% population aged 15-24)	9.2	8.6	7.9	6.8	6.0	6.3	6.9	6.9	7.3	9.0	9.7

Source: Eurostat.

LFS indicators: Break in series 2004.

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Labour market indicators: Cyprus

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	690	714	727	737	752	758	775	796	819	831	828
2. Population aged 15-64	460	479	494	500	518	524	538	555	571	580	578
3. Total employment (000)	340	354	366	373	386	393	392	391	393	376	357
4. Population in employment aged 15-64	318	330	338	348	368	371	371	382	386	375	357
5. Employment rate (% population aged 20-64)	75.4	74.9	74.4	75.8	76.8	76.5	75.3	75.0	73.4	70.2	67.2
6. Employment rate (% population aged 15-64)	69.2	68.9	68.5	69.6	71.0	70.9	69.0	68.9	67.6	64.6	61.7
7. Employment rate (% population aged 15-24)	37.6	37.5	36.7	37.4	37.4	38.0	34.8	33.8	30.1	28.1	23.5
8. Employment rate (% population aged 25-54)	82.6	82.4	81.8	82.6	83.8	83.7	82.3	82.2	81.3	78.4	75.5
9. Employment rate (% population aged 55-64)	50.4	49.9	50.6	53.6	55.9	54.8	55.7	56.3	54.8	50.7	49.6
10. FTE employment rate (% population aged 15-64)	67.8	68.0	66.7	68.0	69.3	69.0	67.0	66.3	64.9	61.5	57.9
11. Self-employed (% total employment)	22.8	22.6	22.1	20.6	19.7	17.8	17.8	17.3	17.3	16.4	16.6
12. Part-time employment (% total employment)	8.9	8.6	8.9	7.7	7.3	7.8	8.6	9.5	10.2	10.7	12.7
13. Fixed term contracts (% total employees)	12.5	12.9	14.0	13.1	13.2	13.9	13.7	14.0	14.1	15.0	17.4
14. Employment in Services (% total employment)	73.5	73.5	74.0	74.7	74.4	74.8	74.9	75.9	76.9	78.9	80.1
15. Employment in Industry (% total employment)	21.0	21.0	21.0	21.1	21.1	20.9	20.3	19.6	18.6	17.5	16.0
16. Employment in Agriculture (% total employment)	5.5	5.5	5.0	4.2	4.5	4.3	4.8	4.5	4.5	3.6	3.9
17. Activity rate (% population aged 15-64)	72.4	72.6	72.4	73.0	73.9	73.6	73.0	73.6	73.5	73.5	73.6
18. Activity rate (% population aged 15-24)	41.3	42.4	42.6	41.5	41.7	41.7	40.4	40.6	38.8	38.9	38.4
19. Activity rate (% population aged 25-54)	85.8	86.0	85.7	86.2	86.7	86.5	86.3	86.9	87.3	87.6	87.7
20. Activity rate (% population aged 55-64)	52.7	52.4	52.4	55.5	57.7	56.6	58.2	59.1	57.6	56.1	56.6
21. Total unemployment (000)	14	16	19	17	15	15	22	26	34	52	69
22. Unemployment rate (% labour force)	4.1	4.6	5.3	4.6	3.9	3.7	5.4	6.3	7.9	11.9	15.9
23. Youth unemployment rate (% labour force 15-24)	8.8	10.2	13.9	10.0	10.2	9.0	13.8	16.6	22.4	27.7	38.9
24. Long term unemployment rate (% labour force)	1.0	1.2	1.3	0.9	0.7	0.5	0.6	1.3	1.6	3.6	6.1
25. Youth unemployment ratio (% population aged 15-24)	3.7	4.9	5.9	4.1	4.2	3.8	5.6	6.7	8.7	10.8	14.9

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	333	347	354	360	367	371	374	384	393	399	397
2. Population aged 15-64	221	232	240	244	252	256	257	265	272	276	275
3. Total employment (000)	189	200	208	209	214	218	209	207	206	197	186
4. Population in employment aged 15-64	174	185	190	194	202	203	196	199	200	194	184
5. Employment rate (% population aged 20-64)	85.6	86.3	85.5	86.2	86.4	85.2	82.8	81.7	79.6	76.1	72.6
6. Employment rate (% population aged 15-64)	78.8	79.8	79.2	79.4	80.0	79.2	76.3	75.3	73.7	70.4	67.0
7. Employment rate (% population aged 15-24)	38.7	41.6	40.5	41.0	39.1	39.4	36.4	34.4	31.8	30.5	24.0
8. Employment rate (% population aged 25-54)	92.2	92.5	91.8	92.0	92.4	91.4	89.2	88.3	86.4	83.3	80.4
9. Employment rate (% population aged 55-64)	68.9	70.8	70.8	71.6	72.5	70.9	71.2	70.5	69.2	63.5	61.1
10. FTE employment rate (% population aged 15-64)	79.3	80.3	79.4	79.5	79.7	78.8	75.7	73.9	71.8	68.3	64.3
11. Self-employed (% total employment)	29.0	28.2	27.3	25.6	25.3	22.9	22.3	22.0	22.4	21.5	21.9
12. Part-time employment (% total employment)	5.5	4.8	5.0	4.3	4.4	4.8	5.3	6.8	7.7	8.0	9.5
13. Fixed term contracts (% total employees)	8.1	8.5	9.0	7.9	7.6	8.2	7.6	7.1	7.1	9.0	10.3
14. Employment in Services (% total employment)	63.6	63.0	63.4	64.2	62.8	63.4	63.8	65.1	65.1	68.1	70.0
15. Employment in Industry (% total employment)	29.7	30.4	30.5	30.5	31.0	31.0	30.4	29.0	28.9	27.0	24.5
16. Employment in Agriculture (% total employment)	6.6	6.6	6.1	5.3	6.2	5.6	5.8	5.9	6.0	4.9	5.5
17. Activity rate (% population aged 15-64)	82.2	83.0	82.9	82.7	82.9	82.0	80.7	80.4	80.4	80.7	80.6
18. Activity rate (% population aged 15-24)	42.6	46.3	46.6	45.0	43.9	43.1	42.1	40.9	41.4	42.8	40.8
19. Activity rate (% population aged 25-54)	95.2	95.2	95.3	95.3	95.0	94.0	93.5	93.4	93.1	93.8	94.0
20. Activity rate (% population aged 55-64)	73.2	74.2	73.2	74.1	74.8	73.0	74.4	74.3	72.9	71.2	71.2
21. Total unemployment (000)	7	7	9	8	7	7	11	14	18	29	38
22. Unemployment rate (% labour force)	3.7	3.5	4.4	3.9	3.4	3.2	5.3	6.2	8.1	12.6	16.6
23. Youth unemployment rate (% labour force 15-24)	8.7	9.0	13.2	8.9	11.0	8.7	13.6	15.9	23.3	28.8	41.1
24. Long term unemployment rate (% labour force)	0.8	0.9	0.8	0.7	0.8	0.5	0.6	1.3	1.7	3.9	6.5
25. Youth unemployment ratio (% population aged 15-24)	3.9	4.7	6.1	4.0	4.8	3.7	5.7	6.5	9.6	12.3	16.8

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	356	367	373	377	386	387	401	413	425	432	431
2. Population aged 15-64	239	247	254	257	266	268	281	290	299	304	303
3. Total employment (000)	151	154	159	164	172	175	182	184	187	180	171
4. Population in employment aged 15-64	144	145	148	155	166	168	175	183	186	181	173
5. Employment rate (% population aged 20-64)	65.9	64.1	63.8	65.9	67.7	68.2	68.3	68.8	67.7	64.8	62.2
6. Employment rate (% population aged 15-64)	60.4	58.7	58.4	60.3	62.4	62.9	62.3	63.0	62.1	59.4	56.9
7. Employment rate (% population aged 15-24)	36.6	33.8	33.2	34.1	36.0	36.7	33.3	33.3	28.7	26.1	23.0
8. Employment rate (% population aged 25-54)	73.6	72.8	72.2	73.6	75.5	76.2	76.2	76.7	76.7	74.0	71.1
9. Employment rate (% population aged 55-64)	32.7	30.0	31.5	36.6	40.3	39.4	40.6	42.5	40.8	38.2	38.3
10. FTE employment rate (% population aged 15-64)	57.2	56.6	54.9	57.2	59.5	59.7	59.0	59.5	58.6	55.5	52.3
11. Self-employed (% total employment)	15.1	15.2	15.3	14.2	12.8	11.5	12.6	12.1	11.6	10.9	10.9
12. Part-time employment (% total employment)	13.2	13.6	14.0	12.1	10.9	11.4	12.4	12.7	12.9	13.7	16.1
13. Fixed term contracts (% total employees)	17.1	17.7	19.5	19.0	19.2	19.9	20.0	20.7	20.9	20.9	24.2
14. Employment in Services (% total employment)	85.6	86.7	87.4	87.7	88.6	88.6	87.4	88.0	89.6	90.4	91.0
15. Employment in Industry (% total employment)	10.3	9.2	9.0	9.4	8.9	8.7	8.9	9.0	7.6	7.3	6.8
16. Employment in Agriculture (% total employment)	4.1	4.1	3.6	2.9	2.5	2.7	3.6	3.0	2.8	2.3	2.2
17. Activity rate (% population aged 15-64)	63.3	62.8	62.5	63.8	65.4	65.7	66.0	67.4	67.4	66.9	67.2
18. Activity rate (% population aged 15-24)	40.2	39.0	39.0	38.3	39.7	40.5	38.8	40.2	36.6	35.5	36.3
19. Activity rate (% population aged 25-54)	76.9	77.2	76.5	77.4	78.7	79.1	79.8	81.0	82.0	82.0	82.0
20. Activity rate (% population aged 55-64)	33.2	31.6	32.8	37.8	41.6	41.0	42.3	44.3	42.7	41.3	42.3
21. Total unemployment (000)	7	9	10	9	8	8	10	13	16	23	31
22. Unemployment rate (% labour force)	4.7	6.0	6.5	5.4	4.6	4.3	5.5	6.4	7.7	11.1	15.2
23. Youth unemployment rate (% labour force 15-24)	8.9	11.5	14.7	11.1	9.4	9.4	14.0	17.2	21.5	26.7	36.8
24. Long term unemployment rate (% labour force)	1.3	1.6	1.8	1.1	0.7	0.5	0.6	1.3	1.5	3.1	5.6
25. Youth unemployment ratio (% population aged 15-24)	3.6	5.1	5.7	4.3	3.7	3.8	5.4	6.9	7.9	9.5	13.3

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Source: Eurostat.

LFS indicators: Break in series 2009.

Labour market indicators: Latvia

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	2 330	2 319	2 305	2 294	2 180	2 163	2 135	2 093	2 050	2 016	1 996
2. Population aged 15-64	1 588	1 587	1 583	1 580	1 491	1 479	1 453	1 417	1 382	1 352	1 333
3. Total employment (000)	1 000	1 012	1 028	1 079	1 064	1 055	904	844	856	869	889
4. Population in employment aged 15-64	982	988	1 002	1 047	1 016	1 009	877	829	841	852	867
5. Employment rate (% population aged 20-64)	68.9	69.3	70.3	73.5	75.2	75.4	66.6	64.3	66.3	68.1	69.7
6. Employment rate (% population aged 15-64)	61.8	62.3	63.3	66.3	68.1	68.2	60.3	58.5	60.8	63.0	65.0
7. Employment rate (% population aged 15-24)	31.5	30.5	32.6	35.9	38.1	37.0	27.5	25.4	25.8	28.7	30.2
8. Employment rate (% population aged 25-54)	77.7	77.9	78.4	81.1	82.1	82.2	74.1	72.6	75.0	76.3	77.9
9. Employment rate (% population aged 55-64)	44.1	47.9	49.5	53.3	58.0	59.1	52.5	47.8	50.5	52.8	54.8
10. FTE employment rate (% population aged 15-64)	61.1	60.8	63.0	66.1	68.1	68.0	59.1	56.9	59.4	61.4	63.8
11. Self-employed (% total employment)	13.4	13.5	11.9	11.9	11.2	10.5	11.8	11.8	11.6	11.7	11.9
12. Part-time employment (% total employment)	10.3	10.4	8.3	6.5	6.3	6.6	8.7	9.8	9.2	9.4	8.1
13. Fixed term contracts (% total employees)	11.1	9.5	8.4	7.1	4.1	3.4	4.3	7.1	6.6	4.7	4.4
14. Employment in Services (% total employment)	59.4	59.9	61.6	61.8	64.9	65.3	67.8	68.8	68.2	68.1	68.4
15. Employment in Industry (% total employment)	27.2	27.2	27.3	27.3	26.9	27.1	23.7	23.3	23.8	24.0	24.0
16. Employment in Agriculture (% total employment)	13.4	13.0	11.2	10.9	8.1	7.6	8.4	7.8	8.0	7.8	7.6
17. Activity rate (% population aged 15-64)	69.2	69.7	69.6	71.3	72.6	74.2	73.5	73.0	72.8	74.4	74.0
18. Activity rate (% population aged 15-24)	38.4	37.2	37.7	40.8	42.6	42.8	41.2	39.7	37.5	40.1	39.4
19. Activity rate (% population aged 25-54)	86.3	86.3	85.6	86.4	87.1	88.7	88.4	88.6	88.0	88.4	87.6
20. Activity rate (% population aged 55-64)	47.9	52.3	53.9	57.1	60.7	63.0	60.9	56.9	59.4	61.8	61.3
21. Total unemployment (000)	127	128	108	78	68	88	193	206	167	155	120
22. Unemployment rate (% labour force)	11.6	11.7	10.0	7.0	6.1	7.7	17.5	19.5	16.2	15.0	11.9
23. Youth unemployment rate (% labour force 15-24)	19.6	20.0	15.1	13.6	10.6	13.6	33.3	36.2	31.0	28.5	23.2
24. Long term unemployment rate (% labour force)	4.8	5.1	4.6	2.6	1.6	1.9	4.5	8.8	8.8	7.8	5.8
25. Youth unemployment ratio (% population aged 15-24)	6.9	6.8	5.1	5.0	4.5	5.8	13.7	14.4	11.6	11.5	9.1

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	1 071	1 068	1 062	1 057	996	990	975	954	933	918	911
2. Population aged 15-64	761	764	763	763	714	710	698	679	662	648	641
3. Total employment (000)	513	518	530	553	544	531	433	399	414	425	438
4. Population in employment aged 15-64	503	507	516	537	519	508	420	393	407	417	428
5. Employment rate (% population aged 20-64)	73.9	74.1	75.4	78.2	80.5	79.3	66.8	64.0	67.5	70.0	71.9
6. Employment rate (% population aged 15-64)	66.1	66.4	67.6	70.4	72.7	71.5	60.3	57.9	61.5	64.4	66.8
7. Employment rate (% population aged 15-24)	37.1	36.4	38.7	42.8	43.8	42.1	29.5	26.5	28.3	31.8	33.3
8. Employment rate (% population aged 25-54)	80.7	80.4	81.7	83.7	86.0	84.9	73.7	71.7	75.1	77.7	79.9
9. Employment rate (% population aged 55-64)	51.3	55.8	55.2	59.5	64.3	62.8	51.8	46.9	51.7	53.2	55.2
10. FTE employment rate (% population aged 15-64)	66.3	66.8	67.7	70.5	73.1	71.6	59.4	56.6	60.5	63.4	66.1
11. Self-employed (% total employment)	15.4	14.7	13.8	13.7	13.3	13.2	14.8	14.1	14.0	14.2	14.2
12. Part-time employment (% total employment)	7.9	7.7	6.3	4.7	4.7	4.9	7.3	8.0	7.3	7.1	6.1
13. Fixed term contracts (% total employees)	13.1	11.6	10.7	8.8	5.5	4.8	5.9	9.3	7.9	6.2	5.3
14. Employment in Services (% total employment)	47.4	48.3	49.1	48.2	50.3	51.6	55.3	55.2	54.9	54.7	54.5
15. Employment in Industry (% total employment)	35.9	35.8	36.5	37.9	39.6	38.6	33.5	34.0	33.7	34.1	34.8
16. Employment in Agriculture (% total employment)	16.7	15.9	14.4	13.8	10.2	9.8	11.2	10.8	11.4	11.2	10.7
17. Activity rate (% population aged 15-64)	74.1	74.3	74.4	76.2	77.9	78.3	76.6	75.3	75.8	77.1	76.6
18. Activity rate (% population aged 15-24)	44.5	43.3	43.8	47.8	49.2	49.0	46.4	42.2	41.1	44.0	42.6
19. Activity rate (% population aged 25-54)	89.7	89.7	89.4	90.0	91.6	92.0	91.1	91.0	90.8	91.2	90.6
20. Activity rate (% population aged 55-64)	56.1	60.4	61.0	64.4	67.6	68.2	62.8	58.5	62.5	63.2	62.2
21. Total unemployment (000)	64	64	56	41	38	49	115	119	95	83	64
22. Unemployment rate (% labour force)	11.6	11.5	10.1	7.3	6.5	8.4	20.9	22.7	18.6	16.2	12.6
23. Youth unemployment rate (% labour force 15-24)	17.5	16.3	12.8	11.9	11.0	14.0	36.4	37.3	31.3	27.8	21.8
24. Long term unemployment rate (% labour force)	4.7	5.2	4.9	3.0	1.9	1.9	5.4	10.9	11.0	8.6	6.6
25. Youth unemployment ratio (% population aged 15-24)	7.4	6.9	5.2	5.0	5.4	6.9	16.9	15.8	12.9	12.2	9.3

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	1 258	1 251	1 244	1 237	1 184	1 174	1 159	1 139	1 117	1 098	1 085
2. Population aged 15-64	826	823	820	817	777	769	756	738	720	704	691
3. Total employment (000)	487	494	498	526	521	524	471	444	443	444	451
4. Population in employment aged 15-64	478	482	487	510	497	501	456	436	434	435	438
5. Employment rate (% population aged 20-64)	64.3	65.0	65.7	69.1	70.3	71.9	66.5	64.5	65.3	66.4	67.7
6. Employment rate (% population aged 15-64)	57.9	58.5	59.3	62.4	63.9	65.2	60.4	59.0	60.2	61.7	63.4
7. Employment rate (% population aged 15-24)	25.7	24.4	26.3	28.7	32.2	31.7	25.4	24.3	23.4	25.4	27.0
8. Employment rate (% population aged 25-54)	74.9	75.5	75.3	78.6	78.4	79.6	74.5	73.5	74.8	75.0	76.1
9. Employment rate (% population aged 55-64)	38.8	41.9	45.2	48.7	53.4	56.3	53.0	48.4	49.7	52.5	54.6
10. FTE employment rate (% population aged 15-64)	56.5	55.2	58.5	62.0	63.5	64.6	58.7	57.1	58.3	59.7	61.8
11. Self-employed (% total employment)	11.3	12.4	10.0	10.1	9.1	7.7	8.9	9.6	9.3	9.2	9.6
12. Part-time employment (% total employment)	12.7	13.2	10.4	8.3	8.1	8.5	10.1	11.4	10.9	11.6	10.0
13. Fixed term contracts (% total employees)	9.1	7.3	6.2	5.4	2.8	2.1	2.9	5.2	5.5	3.3	3.6
14. Employment in Services (% total employment)	72.1	72.0	74.9	76.1	79.6	78.8	79.2	81.0	80.6	81.0	81.7
15. Employment in Industry (% total employment)	18.1	18.1	17.4	16.1	14.3	15.8	14.8	13.8	14.5	14.4	13.6
16. Employment in Agriculture (% total employment)	9.8	9.9	7.7	7.8	6.1	5.4	6.0	5.2	4.8	4.6	4.7
17. Activity rate (% population aged 15-64)	64.7	65.3	65.1	66.7	67.8	70.3	70.7	70.8	70.1	72.0	71.6
18. Activity rate (% population aged 15-24)	32.1	31.0	31.3	33.6	35.8	36.5	35.9	37.2	33.7	36.1	36.0
19. Activity rate (% population aged 25-54)	83.0	83.1	82.0	82.9	82.8	85.6	85.9	86.3	85.3	85.7	84.8
20. Activity rate (% population aged 55-64)	41.8	46.1	48.6	51.6	55.7	59.2	59.5	55.7	57.1	60.8	60.5
21. Total unemployment (000)	63	65	53	36	30	40	78	87	71	73	57
22. Unemployment rate (% labour force)	11.7	12.0	10.0	6.7	5.6	7.1	14.1	16.3	13.8	14.0	11.1
23. Youth unemployment rate (% labour force 15-24)	22.6	25.1	18.4	16.0	10.0	13.1	29.2	34.8	30.6	29.5	24.9
24. Long term unemployment rate (% labour force)	5.0	5.1	4.3	2.0	1.3	1.8	3.6	6.7	6.7	7.0	4.9
25. Youth unemployment ratio (% population aged 15-24)	6.4	6.6	5.1	4.9	3.6	4.8	10.5	12.9	10.3	10.6	9.0

Source: Eurostat.

LFS indicators: Break in series 2007.

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Labour market indicators: Lithuania

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	3 445	3 397	3 354	3 290	3 250	3 213	3 184	3 142	3 032	2 991	2 960
2. Population aged 15-64	2 305	2 274	2 249	2 209	2 188	2 169	2 154	2 127	2 037	2 007	1 984
3. Total employment (000)	1 426	1 425	1 461	1 487	1 529	1 519	1 415	1 247	1 253	1 275	1 292
4. Population in employment aged 15-64	1 408	1 401	1 414	1 405	1 423	1 397	1 290	1 224	1 226	1 244	1 264
5. Employment rate (% population aged 20-64)	68.9	69.3	70.7	71.3	72.7	72.0	67.0	64.3	66.9	68.5	69.9
6. Employment rate (% population aged 15-64)	61.1	61.6	62.9	63.6	65.0	64.4	59.9	57.6	60.2	62.0	63.7
7. Employment rate (% population aged 15-24)	22.5	20.3	21.2	23.7	24.8	26.0	20.6	18.3	19.0	21.5	24.6
8. Employment rate (% population aged 25-54)	78.9	79.6	80.9	81.1	82.2	80.9	75.9	73.6	76.9	78.5	79.6
9. Employment rate (% population aged 55-64)	44.7	47.3	49.6	49.7	53.2	53.0	51.2	48.3	50.2	51.7	53.4
10. FTE employment rate (% population aged 15-64)	62.0	60.7	62.0	62.4	64.2	63.7	58.7	56.7	59.2	60.9	62.6
11. Self-employed (% total employment)	20.5	18.7	17.1	15.8	13.7	11.5	12.1	10.9	10.6	11.1	11.8
12. Part-time employment (% total employment)	9.6	8.5	7.2	10.4	9.1	6.8	8.3	8.2	8.9	9.5	9.0
13. Fixed term contracts (% total employees)	7.2	6.1	5.4	4.6	3.8	2.4	2.3	2.4	2.7	2.6	2.7
14. Employment in Services (% total employment)	54.5	56.4	57.1	58.3	59.2	61.5	63.8	66.6	67.0	66.1	66.1
15. Employment in Industry (% total employment)	27.8	28.0	29.1	29.6	30.6	30.6	27.0	24.5	24.6	25.1	25.5
16. Employment in Agriculture (% total employment)	17.7	15.6	13.9	12.1	10.1	7.9	9.2	8.8	8.5	8.8	8.4
17. Activity rate (% population aged 15-64)	69.9	69.2	68.7	67.6	67.9	68.4	69.6	70.2	71.4	71.8	72.4
18. Activity rate (% population aged 15-24)	30.0	26.0	25.2	26.3	27.1	30.0	29.3	28.4	28.2	29.3	31.5
19. Activity rate (% population aged 25-54)	88.8	88.5	87.8	85.7	85.6	85.4	87.0	88.4	89.8	89.7	89.5
20. Activity rate (% population aged 55-64)	50.5	52.4	53.2	52.9	55.3	55.4	57.2	56.5	58.0	58.7	60.1
21. Total unemployment (000)	204	173	130	88	64	88	211	270	228	197	172
22. Unemployment rate (% labour force)	12.4	10.9	8.3	5.8	4.3	5.8	13.8	17.8	15.4	13.4	11.8
23. Youth unemployment rate (% labour force 15-24)	24.8	21.8	15.8	10.0	8.4	13.3	29.6	35.7	32.6	26.7	21.9
24. Long term unemployment rate (% labour force)	6.0	5.6	4.4	2.6	1.4	1.3	3.3	7.4	8.0	6.6	5.1
25. Youth unemployment ratio (% population aged 15-24)	7.5	5.7	4.0	2.6	2.3	4.0	8.7	10.2	9.2	7.8	6.9

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	1 607	1 582	1 561	1 529	1 507	1 487	1 473	1 450	1 397	1 378	1 364
2. Population aged 15-64	1 108	1 096	1 084	1 065	1 054	1 046	1 040	1 024	981	968	958
3. Total employment (000)	720	728	745	750	775	767	677	590	603	617	636
4. Population in employment aged 15-64	709	714	720	707	719	703	616	579	590	603	620
5. Employment rate (% population aged 20-64)	72.5	73.7	75.0	74.9	76.6	75.6	66.8	63.5	67.2	69.1	71.2
6. Employment rate (% population aged 15-64)	64.0	65.2	66.4	66.4	68.2	67.2	59.3	56.5	60.1	62.2	64.7
7. Employment rate (% population aged 15-24)	26.3	23.9	24.9	26.2	29.4	30.1	21.2	19.1	20.9	22.8	27.6
8. Employment rate (% population aged 25-54)	79.8	82.0	83.2	83.6	84.2	82.6	74.2	71.1	75.7	77.7	79.8
9. Employment rate (% population aged 55-64)	55.3	57.8	59.5	55.5	60.7	60.2	55.5	52.1	54.1	55.9	56.1
10. FTE employment rate (% population aged 15-64)	65.8	65.2	66.4	66.1	68.1	67.4	58.8	56.3	60.0	62.0	64.4
11. Self-employed (% total employment)	23.8	21.1	19.4	17.7	16.4	14.2	15.0	13.2	12.6	13.3	13.9
12. Part-time employment (% total employment)	7.4	6.6	5.3	8.3	7.5	4.9	6.9	6.8	7.1	7.5	7.1
13. Fixed term contracts (% total employees)	9.6	8.5	7.5	6.7	5.1	2.9	3.0	3.3	3.6	3.4	3.5
14. Employment in Services (% total employment)	44.9	46.4	46.4	45.8	46.1	48.0	51.2	55.2	56.0	54.0	54.0
15. Employment in Industry (% total employment)	34.2	35.6	37.1	40.0	41.4	42.0	37.0	33.4	33.3	34.6	35.2
16. Employment in Agriculture (% total employment)	21.0	18.0	16.5	14.2	12.6	9.9	11.8	11.4	10.7	11.4	10.8
17. Activity rate (% population aged 15-64)	73.5	72.9	72.4	70.7	71.3	71.6	71.7	72.0	73.5	73.7	74.7
18. Activity rate (% population aged 15-24)	34.1	30.5	29.6	29.1	31.6	34.6	32.7	31.3	32.1	32.4	35.8
19. Activity rate (% population aged 25-54)	90.5	90.6	89.9	88.4	87.7	87.3	88.0	89.0	90.7	90.5	90.6
20. Activity rate (% population aged 55-64)	62.0	63.4	64.2	59.8	63.3	62.9	63.3	62.6	64.3	64.6	65.2
21. Total unemployment (000)	105	85	65	46	32	46	130	159	132	111	96
22. Unemployment rate (% labour force)	12.7	10.5	8.1	6.0	4.2	6.0	17.1	21.2	17.9	15.2	13.1
23. Youth unemployment rate (% labour force 15-24)	22.5	21.5	16.0	10.0	7.0	13.0	35.1	39.0	34.9	29.7	23.0
24. Long term unemployment rate (% labour force)	6.0	5.3	4.2	2.6	1.5	1.1	3.7	9.1	9.4	7.4	5.5
25. Youth unemployment ratio (% population aged 15-24)	7.8	6.6	4.7	2.9	2.2	4.5	11.4	12.2	11.2	9.6	8.2

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	1 839	1 815	1 793	1 761	1 743	1 725	1 711	1 692	1 635	1 614	1 597
2. Population aged 15-64	1 197	1 179	1 165	1 144	1 134	1 124	1 115	1 103	1 055	1 039	1 025
3. Total employment (000)	706	698	716	738	753	752	738	656	649	658	656
4. Population in employment aged 15-64	699	687	694	698	703	694	674	646	636	642	644
5. Employment rate (% population aged 20-64)	65.6	65.3	66.6	68.0	69.1	68.7	67.2	65.0	66.6	67.9	68.6
6. Employment rate (% population aged 15-64)	58.4	58.3	59.6	61.0	62.0	61.8	60.4	58.5	60.2	61.8	62.8
7. Employment rate (% population aged 15-24)	18.5	16.6	17.4	21.0	20.0	21.8	20.1	17.4	17.0	20.1	21.5
8. Employment rate (% population aged 25-54)	78.0	77.4	78.6	78.7	80.2	79.4	77.5	75.9	78.1	79.1	79.4
9. Employment rate (% population aged 55-64)	36.7	39.3	41.9	45.2	47.5	47.4	47.8	45.5	47.2	48.5	51.2
10. FTE employment rate (% population aged 15-64)	58.4	56.6	57.9	58.9	60.4	60.3	58.5	57.0	58.5	59.9	60.8
11. Self-employed (% total employment)	17.2	16.2	14.8	13.9	11.0	8.8	9.4	8.8	8.8	8.9	9.7
12. Part-time employment (% total employment)	11.8	10.5	9.2	12.6	10.7	8.7	9.5	9.4	10.5	11.3	10.8
13. Fixed term contracts (% total employees)	4.8	3.8	3.4	2.6	2.4	1.8	1.6	1.7	1.9	1.9	1.9
14. Employment in Services (% total employment)	64.3	66.8	68.1	70.8	72.7	75.2	75.4	76.9	77.2	77.5	77.7
15. Employment in Industry (% total employment)	21.4	20.1	20.7	19.3	19.7	19.0	17.8	16.6	16.4	16.1	16.2
16. Employment in Agriculture (% total employment)	14.3	13.1	11.2	9.9	7.7	5.7	6.8	6.5	6.5	6.3	6.1
17. Activity rate (% population aged 15-64)	66.5	65.7	65.2	64.6	64.9	65.5	67.6	68.6	69.4	70.1	70.3
18. Activity rate (% population aged 15-24)	25.8	21.4	20.6	23.3	22.3	25.3	25.9	25.4	24.1	26.1	27.0
19. Activity rate (% population aged 25-54)	87.2	86.6	85.8	83.2	83.6	83.6	86.0	87.8	88.9	89.0	88.4
20. Activity rate (% population aged 55-64)	41.8	44.0	44.8	47.6	49.2	49.7	52.4	51.7	53.1	54.2	56.1
21. Total unemployment (000)	98	89	66	42	32	42	81	112	96	86	77
22. Unemployment rate (% labour force)	12.2	11.3	8.5	5.6	4.3	5.6	10.5	14.5	12.9	11.6	10.5
23. Youth unemployment rate (% labour force 15-24)	28.1	22.2	15.5	10.0	10.4	13.9	22.4	31.6	29.4	22.7	20.4
24. Long term unemployment rate (% labour force)	6.0	6.0	4.6	2.6	1.3	1.5	2.8	5.9	6.7	5.7	4.6
25. Youth unemployment ratio (% population aged 15-24)	7.3	4.7	3.2	2.3	2.3	3.5	5.8	8.0	7.1	5.9	5.5

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Source: Eurostat.

LFS indicators: Break in series 2007; Indicator 24: 2004-2010 Estimate.

Labour market indicators: **Luxembourg**

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	443	446	450	456	465	467	481	488	500	513	517
2. Population aged 15-64	300	301	304	307	316	318	330	335	344	355	359
3. Total employment (000)	293	299	308	319	333	350	353	359	370	379	385
4. Population in employment aged 15-64	186	188	193	195	203	202	215	219	222	234	236
5. Employment rate (% population aged 20-64)	67.2	67.7	69.0	69.1	69.6	68.8	70.4	70.7	70.1	71.4	71.1
6. Employment rate (% population aged 15-64)	62.2	62.5	63.6	63.6	64.2	63.4	65.2	65.2	64.6	65.8	65.7
7. Employment rate (% population aged 15-24)	27.0	23.3	24.9	23.3	22.5	23.8	26.7	21.2	20.7	21.7	21.9
8. Employment rate (% population aged 25-54)	77.8	79.3	80.7	81.0	81.9	80.0	81.2	82.3	82.0	83.1	82.9
9. Employment rate (% population aged 55-64)	30.3	30.4	31.7	33.2	32.0	34.1	38.2	39.6	39.3	41.0	40.5
10. FTE employment rate (% population aged 15-64)	58.3	58.2	59.2	59.7	60.5	59.4	59.7	59.8	59.3	60.5	60.4
11. Self-employed (% total employment)	6.8	6.7	6.5	6.2	6.0	6.0	6.1	6.1	6.1	6.1	6.0
12. Part-time employment (% total employment)	13.4	16.4	17.4	17.1	17.8	18.0	18.2	17.9	18.4	19.0	19.2
13. Fixed term contracts (% total employees)	3.1	4.8	5.3	6.1	6.8	6.2	7.2	7.1	7.1	7.7	7.1
14. Employment in Services (% total employment)	74.4	74.6	75.0	75.3	75.8	76.6	77.2	77.6	78.0	78.4	78.9
15. Employment in Industry (% total employment)	23.9	23.7	23.4	23.2	22.7	22.1	21.6	21.3	20.9	20.5	20.0
16. Employment in Agriculture (% total employment)	1.7	1.6	1.6	1.6	1.6	1.2	1.2	1.2	1.1	1.1	1.1
17. Activity rate (% population aged 15-64)	64.6	65.8	66.6	66.7	66.9	66.8	68.7	68.2	67.9	69.4	69.9
18. Activity rate (% population aged 15-24)	30.4	28.0	28.8	27.8	26.5	29.0	32.3	24.7	24.9	26.8	25.9
19. Activity rate (% population aged 25-54)	80.4	83.0	83.9	84.5	84.7	83.4	84.8	85.7	85.6	87.0	87.5
20. Activity rate (% population aged 55-64)	30.7	30.9	32.4	33.6	32.7	35.1	39.4	40.6	40.4	41.9	42.5
21. Total unemployment (000)	7	10	9	9	9	10	12	11	11	13	15
22. Unemployment rate (% labour force)	3.8	5.0	4.6	4.6	4.2	4.9	5.1	4.6	4.8	5.1	5.9
23. Youth unemployment rate (% labour force 15-24)	11.2	16.4	14.6	15.5	15.6	17.3	16.5	15.8	16.4	18.0	16.9
24. Long term unemployment rate (% labour force)	1.0	1.0	1.2	1.4	1.2	1.6	1.2	1.3	1.4	1.6	1.8
25. Youth unemployment ratio (% population aged 15-24)	3.3	4.7	3.9	4.5	4.0	5.2	5.5	3.5	4.2	5.0	4.0

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	219	221	223	232	234	233	240	243	249	256	259
2. Population aged 15-64	151	152	153	153	157	161	167	169	175	180	182
3. Total employment (000)	174	176	179	181	187	200	202	203	210	212	216
4. Population in employment aged 15-64	111	111	112	111	114	115	122	124	126	130	132
5. Employment rate (% population aged 20-64)	79.1	78.9	79.4	78.9	78.3	77.2	79.0	79.2	78.1	78.5	78.0
6. Employment rate (% population aged 15-64)	73.3	72.8	73.3	72.6	72.3	71.5	73.2	73.1	72.1	72.5	72.1
7. Employment rate (% population aged 15-24)	28.0	26.0	28.4	25.4	26.5	27.0	29.1	22.1	22.8	23.4	24.2
8. Employment rate (% population aged 25-54)	91.6	92.2	92.8	92.7	92.2	90.2	90.8	92.0	90.8	91.0	90.1
9. Employment rate (% population aged 55-64)	39.7	38.3	38.3	38.7	35.6	38.7	46.5	47.7	47.0	47.4	48.3
10. FTE employment rate (% population aged 15-64)	72.9	72.9	73.7	73.5	73.8	72.3	71.6	71.8	70.7	71.0	70.7
11. Self-employed (% total employment)	7.2	7.5	7.1	7.1	6.8	6.1	7.1	6.9	6.8	6.5	6.5
12. Part-time employment (% total employment)	1.6	2.5	2.5	2.6	2.6	2.7	5.6	4.0	4.8	5.4	6.0
13. Fixed term contracts (% total employees)	2.4	4.1	4.9	5.7	6.2	5.9	6.3	6.2	6.3	7.3	5.7
14. Employment in Services (% total employment)	63.7	64.5	64.6	64.2	64.6	67.5	67.4	68.2	68.1	68.5	69.7
15. Employment in Industry (% total employment)	34.3	33.6	33.5	33.9	33.4	31.0	31.2	30.4	30.5	30.2	28.9
16. Employment in Agriculture (% total employment)	2.0	1.9	1.9	1.9	2.0	1.4	1.4	1.4	1.3	1.3	1.4
17. Activity rate (% population aged 15-64)	75.5	75.6	76.0	75.3	75.0	74.7	76.6	76.0	75.0	75.9	76.3
18. Activity rate (% population aged 15-24)	31.0	29.6	32.1	30.6	30.6	30.9	34.9	26.8	26.3	28.8	29.8
19. Activity rate (% population aged 25-54)	94.1	95.3	95.5	95.3	94.9	93.7	94.1	94.8	93.9	94.6	94.4
20. Activity rate (% population aged 55-64)	40.1	38.8	39.4	38.9	36.4	39.7	47.7	48.8	48.4	48.3	50.5
21. Total unemployment (000)	3	4	4	4	4	5	6	5	5	6	8
22. Unemployment rate (% labour force)	3.0	3.6	3.6	3.5	3.4	4.1	4.5	3.8	3.9	4.5	5.6
23. Youth unemployment rate (% labour force 15-24)	9.9	12.0	12.6	16.0	13.8	13.4	15.0	17.2	15.1	18.6	19.0
24. Long term unemployment rate (% labour force)	0.9	0.8	1.2	1.2	1.3	1.2	0.9	1.3	1.3	1.3	1.7
25. Youth unemployment ratio (% population aged 15-24)	3.0	3.6	3.8	5.2	4.1	3.9	5.8	4.7	3.5	5.4	5.6

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	224	224	227	225	230	235	241	246	250	257	258
2. Population aged 15-64	148	149	151	154	159	157	163	166	170	175	177
3. Total employment (000)	119	123	129	138	146	150	151	156	160	167	170
4. Population in employment aged 15-64	76	77	81	84	89	87	93	95	97	103	105
5. Employment rate (% population aged 20-64)	55.1	56.2	58.4	59.4	61.0	60.1	61.5	62.0	61.9	64.1	63.9
6. Employment rate (% population aged 15-64)	50.9	51.9	53.7	54.6	56.1	55.1	57.0	57.2	56.9	59.0	59.1
7. Employment rate (% population aged 15-24)	26.1	20.5	21.3	21.2	18.4	20.6	24.2	20.3	18.5	20.1	19.4
8. Employment rate (% population aged 25-54)	63.8	66.2	68.4	69.5	71.7	69.5	71.4	72.6	72.9	75.0	75.5
9. Employment rate (% population aged 55-64)	20.6	22.2	24.9	27.8	28.6	29.3	29.4	31.3	31.3	34.3	32.4
10. FTE employment rate (% population aged 15-64)	43.7	43.3	44.4	46.1	47.5	46.2	47.7	48.0	47.8	50.0	50.1
11. Self-employed (% total employment)	6.1	5.5	5.7	5.1	5.0	6.0	4.8	5.0	5.2	5.5	5.5
12. Part-time employment (% total employment)	30.7	36.3	38.2	36.2	37.2	38.3	35.1	36.0	36.1	36.3	36.0
13. Fixed term contracts (% total employees)	4.2	5.8	5.8	6.6	7.6	6.6	8.4	8.3	8.2	8.2	8.9
14. Employment in Services (% total employment)	91.0	90.1	90.7	91.2	91.2	89.8	92.0	91.0	92.2	92.4	91.7
15. Employment in Industry (% total employment)	7.8	8.6	8.3	7.7	7.8	9.3	7.3	8.2	7.1	6.8	7.6
16. Employment in Agriculture (% total employment)	1.2	1.3	1.0	1.1	1.0	0.9	0.8	0.8	0.8	0.8	0.7
17. Activity rate (% population aged 15-64)	53.5	55.8	57.0	58.2	58.9	58.7	60.7	60.3	60.7	62.8	63.2
18. Activity rate (% population aged 15-24)	29.7	26.4	25.5	25.0	22.3	27.1	29.5	22.7	23.4	24.7	21.8
19. Activity rate (% population aged 25-54)	66.5	70.4	72.2	73.8	74.7	72.9	75.3	76.4	77.1	79.2	80.5
20. Activity rate (% population aged 55-64)	21.2	22.6	25.1	28.5	29.1	30.3	30.6	32.0	32.1	35.2	34.2
21. Total unemployment (000)	4	6	5	5	5	5	6	6	6	6	7
22. Unemployment rate (% labour force)	4.9	6.8	6.1	5.9	5.1	5.9	5.9	5.5	6.0	5.8	6.3
23. Youth unemployment rate (% labour force 15-24)	12.5	21.5	17.2	14.9	18.2	22.0	18.2	14.3	17.9	17.3	13.8
24. Long term unemployment rate (% labour force)	0.9	1.3	1.2	1.5	1.1	2.1	1.6	1.4	1.5	1.8	1.9
25. Youth unemployment ratio (% population aged 15-24)	3.6	5.9	4.1	3.8	3.9	6.5	5.2	2.3	4.9	4.6	2.4

Source: Eurostat.

LFS indicators: Break in series 2007.

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Labour market indicators: Hungary

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	9980	9944	9932	9921	9907	9893	9867	9852	9833	9802	9779
2. Population aged 15-64	6836	6826	6815	6816	6800	6794	6771	6769	6770	6716	6686
3. Total employment (000)	4227	4186	4174	4192	4222	4146	4043	4077	4090	4090	4108
4. Population in employment aged 15-64	3897	3875	3879	3906	3897	3849	3751	3750	3779	3843	3906
5. Employment rate (% population aged 20-64)	62.4	62.1	62.2	62.6	62.6	61.9	60.5	60.4	60.7	62.1	63.2
6. Employment rate (% population aged 15-64)	57.0	56.8	56.9	57.3	57.3	56.7	55.4	55.4	55.8	57.2	58.4
7. Employment rate (% population aged 15-24)	26.8	23.6	21.8	21.7	21.0	20.0	18.1	18.3	18.3	18.6	19.8
8. Employment rate (% population aged 25-54)	73.7	73.6	73.7	74.2	74.6	74.4	72.9	72.5	73.1	74.6	75.5
9. Employment rate (% population aged 55-64)	28.9	31.1	33.0	33.6	33.1	31.4	32.8	34.4	35.8	36.9	38.5
10. FTE employment rate (% population aged 15-64)	56.9	56.5	56.5	57.0	56.9	56.2	54.6	54.6	54.7	56.1	57.6
11. Self-employed (% total employment)	13.8	13.6	12.7	12.2	11.6	11.4	10.9	10.6	10.8	10.6	10.4
12. Part-time employment (% total employment)	4.4	4.7	4.1	4.0	4.1	4.6	5.6	5.8	6.8	7.0	6.7
13. Fixed term contracts (% total employees)	7.5	6.8	7.0	6.7	7.3	7.9	8.5	9.7	8.9	9.4	10.8
14. Employment in Services (% total employment)	58.5	59.7	60.7	61.0	61.6	61.9	63.0	63.8	63.2	63.8	64.1
15. Employment in Industry (% total employment)	32.0	31.5	31.0	31.0	31.0	31.0	30.1	29.3	29.7	29.0	28.9
16. Employment in Agriculture (% total employment)	9.4	8.8	8.3	8.0	7.5	7.1	6.9	6.9	7.1	7.3	7.1
17. Activity rate (% population aged 15-64)	60.6	60.5	61.3	62.0	61.9	61.5	61.6	62.4	62.7	64.3	65.1
18. Activity rate (% population aged 15-24)	31.0	27.9	27.1	26.8	25.6	25.0	24.6	24.9	24.7	25.9	27.2
19. Activity rate (% population aged 25-54)	77.8	77.9	78.7	79.6	80.0	80.1	80.2	80.9	81.3	82.9	83.2
20. Activity rate (% population aged 55-64)	29.8	32.0	34.3	34.9	34.5	33.1	35.0	37.3	39.2	40.0	41.7
21. Total unemployment (000)	240	252	302	317	312	329	421	475	468	476	449
22. Unemployment rate (% labour force)	5.8	6.1	7.2	7.5	7.4	7.8	10.0	11.2	10.9	10.9	10.2
23. Youth unemployment rate (% labour force 15-24)	13.2	15.5	19.4	19.1	18.1	19.9	26.5	26.6	26.1	28.1	27.2
24. Long term unemployment rate (% labour force)	2.4	2.7	3.2	3.4	3.4	3.6	4.2	5.5	5.2	4.9	5.0
25. Youth unemployment ratio (% population aged 15-24)	4.1	4.3	5.2	5.1	4.6	5.0	6.5	6.6	6.4	7.3	7.4

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	4722	4703	4698	4692	4691	4680	4671	4664	4658	4645	4636
2. Population aged 15-64	3329	3329	3328	3328	3319	3321	3316	3321	3331	3296	3282
3. Total employment (000)	2292	2273	2264	2280	2305	2256	2186	2181	2207	2196	2220
4. Population in employment aged 15-64	2113	2102	2101	2122	2126	2093	2026	2005	2039	2061	2109
5. Employment rate (% population aged 20-64)	69.6	69.2	69.2	69.9	70.2	69.0	67.0	66.0	66.8	68.1	69.7
6. Employment rate (% population aged 15-64)	63.5	63.1	63.1	63.8	64.0	63.0	61.1	60.4	61.2	62.5	64.3
7. Employment rate (% population aged 15-24)	29.8	26.3	24.4	24.5	24.2	23.2	19.9	20.0	19.9	20.0	22.4
8. Employment rate (% population aged 25-54)	80.1	80.5	80.3	81.0	81.3	81.0	78.9	77.9	79.6	80.4	81.1
9. Employment rate (% population aged 55-64)	37.8	38.4	40.6	41.4	41.7	38.5	39.9	39.6	39.8	42.6	46.2
10. FTE employment rate (% population aged 15-64)	64.0	63.7	63.3	64.1	64.3	63.1	60.9	60.1	60.7	62.1	64.0
11. Self-employed (% total employment)	17.4	16.9	15.8	15.1	14.1	14.2	13.5	13.2	13.5	12.9	12.8
12. Part-time employment (% total employment)	2.8	3.2	2.7	2.6	2.8	3.3	3.9	3.9	4.7	4.7	4.4
13. Fixed term contracts (% total employees)	8.3	7.5	7.6	7.4	7.7	8.7	9.0	10.1	9.4	10.3	11.2
14. Employment in Services (% total employment)	47.5	48.5	49.1	49.4	49.9	50.4	51.1	52.1	51.8	52.4	52.7
15. Employment in Industry (% total employment)	39.3	39.2	39.6	39.7	39.7	39.9	39.5	38.2	38.4	37.6	37.5
16. Employment in Agriculture (% total employment)	13.2	12.3	11.3	10.9	10.5	9.7	9.4	9.7	9.8	10.0	9.7
17. Activity rate (% population aged 15-64)	67.6	67.2	67.9	68.7	69.0	68.3	68.2	68.3	68.8	70.5	71.7
18. Activity rate (% population aged 15-24)	34.6	31.4	30.3	30.1	29.3	28.6	27.7	27.7	27.3	28.0	30.4
19. Activity rate (% population aged 25-54)	84.8	85.0	85.5	86.5	86.9	87.0	86.9	87.2	88.3	89.5	89.4
20. Activity rate (% population aged 55-64)	38.9	39.7	42.3	43.1	43.6	40.5	42.6	43.1	44.0	46.4	50.2
21. Total unemployment (000)	136	137	159	165	164	174	234	264	253	263	243
22. Unemployment rate (% labour force)	6.0	6.1	7.0	7.2	7.1	7.6	10.3	11.6	11.0	11.2	10.2
23. Youth unemployment rate (% labour force 15-24)	13.6	16.2	19.6	18.6	17.6	19.1	28.2	27.9	27.2	28.8	26.3
24. Long term unemployment rate (% labour force)	2.5	2.8	3.3	3.3	3.3	3.6	4.2	5.8	5.2	5.1	5.0
25. Youth unemployment ratio (% population aged 15-24)	4.8	5.1	6.0	5.6	5.2	5.5	7.8	7.7	7.4	8.1	8.0

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	5258	5241	5234	5228	5216	5212	5196	5187	5174	5157	5142
2. Population aged 15-64	3506	3497	3486	3488	3481	3473	3455	3448	3439	3420	3404
3. Total employment (000)	1935	1914	1910	1912	1918	1890	1857	1896	1883	1894	1888
4. Population in employment aged 15-64	1785	1773	1777	1784	1772	1756	1725	1745	1740	1782	1797
5. Employment rate (% population aged 20-64)	55.5	55.3	55.6	55.7	55.5	55.1	54.4	55.0	54.9	56.4	57.0
6. Employment rate (% population aged 15-64)	50.9	50.7	51.0	51.1	50.9	50.6	49.9	50.6	50.6	52.1	52.8
7. Employment rate (% population aged 15-24)	23.8	20.8	19.2	18.8	17.8	16.8	16.3	16.6	16.7	17.2	17.2
8. Employment rate (% population aged 25-54)	67.4	67.0	67.2	67.6	67.9	67.9	66.9	67.1	66.6	68.9	69.8
9. Employment rate (% population aged 55-64)	21.8	25.0	26.7	27.1	26.2	25.7	27.0	30.1	32.4	32.2	32.3
10. FTE employment rate (% population aged 15-64)	50.0	49.5	50.0	50.2	49.9	49.5	48.6	49.2	48.9	50.4	51.4
11. Self-employed (% total employment)	9.5	9.7	9.1	8.7	8.6	8.0	7.9	7.6	7.6	7.9	7.6
12. Part-time employment (% total employment)	6.2	6.3	5.8	5.6	5.8	6.2	7.5	8.0	9.2	9.7	9.3
13. Fixed term contracts (% total employees)	6.7	6.1	6.4	6.0	6.8	7.0	7.8	9.2	8.4	8.5	10.5
14. Employment in Services (% total employment)	72.2	73.5	74.9	75.1	75.9	75.9	77.2	77.5	76.8	77.2	77.6
15. Employment in Industry (% total employment)	23.1	22.0	20.6	20.4	20.3	20.3	18.8	18.9	19.3	18.8	18.5
16. Employment in Agriculture (% total employment)	4.8	4.4	4.6	4.5	3.8	3.8	3.9	3.5	3.9	4.1	3.9
17. Activity rate (% population aged 15-64)	53.9	54.0	55.1	55.5	55.1	55.0	55.3	56.7	56.8	58.3	58.8
18. Activity rate (% population aged 15-24)	27.3	24.3	23.8	23.4	21.8	21.3	21.5	22.1	22.1	23.7	24.0
19. Activity rate (% population aged 25-54)	71.0	70.9	72.1	72.9	73.2	73.3	73.6	74.6	74.3	76.3	76.9
20. Activity rate (% population aged 55-64)	22.4	25.8	27.7	28.2	27.3	27.0	28.8	32.4	35.2	34.8	34.8
21. Total unemployment (000)	104	116	143	152	148	155	187	210	215	213	206
22. Unemployment rate (% labour force)	5.5	6.1	7.4	7.8	7.7	8.1	9.7	10.7	10.9	10.6	10.2
23. Youth unemployment rate (% labour force 15-24)	12.8	14.4	19.1	19.8	18.6	20.9	24.2	24.9	24.6	27.3	28.4
24. Long term unemployment rate (% labour force)	2.3	2.6	3.2	3.4	3.6	3.7	4.1	5.2	5.3	4.7	4.9
25. Youth unemployment ratio (% population aged 15-24)	3.5	3.5	4.5	4.6	4.1	4.4	5.2	5.5	5.4	6.5	6.8

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Source: Eurostat.

Labour market indicators: Malta

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	399	400	397	399	400	402	405	406	408	410	413
2. Population aged 15-64	271	272	277	279	281	284	286	285	284	284	284
3. Total employment (000)	149	149	152	154	157	161	161	164	168	172	178
4. Population in employment aged 15-64	147	147	148	150	155	158	158	161	164	168	173
5. Employment rate (% population aged 20-64)	57.8	57.9	57.4	57.9	58.6	59.2	59.0	60.1	61.6	63.1	64.8
6. Employment rate (% population aged 15-64)	54.2	54.0	53.6	53.9	55.0	55.5	55.3	56.2	57.9	59.1	60.8
7. Employment rate (% population aged 15-24)	47.2	46.2	45.0	44.8	46.8	46.6	44.1	44.2	45.0	43.8	45.9
8. Employment rate (% population aged 25-54)	61.8	62.1	63.1	64.4	66.2	67.2	68.1	68.6	70.6	72.6	74.0
9. Employment rate (% population aged 55-64)	32.5	31.5	31.9	30.7	29.5	30.1	29.1	31.9	33.2	34.7	36.2
10. FTE employment rate (% population aged 15-64)	53.0	52.6	51.8	52.4	53.0	53.5	53.3	53.8	55.2	56.1	57.5
11. Self-employed (% total employment)	11.9	12.0	12.1	12.1	12.2	12.2	12.6	12.5	12.2	12.6	12.2
12. Part-time employment (% total employment)	9.2	8.7	9.3	9.9	10.8	11.5	11.5	12.4	13.4	14.1	15.2
13. Fixed term contracts (% total employees)	3.6	4.0	4.4	3.8	5.1	4.3	5.0	5.4	6.6	6.8	7.7
14. Employment in Services (% total employment)	70.1	71.3	71.8	72.6	73.7	75.4	76.5	76.6	77.0	77.7	78.5
15. Employment in Industry (% total employment)	26.7	25.2	24.8	24.0	22.9	21.3	20.0	20.1	19.8	19.2	18.6
16. Employment in Agriculture (% total employment)	3.2	3.4	3.4	3.4	3.4	3.3	3.4	3.3	3.2	3.1	2.9
17. Activity rate (% population aged 15-64)	58.6	58.2	57.6	57.9	58.8	59.1	59.4	60.4	61.8	63.1	65.0
18. Activity rate (% population aged 15-24)	56.5	55.3	53.6	53.0	54.1	52.7	51.6	50.9	51.9	50.9	52.8
19. Activity rate (% population aged 25-54)	65.4	65.3	66.4	67.9	69.8	70.7	71.9	72.9	74.7	76.5	78.0
20. Activity rate (% population aged 55-64)	33.4	32.3	33.0	31.5	30.6	31.4	30.9	33.3	34.2	36.0	38.4
21. Total unemployment (000)	12	11	11	11	11	10	12	12	11	11	12
22. Unemployment rate (% labour force)	7.7	7.2	6.9	6.8	6.5	6.0	6.9	6.9	6.4	6.3	6.4
23. Youth unemployment rate (% labour force 15-24)	17.4	16.6	16.1	15.5	13.5	11.7	14.5	13.2	13.3	14.1	13.0
24. Long term unemployment rate (% labour force)	3.2	3.4	3.3	2.7	2.7	2.5	2.9	3.1	3.1	3.1	2.9
25. Youth unemployment ratio (% population aged 15-24)	9.3	9.2	8.6	8.2	7.3	6.1	7.5	6.7	6.9	7.2	6.9

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	198	198	198	199	199	201	202	203	203	205	206
2. Population aged 15-64	136	137	140	141	142	144	145	145	144	144	144
3. Total employment (000)	103	104	105	106	107	107	107	108	109	110	111
4. Population in employment aged 15-64	102	103	103	104	105	105	104	105	106	106	107
5. Employment rate (% population aged 20-64)	80.6	81.2	79.7	79.6	79.0	78.5	77.5	78.2	79.0	79.2	79.4
6. Employment rate (% population aged 15-64)	74.5	75.1	73.5	73.6	73.5	72.9	71.9	72.5	73.8	73.8	74.1
7. Employment rate (% population aged 15-24)	49.1	50.4	46.7	47.5	48.9	48.0	45.8	45.9	48.0	46.7	47.5
8. Employment rate (% population aged 25-54)	88.3	88.8	89.1	89.7	90.3	89.5	89.3	89.1	90.0	89.7	89.6
9. Employment rate (% population aged 55-64)	53.8	53.4	52.0	50.6	47.4	47.9	46.3	50.0	51.5	53.1	53.9
10. FTE employment rate (% population aged 15-64)	75.3	75.5	73.1	73.7	73.5	72.9	71.9	72.1	73.0	72.9	72.9
11. Self-employed (% total employment)	14.2	14.8	15.1	15.2	15.1	15.5	15.9	16.2	15.9	16.5	16.2
12. Part-time employment (% total employment)	3.8	4.1	4.4	4.7	4.3	4.5	5.3	5.9	6.7	7.0	8.2
13. Fixed term contracts (% total employees)	3.0	3.1	3.6	2.7	3.7	3.4	3.9	4.3	5.7	6.1	7.1
14. Employment in Services (% total employment)	64.4	65.8	65.6	66.2	66.9	67.7	69.7	69.9	70.3	70.6	72.0
15. Employment in Industry (% total employment)	31.3	29.7	29.9	29.1	28.4	27.6	25.6	25.4	25.0	24.9	23.9
16. Employment in Agriculture (% total employment)	4.3	4.5	4.5	4.7	4.7	4.6	4.7	4.7	4.7	4.5	4.1
17. Activity rate (% population aged 15-64)	80.2	80.2	78.5	78.5	78.0	77.2	77.0	77.8	78.6	78.3	79.4
18. Activity rate (% population aged 15-24)	58.8	59.9	55.8	56.8	57.5	55.3	54.6	53.6	55.7	54.0	55.9
19. Activity rate (% population aged 25-54)	93.5	93.3	93.4	94.1	94.4	93.8	93.9	94.5	94.9	94.3	94.4
20. Activity rate (% population aged 55-64)	55.5	54.7	54.2	51.9	48.8	49.5	48.9	52.3	53.0	54.9	57.2
21. Total unemployment (000)	8	7	7	7	6	6	7	8	7	7	8
22. Unemployment rate (% labour force)	7.0	6.4	6.3	6.1	5.8	5.6	6.5	6.7	6.0	5.7	6.5
23. Youth unemployment rate (% labour force 15-24)	16.9	15.9	16.2	16.4	15.0	13.1	16.2	14.4	13.7	13.5	15.1
24. Long term unemployment rate (% labour force)	3.4	3.6	3.3	3.0	2.8	2.7	3.1	3.3	3.3	3.3	3.4
25. Youth unemployment ratio (% population aged 15-24)	9.7	9.5	9.0	9.3	8.6	7.2	8.8	7.7	7.6	7.3	8.5

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	201	202	200	200	200	201	202	203	204	206	207
2. Population aged 15-64	135	136	137	138	139	140	141	141	140	140	140
3. Total employment (000)	46	45	47	47	51	54	54	56	59	63	67
4. Population in employment aged 15-64	45	44	46	46	50	53	54	56	58	62	66
5. Employment rate (% population aged 20-64)	34.9	34.3	34.8	35.7	37.7	39.4	40.0	41.6	43.8	46.6	49.8
6. Employment rate (% population aged 15-64)	33.6	32.7	33.4	33.7	36.0	37.7	38.0	39.5	41.5	44.0	47.0
7. Employment rate (% population aged 15-24)	45.2	41.8	43.1	42.0	44.5	45.0	42.2	42.4	41.8	40.7	44.3
8. Employment rate (% population aged 25-54)	34.7	34.8	36.4	38.2	41.3	44.1	45.9	47.5	50.8	54.9	57.8
9. Employment rate (% population aged 55-64)	13.0	11.5	12.7	11.2	12.1	12.7	12.2	14.1	15.1	16.3	18.7
10. FTE employment rate (% population aged 15-64)	30.6	29.7	30.1	30.7	32.2	33.8	34.2	35.2	37.2	39.2	41.8
11. Self-employed (% total employment)	6.6	5.5	5.4	5.1	6.1	5.6	6.1	5.4	5.5	5.8	5.4
12. Part-time employment (% total employment)	21.3	19.3	20.4	21.6	24.6	25.4	23.8	24.9	25.9	26.5	26.8
13. Fixed term contracts (% total employees)	4.8	5.8	5.9	5.8	7.7	5.8	6.8	7.1	8.1	7.9	8.7
14. Employment in Services (% total employment)	82.7	83.9	85.3	86.8	87.8	90.3	89.5	89.1	89.3	90.0	89.1
15. Employment in Industry (% total employment)	16.5	15.1	13.8	12.7	11.5	9.0	9.4	10.2	10.2	9.3	9.9
16. Employment in Agriculture (% total employment)	0.9	1.0	0.9	0.5	0.7	0.7	1.0	0.7	0.6	0.7	1.0
17. Activity rate (% population aged 15-64)	36.8	36.0	36.4	36.8	39.1	40.4	41.2	42.5	44.7	47.5	50.2
18. Activity rate (% population aged 15-24)	54.0	50.6	51.3	49.1	50.5	50.0	48.3	48.1	48.0	47.7	49.5
19. Activity rate (% population aged 25-54)	36.8	36.8	38.7	40.8	44.3	46.7	48.9	50.6	54.0	58.1	61.1
20. Activity rate (% population aged 55-64)	13.1	11.9	12.7	11.6	12.8	13.6	13.2	14.6	15.6	17.3	19.7
21. Total unemployment (000)	5	4	4	4	4	4	4	4	4	5	4
22. Unemployment rate (% labour force)	9.3	9.0	8.4	8.3	7.9	6.8	7.6	7.1	7.1	7.3	6.3
23. Youth unemployment rate (% labour force 15-24)	17.9	17.4	16.0	14.4	11.8	10.0	12.5	11.8	12.9	14.7	10.4
24. Long term unemployment rate (% labour force)	2.4	3.0	3.1	2.3	2.4	2.4	2.4	2.5	2.5	2.7	2.5
25. Youth unemployment ratio (% population aged 15-24)	8.8	8.8	8.2	7.1	6.0	5.0	6.1	5.7	6.2	7.0	5.1

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Source: Eurostat.

LFS indicators: Break in series 2005.

Labour market indicators: Netherlands

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	16 037	16 119	16 107	16 142	16 180	16 190	16 223	16 350	16 400	16 507	16 622
2. Population aged 15-64	10 920	10 960	10 943	10 964	10 986	10 970	10 970	11 017	10 994	10 992	11 014
3. Total employment (000)	8 283	8 211	8 251	8 392	8 605	8 733	8 671	8 637	8 698	8 682	8 592
4. Population in employment aged 15-64	8 042	8 014	8 013	8 152	8 345	8 468	8 443	8 227	8 232	8 254	8 184
5. Employment rate (% population aged 20-64)	75.2	74.9	75.1	76.3	77.8	78.9	78.8	76.8	77.0	77.2	76.5
6. Employment rate (% population aged 15-64)	73.6	73.1	73.2	74.3	76.0	77.2	77.0	74.7	74.9	75.1	74.3
7. Employment rate (% population aged 15-24)	68.3	65.9	65.2	66.2	68.4	69.3	68.0	63.0	63.5	63.3	62.3
8. Employment rate (% population aged 25-54)	82.6	82.5	82.9	84.2	85.4	86.8	86.3	84.7	84.2	83.8	82.4
9. Employment rate (% population aged 55-64)	44.3	45.2	46.1	47.7	50.9	53.0	55.1	53.7	56.1	58.6	60.1
10. FTE employment rate (% population aged 15-64)	57.2	56.5	56.4	57.4	58.6	59.6	59.2	57.2	57.3	57.3	56.4
11. Self-employed (% total employment)	13.5	13.7	13.9	13.9	13.7	13.5	13.6	13.8	14.0	14.4	15.0
12. Part-time employment (% total employment)	45.0	45.5	46.1	46.2	46.8	47.3	48.3	48.9	49.1	49.8	50.8
13. Fixed term contracts (% total employees)	14.5	14.8	15.5	16.6	18.1	18.2	18.2	18.5	18.4	19.5	20.6
14. Employment in Services (% total employment)	78.9	79.2	79.7	80.0	80.4	80.5	80.8	81.1	81.5	81.7	81.8
15. Employment in Industry (% total employment)	18.0	17.7	17.4	17.1	16.8	16.8	16.6	16.2	15.9	15.8	15.6
16. Employment in Agriculture (% total employment)	3.1	3.0	3.0	2.9	2.8	2.7	2.6	2.6	2.6	2.5	2.6
17. Activity rate (% population aged 15-64)	76.5	76.6	76.9	77.4	78.5	79.3	79.7	78.2	78.4	79.3	79.7
18. Activity rate (% population aged 15-24)	72.9	71.6	71.0	70.8	72.7	73.2	72.8	69.0	68.8	69.9	70.0
19. Activity rate (% population aged 25-54)	85.3	85.9	86.5	87.1	87.6	88.5	88.8	87.9	87.5	87.7	87.5
20. Activity rate (% population aged 55-64)	45.5	46.9	48.1	49.6	52.8	54.7	56.8	55.9	58.5	61.5	64.1
21. Total unemployment (000)	341	419	441	366	306	267	327	390	389	469	600
22. Unemployment rate (% labour force)	4.2	5.1	5.3	4.4	3.6	3.1	3.7	4.5	4.4	5.3	6.7
23. Youth unemployment rate (% labour force 15-24)	7.3	9.0	9.4	7.5	7.0	6.3	7.7	8.7	7.6	9.5	11.0
24. Long term unemployment rate (% labour force)	1.2	1.7	2.1	1.9	1.4	1.1	0.9	1.2	1.5	1.8	2.4
25. Youth unemployment ratio (% population aged 15-24)	4.6	5.7	5.8	4.6	4.3	3.9	4.8	6.0	5.3	6.6	7.7

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	7 969	8 012	7 992	8 006	8 022	8 027	8 043	8 103	8 126	8 187	8 252
2. Population aged 15-64	5 525	5 543	5 519	5 524	5 529	5 516	5 512	5 533	5 517	5 519	5 533
3. Total employment (000)	4 626	4 572	4 560	4 624	4 709	4 752	4 689	4 670	4 676	4 663	4 606
4. Population in employment aged 15-64	4 479	4 447	4 411	4 471	4 547	4 588	4 540	4 425	4 403	4 401	4 352
5. Employment rate (% population aged 20-64)	83.4	82.7	82.4	83.5	84.8	85.5	84.9	82.8	82.6	82.5	81.3
6. Employment rate (% population aged 15-64)	81.1	80.2	79.9	80.9	82.2	83.2	82.4	80.0	79.8	79.7	78.7
7. Employment rate (% population aged 15-24)	68.9	66.3	65.5	67.2	68.9	69.8	67.5	62.6	62.7	62.4	61.8
8. Employment rate (% population aged 25-54)	90.6	90.2	90.3	91.4	92.1	93.0	92.0	90.0	89.4	88.6	86.4
9. Employment rate (% population aged 55-64)	56.7	56.9	56.9	58.0	61.5	63.7	65.4	64.5	65.8	68.1	70.2
10. FTE employment rate (% population aged 15-64)	73.2	72.0	71.7	72.5	73.5	74.3	73.2	70.9	70.7	70.3	68.9
11. Self-employed (% total employment)	15.9	16.0	16.3	16.4	16.4	16.2	16.2	16.6	16.8	17.4	18.1
12. Part-time employment (% total employment)	22.0	22.3	22.6	23.0	23.6	23.9	24.9	25.4	25.4	26.4	27.9
13. Fixed term contracts (% total employees)	12.9	13.4	14.3	15.4	16.6	16.6	16.4	17.3	17.3	18.6	19.8
14. Employment in Services (% total employment)	69.3	69.5	70.0	70.2	70.8	70.8	70.9	71.1	71.4	71.7	72.4
15. Employment in Industry (% total employment)	26.7	26.5	26.1	26.0	25.6	25.7	25.6	25.3	25.0	24.8	24.1
16. Employment in Agriculture (% total employment)	4.0	4.0	3.9	3.8	3.6	3.5	3.5	3.6	3.6	3.4	3.5
17. Activity rate (% population aged 15-64)	84.0	83.9	83.7	83.9	84.6	85.3	85.3	83.7	83.5	84.2	84.7
18. Activity rate (% population aged 15-24)	73.5	72.0	71.2	71.5	73.0	73.7	72.7	68.6	67.8	68.5	69.3
19. Activity rate (% population aged 25-54)	93.5	93.7	93.8	94.1	94.0	94.5	94.4	93.3	93.0	92.9	92.3
20. Activity rate (% population aged 55-64)	58.2	59.1	59.5	60.4	64.0	65.9	67.6	67.3	68.6	71.6	75.3
21. Total unemployment (000)	187	227	227	179	147	134	175	208	211	254	341
22. Unemployment rate (% labour force)	4.1	4.9	4.9	3.9	3.1	2.8	3.7	4.4	4.5	5.3	7.1
23. Youth unemployment rate (% labour force 15-24)	7.7	9.1	9.5	6.7	6.3	6.3	8.1	8.8	7.5	8.9	10.8
24. Long term unemployment rate (% labour force)	1.1	1.8	2.1	1.8	1.3	1.0	0.9	1.2	1.6	1.9	2.6
25. Youth unemployment ratio (% population aged 15-24)	4.6	5.7	5.7	4.3	4.1	4.0	5.2	6.1	5.1	6.1	7.5

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	8 068	8 107	8 116	8 136	8 157	8 164	8 181	8 247	8 274	8 320	8 370
2. Population aged 15-64	5 395	5 417	5 424	5 441	5 457	5 454	5 458	5 485	5 477	5 473	5 481
3. Total employment (000)	3 657	3 639	3 691	3 768	3 896	3 981	3 982	3 967	4 023	4 019	3 985
4. Population in employment aged 15-64	3 562	3 567	3 603	3 681	3 798	3 880	3 903	3 802	3 829	3 853	3 833
5. Employment rate (% population aged 20-64)	66.9	66.9	67.6	69.0	70.7	72.2	72.7	70.8	71.4	71.9	71.6
6. Employment rate (% population aged 15-64)	66.0	65.8	66.4	67.7	69.6	71.1	71.5	69.3	69.9	70.4	69.9
7. Employment rate (% population aged 15-24)	67.8	65.4	64.9	65.1	67.9	68.8	68.4	63.5	64.4	64.3	62.8
8. Employment rate (% population aged 25-54)	74.4	74.6	75.5	77.0	78.7	80.5	80.7	79.3	79.0	78.9	78.3
9. Employment rate (% population aged 55-64)	31.8	33.4	35.2	37.2	40.1	42.2	44.7	42.8	46.4	49.1	50.0
10. FTE employment rate (% population aged 15-64)	41.7	41.5	41.8	43.0	44.4	45.7	45.9	44.3	44.7	45.0	44.8
11. Self-employed (% total employment)	10.3	10.9	10.9	10.8	10.5	10.3	10.6	10.5	10.7	11.0	11.5
12. Part-time employment (% total employment)	74.1	74.7	75.1	74.7	75.0	75.3	75.8	76.5	76.7	77.0	77.2
13. Fixed term contracts (% total employees)	16.4	16.5	16.9	18.0	19.7	20.0	20.3	19.9	19.6	20.5	21.5
14. Employment in Services (% total employment)	90.7	91.0	91.1	91.4	91.6	91.7	91.9	92.3	92.4	92.5	92.7
15. Employment in Industry (% total employment)	7.3	7.1	7.0	6.8	6.7	6.6	6.4	6.1	6.1	6.0	5.8
16. Employment in Agriculture (% total employment)	2.0	1.9	1.9	1.8	1.7	1.7	1.6	1.6	1.5	1.5	1.5
17. Activity rate (% population aged 15-64)	68.7	69.2	70.0	70.7	72.2	73.3	74.1	72.6	73.1	74.3	74.6
18. Activity rate (% population aged 15-24)	72.3	71.1	70.8	70.1	72.4	72.6	72.9	69.4	69.9	71.4	70.8
19. Activity rate (% population aged 25-54)	77.0	77.9	79.0	80.1	81.2	82.5	83.0	82.4	81.9	82.4	82.6
20. Activity rate (% population aged 55-64)	32.6	34.4	36.5	38.6	41.4	43.5	46.0	44.5	48.4	51.3	52.9
21. Total unemployment (000)	154	192	214	187	159	134	152	182	178	214	259
22. Unemployment rate (% labour force)	4.3	5.3	5.8	5.0	4.1	3.4	3.8	4.5	4.4	5.2	6.3
23. Youth unemployment rate (% labour force 15-24)	6.9	8.9	9.4	8.4	7.8	6.4	7.3	8.6	7.8	10.0	11.2
24. Long term unemployment rate (% labour force)	1.2	1.7	2.1	2.0	1.5	1.1	1.0	1.2	1.4	1.7	2.2
25. Youth unemployment ratio (% population aged 15-24)	4.6	5.7	5.9	4.9	4.5	3.8	4.5	6.0	5.5	7.2	7.9

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Source: Eurostat.

LFS indicators: Break in series 2010.

Labour market indicators: Austria

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	7 998	8 045	8 109	8 155	8 191	8 220	8 238	8 259	8 290	8 329	8 354
2. Population aged 15-64	5 459	5 485	5 516	5 532	5 551	5 576	5 588	5 606	5 644	5 666	5 667
3. Total employment (000)	3 784	3 807	3 852	3 917	3 987	4 066	4 037	4 075	4 144	4 198	4 229
4. Population in employment aged 15-64	3 763	3 716	3 786	3 881	3 963	4 020	4 002	4 021	4 070	4 109	4 099
5. Employment rate (% population aged 20-64)	72.0	70.8	71.7	73.2	74.4	75.1	74.7	74.9	75.2	75.6	75.5
6. Employment rate (% population aged 15-64)	68.9	67.8	68.6	70.2	71.4	72.1	71.6	71.7	72.1	72.5	72.3
7. Employment rate (% population aged 15-24)	51.1	51.9	53.1	54.0	55.5	55.9	54.5	53.6	54.9	54.6	53.8
8. Employment rate (% population aged 25-54)	84.0	82.6	82.6	83.5	84.0	84.4	84.0	84.2	84.9	85.4	84.9
9. Employment rate (% population aged 55-64)	30.3	28.8	31.8	35.5	38.6	41.0	41.1	42.4	41.5	43.1	44.9
10. FTE employment rate (% population aged 15-64)	63.2	60.6	61.8	63.0	63.8	64.2	63.4	63.3	63.7	63.9	63.6
11. Self-employed (% total employment)	13.4	13.5	13.5	13.6	13.4	13.4	13.5	13.5	13.3	13.1	13.1
12. Part-time employment (% total employment)	18.7	19.8	21.1	21.8	22.6	23.3	24.6	25.2	25.2	25.7	26.6
13. Fixed term contracts (% total employees)	6.9	9.6	9.1	9.0	8.9	9.0	9.1	9.3	9.6	9.3	9.2
14. Employment in Services (% total employment)	69.0	69.5	70.2	70.5	70.5	70.7	71.1	71.5	71.7	72.0	72.2
15. Employment in Industry (% total employment)	25.1	24.7	24.4	24.1	24.3	24.3	23.8	23.5	23.4	23.4	23.3
16. Employment in Agriculture (% total employment)	5.9	5.7	5.4	5.4	5.2	5.1	5.1	5.0	4.8	4.5	4.5
17. Activity rate (% population aged 15-64)	72.0	71.3	72.4	73.7	74.7	75.0	75.3	75.1	75.3	75.9	76.1
18. Activity rate (% population aged 15-24)	55.0	57.4	59.2	59.4	60.8	60.8	60.5	58.8	59.9	59.9	59.3
19. Activity rate (% population aged 25-54)	87.3	86.3	86.4	87.1	87.4	87.3	87.7	87.7	88.1	88.7	88.8
20. Activity rate (% population aged 55-64)	32.0	29.9	33.0	36.8	39.8	41.9	42.1	43.4	42.9	44.4	46.5
21. Total unemployment (000)	166	195	208	196	186	162	204	188	179	189	215
22. Unemployment rate (% labour force)	4.3	4.9	5.2	4.8	4.4	3.8	4.8	4.4	4.2	4.3	4.9
23. Youth unemployment rate (% labour force 15-24)	8.1	9.7	10.3	9.1	8.7	8.0	10.0	8.8	8.3	8.7	9.2
24. Long term unemployment rate (% labour force)	1.1	1.4	1.3	1.3	1.2	0.9	1.0	1.1	1.1	1.1	1.2
25. Youth unemployment ratio (% population aged 15-24)	3.9	5.6	6.1	5.4	5.3	4.9	6.0	5.2	5.0	5.2	5.4

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	3 877	3 898	3 939	3 964	3 985	4 001	4 012	4 024	4 041	4 066	4 081
2. Population aged 15-64	2 718	2 728	2 745	2 753	2 763	2 775	2 780	2 789	2 807	2 821	2 822
3. Total employment (000)	2 088	2 096	2 110	2 141	2 186	2 209	2 164	2 186	2 228	2 248	2 252
4. Population in employment aged 15-64	2 076	2 043	2 070	2 118	2 168	2 178	2 138	2 151	2 183	2 195	2 176
5. Employment rate (% population aged 20-64)	79.6	78.0	78.5	80.0	81.6	81.7	80.1	80.2	80.8	80.9	80.3
6. Employment rate (% population aged 15-64)	76.4	74.9	75.4	76.9	78.4	78.5	76.9	77.1	77.8	77.8	77.1
7. Employment rate (% population aged 15-24)	55.7	56.0	56.8	58.2	59.6	59.5	57.3	57.9	59.8	58.8	57.4
8. Employment rate (% population aged 25-54)	91.1	89.4	89.1	89.9	90.6	90.2	88.5	88.7	89.6	89.6	88.5
9. Employment rate (% population aged 55-64)	40.4	38.9	41.3	45.3	49.8	51.8	51.0	51.6	50.6	52.5	54.3
10. FTE employment rate (% population aged 15-64)	74.9	72.6	74.1	75.5	76.7	76.4	74.6	74.6	75.3	75.4	74.5
11. Self-employed (% total employment)	14.6	15.6	15.6	15.4	15.0	15.3	15.6	15.6	15.3	15.2	15.4
12. Part-time employment (% total employment)	4.7	4.9	6.1	6.5	7.2	8.1	8.7	9.0	8.9	9.0	10.0
13. Fixed term contracts (% total employees)	7.1	10.2	9.3	9.1	8.8	8.9	9.2	9.8	9.6	9.3	9.4
14. Employment in Services (% total employment)	56.7	58.5	58.7	59.1	59.3	59.3	59.5	60.1	60.4	60.5	61.0
15. Employment in Industry (% total employment)	37.5	35.8	35.8	35.5	35.5	35.6	35.3	34.8	34.6	34.5	34.1
16. Employment in Agriculture (% total employment)	5.9	5.6	5.4	5.4	5.2	5.1	5.2	5.2	5.1	5.0	4.9
17. Activity rate (% population aged 15-64)	79.9	78.5	79.3	80.5	81.7	81.4	81.0	80.9	81.1	81.4	81.2
18. Activity rate (% population aged 15-24)	60.3	61.7	63.6	63.9	65.0	64.6	64.0	63.6	64.9	64.5	63.1
19. Activity rate (% population aged 25-54)	94.6	92.9	92.8	93.2	93.7	93.0	92.6	92.5	92.8	93.1	92.7
20. Activity rate (% population aged 55-64)	42.9	40.6	43.0	47.3	51.3	52.8	52.3	53.0	52.6	54.4	56.4
21. Total unemployment (000)	84	98	108	97	90	82	114	105	93	101	115
22. Unemployment rate (% labour force)	4.0	4.5	4.9	4.3	3.9	3.6	5.0	4.6	4.0	4.4	4.9
23. Youth unemployment rate (% labour force 15-24)	7.3	9.3	10.7	8.9	8.3	7.9	10.5	8.9	7.9	8.8	8.9
24. Long term unemployment rate (% labour force)	1.1	1.3	1.3	1.3	1.0	0.9	1.1	1.3	1.1	1.1	1.2
25. Youth unemployment ratio (% population aged 15-24)	4.5	5.7	6.8	5.7	5.4	5.1	6.7	5.7	5.1	5.7	5.6

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	4 120	4 147	4 170	4 191	4 206	4 219	4 226	4 235	4 249	4 263	4 273
2. Population aged 15-64	2 741	2 757	2 770	2 779	2 788	2 801	2 808	2 818	2 837	2 846	2 845
3. Total employment (000)	1 695	1 711	1 742	1 776	1 801	1 857	1 873	1 889	1 916	1 950	1 976
4. Population in employment aged 15-64	1 688	1 673	1 717	1 764	1 796	1 842	1 865	1 870	1 887	1 914	1 923
5. Employment rate (% population aged 20-64)	64.5	63.7	64.9	66.4	67.2	68.6	69.4	69.6	69.6	70.3	70.8
6. Employment rate (% population aged 15-64)	61.6	60.7	62.0	63.5	64.4	65.8	66.4	66.4	66.5	67.3	67.6
7. Employment rate (% population aged 15-24)	46.5	47.9	49.4	49.9	51.5	52.3	51.6	49.4	50.1	50.5	50.3
8. Employment rate (% population aged 25-54)	76.9	75.8	76.0	77.0	77.5	78.6	79.5	79.7	80.2	81.1	81.2
9. Employment rate (% population aged 55-64)	20.8	19.3	22.9	26.3	28.0	30.8	31.7	33.7	32.9	34.1	36.0
10. FTE employment rate (% population aged 15-64)	51.6	49.0	50.1	51.0	51.4	52.6	52.8	52.5	52.6	53.0	53.3
11. Self-employed (% total employment)	11.8	10.9	11.1	11.4	11.5	11.2	11.1	11.1	10.9	10.6	10.4
12. Part-time employment (% total employment)	36.0	38.0	39.3	40.2	41.2	41.5	42.9	43.8	44.0	44.9	45.5
13. Fixed term contracts (% total employees)	6.7	9.0	8.8	8.9	9.0	9.1	9.0	8.8	9.4	9.3	9.0
14. Employment in Services (% total employment)	83.4	82.5	83.5	83.5	83.5	83.9	84.3	84.6	84.5	84.8	84.5
15. Employment in Industry (% total employment)	10.7	11.6	11.2	11.1	11.2	11.1	10.8	10.7	11.0	11.1	11.5
16. Employment in Agriculture (% total employment)	6.0	5.9	5.3	5.3	5.2	5.0	4.9	4.7	4.5	4.1	4.1
17. Activity rate (% population aged 15-64)	64.3	64.2	65.6	67.0	67.8	68.6	69.6	69.3	69.5	70.3	71.1
18. Activity rate (% population aged 15-24)	49.8	53.3	54.8	55.1	56.7	56.9	57.0	54.1	55.0	55.3	55.5
19. Activity rate (% population aged 25-54)	79.9	79.6	79.9	80.9	81.1	81.5	82.8	82.8	83.4	84.3	85.0
20. Activity rate (% population aged 55-64)	21.7	19.9	23.5	26.9	28.9	31.6	32.4	34.2	33.7	35.0	37.1
21. Total unemployment (000)	82	97	100	98	96	80	90	83	86	88	100
22. Unemployment rate (% labour force)	4.7	5.4	5.5	5.2	5.0	4.1	4.6	4.2	4.3	4.3	4.9
23. Youth unemployment rate (% labour force 15-24)	8.9	10.1	9.9	9.3	9.1	8.2	9.4	8.8	8.8	8.7	9.4
24. Long term unemployment rate (% labour force)	1.1	1.4	1.4	1.3	1.4	0.9	1.0	0.9	1.0	1.0	1.1
25. Youth unemployment ratio (% population aged 15-24)	3.2	5.4	5.4	5.1	5.2	4.7	5.4	4.7	4.8	4.8	5.2

Source: Eurostat.

LFS indicators: Break in series 2004, 2013.

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Labour market indicators: Poland

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	37 657	37 601	37 527	37 446	37 277	37 158	37 196	36 585	36 600	36 610	36 586
2. Population aged 15-64	26 031	26 142	26 211	26 325	26 299	26 266	26 338	25 842	25 814	25 697	25 525
3. Total employment (000)	:	13 760	14 057	14 504	15 156	15 732	15 789	15 370	15 457	15 475	15 463
4. Population in employment aged 15-64	13 324	13 504	13 834	14 338	14 997	15 557	15 630	15 233	15 313	15 340	15 313
5. Employment rate (% population aged 20-64)	57.1	57.3	58.3	60.1	62.7	65.0	64.9	64.3	64.5	64.7	64.9
6. Employment rate (% population aged 15-64)	51.2	51.7	52.8	54.5	57.0	59.2	59.3	58.9	59.3	59.7	60.0
7. Employment rate (% population aged 15-24)	21.2	21.7	22.5	24.0	25.8	27.3	26.8	26.4	24.9	24.7	24.2
8. Employment rate (% population aged 25-54)	67.5	68.2	69.6	71.8	74.9	77.5	77.6	77.2	77.3	77.2	77.0
9. Employment rate (% population aged 55-64)	26.9	26.2	27.2	28.1	29.7	31.6	32.3	34.1	36.9	38.7	40.6
10. FTE employment rate (% population aged 15-64)	50.3	50.2	51.5	53.3	55.9	58.3	58.4	58.0	58.4	58.9	59.2
11. Self-employed (% total employment)	:	26.8	25.8	24.5	23.5	22.8	22.6	22.7	22.7	22.1	21.8
12. Part-time employment (% total employment)	10.5	10.8	10.8	9.8	9.2	8.5	8.4	8.4	8.0	7.9	7.8
13. Fixed term contracts (% total employees)	19.4	22.7	25.7	27.3	28.2	27.0	26.5	27.3	26.9	26.9	26.9
14. Employment in Services (% total employment)	:	53.0	53.2	54.1	54.5	54.3	55.8	56.9	56.7	57.3	57.7
15. Employment in Industry (% total employment)	:	29.1	29.5	30.2	30.9	31.8	31.0	30.1	30.4	30.2	30.3
16. Employment in Agriculture (% total employment)	:	17.9	17.3	15.7	14.6	14.0	13.3	13.0	12.9	12.6	12.0
17. Activity rate (% population aged 15-64)	63.9	64.0	64.4	63.4	63.2	63.8	64.7	65.3	65.7	66.5	67.0
18. Activity rate (% population aged 15-24)	36.4	35.9	35.7	34.2	33.0	33.1	33.8	34.6	33.5	33.6	33.3
19. Activity rate (% population aged 25-54)	81.4	81.9	82.5	81.7	81.7	82.5	83.4	84.1	84.2	84.6	84.6
20. Activity rate (% population aged 55-64)	30.1	29.6	30.5	30.7	31.8	33.3	34.5	36.7	39.6	41.8	44.0
21. Total unemployment (000)	3 308	3 209	3 018	2 311	1 579	1 165	1 359	1 650	1 659	1 749	1 793
22. Unemployment rate (% labour force)	19.8	19.1	17.9	13.9	9.6	7.1	8.1	9.7	9.7	10.1	10.3
23. Youth unemployment rate (% labour force 15-24)	41.9	39.6	36.9	29.8	21.6	17.2	20.6	23.7	25.8	26.5	27.3
24. Long term unemployment rate (% labour force)	11.1	10.3	10.3	7.8	4.9	2.4	2.5	3.0	3.6	4.1	4.4
25. Youth unemployment ratio (% population aged 15-24)	15.2	14.2	13.2	10.2	7.1	5.7	7.0	8.2	8.6	8.9	9.1

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	18 169	18 139	18 104	18 052	17 924	17 831	17 850	17 708	17 714	17 715	17 702
2. Population aged 15-64	12 873	12 940	12 986	13 027	12 976	12 931	12 971	12 888	12 874	12 819	12 737
3. Total employment (000)	:	7 546	7 777	8 031	8 356	8 680	8 678	8 509	8 590	8 587	8 583
4. Population in employment aged 15-64	7 271	7 400	7 643	7 927	8 258	8 573	8 578	8 418	8 496	8 498	8 486
5. Employment rate (% population aged 20-64)	63.1	63.5	65.1	67.3	70.2	73.0	72.6	71.3	71.9	72.0	72.1
6. Employment rate (% population aged 15-64)	56.5	57.2	58.9	60.9	63.6	66.3	66.1	65.3	66.0	66.3	66.6
7. Employment rate (% population aged 15-24)	23.9	24.8	25.4	26.9	29.2	31.0	30.4	30.5	29.6	29.2	28.6
8. Employment rate (% population aged 25-54)	73.0	73.9	76.1	78.3	81.1	84.0	83.7	82.5	83.0	82.9	82.7
9. Employment rate (% population aged 55-64)	35.2	34.1	35.9	38.4	41.4	44.1	44.3	45.2	47.8	49.3	51.3
10. FTE employment rate (% population aged 15-64)	56.1	56.4	58.4	60.5	63.4	66.3	66.2	65.3	66.0	66.5	66.9
11. Self-employed (% total employment)	:	29.0	27.9	26.7	25.6	24.8	24.8	25.0	25.1	24.6	24.6
12. Part-time employment (% total employment)	8.2	8.2	8.0	7.1	6.6	5.9	5.8	5.8	5.5	5.2	5.2
13. Fixed term contracts (% total employees)	20.8	23.7	26.5	28.5	28.4	26.3	26.3	27.5	27.5	27.4	27.4
14. Employment in Services (% total employment)	:	42.7	42.8	43.4	43.5	42.8	44.0	45.1	44.8	45.1	45.3
15. Employment in Industry (% total employment)	:	38.7	39.4	40.3	41.4	43.1	42.6	41.5	41.8	41.6	41.8
16. Employment in Agriculture (% total employment)	:	18.6	17.8	16.3	15.1	14.1	13.4	13.4	13.5	13.3	12.9
17. Activity rate (% population aged 15-64)	70.0	70.1	70.8	70.1	70.0	70.9	71.8	72.1	72.6	73.3	73.9
18. Activity rate (% population aged 15-24)	40.5	39.7	39.5	37.5	36.5	36.5	38.1	39.3	38.7	38.5	38.4
19. Activity rate (% population aged 25-54)	87.1	87.8	88.7	88.2	87.9	88.8	89.4	89.6	89.7	90.0	90.0
20. Activity rate (% population aged 55-64)	39.7	39.1	40.9	42.6	44.7	46.8	47.5	48.9	51.6	53.5	55.9
21. Total unemployment (000)	1 733	1 673	1 543	1 191	817	583	716	881	856	900	927
22. Unemployment rate (% labour force)	19.1	18.3	16.7	13.0	9.0	6.4	7.8	9.4	9.0	9.4	9.7
23. Youth unemployment rate (% labour force 15-24)	40.9	37.7	35.8	28.3	20.0	15.2	20.2	22.4	23.6	24.1	25.4
24. Long term unemployment rate (% labour force)	10.4	9.7	9.4	7.1	4.6	2.0	2.2	2.9	3.3	3.7	4.0
25. Youth unemployment ratio (% population aged 15-24)	16.6	15.0	14.1	10.6	7.3	5.6	7.7	8.8	9.1	9.3	9.7

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	19 487	19 461	19 422	19 394	19 353	19 327	19 346	18 877	18 887	18 894	18 885
2. Population aged 15-64	13 158	13 203	13 225	13 298	13 322	13 335	13 368	12 954	12 940	12 878	12 788
3. Total employment (000)	:	6 214	6 280	6 473	6 800	7 052	7 111	6 862	6 868	6 888	6 880
4. Population in employment aged 15-64	6 054	6 103	6 191	6 411	6 738	6 984	7 052	6 815	6 817	6 842	6 828
5. Employment rate (% population aged 20-64)	51.2	51.2	51.7	53.1	55.5	57.3	57.6	57.3	57.2	57.5	57.6
6. Employment rate (% population aged 15-64)	46.0	46.2	46.8	48.2	50.6	52.4	52.8	52.6	52.7	53.1	53.4
7. Employment rate (% population aged 15-24)	18.3	18.6	19.6	21.0	22.4	23.7	23.2	22.1	20.0	19.9	19.5
8. Employment rate (% population aged 25-54)	62.1	62.6	63.1	65.3	68.8	71.0	71.6	71.7	71.5	71.5	71.2
9. Employment rate (% population aged 55-64)	19.8	19.4	19.7	19.0	19.4	20.7	21.9	24.2	27.2	29.2	31.0
10. FTE employment rate (% population aged 15-64)	44.7	44.2	44.8	46.3	48.6	50.6	50.9	50.7	50.9	51.4	51.7
11. Self-employed (% total employment)	:	24.1	23.1	21.8	21.0	20.3	20.0	19.9	19.6	18.9	18.5
12. Part-time employment (% total employment)	13.2	14.0	14.3	13.0	12.5	11.7	11.6	11.6	11.2	11.3	11.1
13. Fixed term contracts (% total employees)	17.8	21.5	24.7	26.0	27.9	27.7	26.6	27.1	26.1	26.3	26.5
14. Employment in Services (% total employment)	:	65.5	66.1	67.4	67.9	68.4	70.1	71.4	71.5	72.4	73.1
15. Employment in Industry (% total employment)	:	17.3	17.3	17.6	18.0	17.8	16.7	15.9	16.3	15.9	15.9
16. Employment in Agriculture (% total employment)	:	17.2	16.6	15.0	14.1	13.8	13.2	12.6	12.2	11.7	10.9
17. Activity rate (% population aged 15-64)	58.0	57.9	58.1	56.8	56.5	57.0	57.8	58.5	58.9	59.7	60.1
18. Activity rate (% population aged 15-24)	32.2	32.0	31.8	30.7	29.3	29.6	29.4	29.6	28.1	28.4	27.9
19. Activity rate (% population aged 25-54)	75.8	76.0	76.4	75.4	75.6	76.3	77.5	78.6	78.6	79.1	79.1
20. Activity rate (% population aged 55-64)	22.0	21.4	21.5	20.3	20.6	21.6	23.2	25.9	29.0	31.3	33.3
21. Total unemployment (000)	1 576	1 536	1 475	1 120	763	582	644	769	802	850	866
22. Unemployment rate (% labour force)	20.6	20.1	19.4	15.1	10.3	7.9	8.6	10.0	10.4	10.9	11.1
23. Youth unemployment rate (% labour force 15-24)	43.2	42.0	38.4	31.6	23.7	19.7	21.1	25.4	28.8	30.0	30.1
24. Long term unemployment rate (% labour force)	11.8	11.2	11.5	8.7	5.4	2.8	2.8	3.2	4.0	4.6	4.8
25. Youth unemployment ratio (% population aged 15-24)	13.9	13.4	12.2	9.7	7.0	5.9	6.2	7.5	8.1	8.5	8.4

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Source: Eurostat.

LFS indicators: Break in series 2010; Indicator 1: 2004-2005 Estimate.

Labour market indicators: Portugal

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	10 435	10 504	10 563	10 586	10 604	10 623	10 638	10 636	10 647	10 600	10 499
2. Population aged 15-64	7 038	7 084	7 115	7 116	7 135	7 145	7 143	7 114	7 097	7 038	6 961
3. Total employment (000)	5 121	5 117	5 100	5 126	5 124	5 147	5 014	4 937	4 861	4 656	4 525
4. Population in employment aged 15-64	4 792	4 806	4 800	4 830	4 837	4 872	4 736	4 663	4 557	4 349	4 250
5. Employment rate (% population aged 20-64)	72.9	72.6	72.3	72.7	72.6	73.1	71.2	70.5	69.1	66.5	65.6
6. Employment rate (% population aged 15-64)	68.1	67.8	67.5	67.9	67.8	68.2	66.3	65.6	64.2	61.8	61.1
7. Employment rate (% population aged 15-24)	38.8	37.1	36.1	35.8	34.9	34.7	31.3	28.5	27.2	23.6	22.3
8. Employment rate (% population aged 25-54)	81.0	81.1	80.8	81.3	81.0	81.6	79.7	79.2	77.8	75.4	74.5
9. Employment rate (% population aged 55-64)	51.6	50.3	50.5	50.1	50.9	50.8	49.7	49.2	47.9	46.5	46.7
10. FTE employment rate (% population aged 15-64)	66.5	66.4	65.8	66.1	65.7	66.3	64.4	63.5	61.1	58.3	57.6
11. Self-employed (% total employment)	16.6	15.9	15.4	14.9	14.5	14.5	14.5	13.9	13.8	14.4	14.1
12. Part-time employment (% total employment)	11.7	11.3	11.2	11.3	12.1	11.9	11.6	11.6	13.3	14.3	14.0
13. Fixed term contracts (% total employees)	20.6	19.8	19.5	20.6	22.4	22.8	22.0	23.0	22.2	20.7	21.5
14. Employment in Services (% total employment)	57.1	58.2	59.3	59.9	60.3	61.2	62.4	63.3	63.9	64.8	66.4
15. Employment in Industry (% total employment)	30.8	30.2	29.3	28.7	28.5	27.8	26.5	25.9	25.6	24.2	23.1
16. Employment in Agriculture (% total employment)	12.1	11.6	11.4	11.4	11.2	11.0	11.1	10.8	10.6	11.0	10.5
17. Activity rate (% population aged 15-64)	72.9	73.0	73.4	73.9	74.1	74.2	73.7	74.0	74.1	73.9	73.6
18. Activity rate (% population aged 15-24)	45.4	43.8	43.0	42.7	41.9	41.6	39.2	36.7	38.8	37.9	35.7
19. Activity rate (% population aged 25-54)	85.9	86.3	87.1	87.7	87.8	88.0	87.9	88.7	88.4	88.6	88.3
20. Activity rate (% population aged 55-64)	54.0	53.2	53.8	53.5	54.4	54.4	53.9	54.0	53.7	53.4	54.1
21. Total unemployment (000)	382	401	458	463	483	459	569	645	688	836	855
22. Unemployment rate (% labour force)	7.1	7.5	8.5	8.6	8.9	8.5	10.6	12.0	12.9	15.8	16.4
23. Youth unemployment rate (% labour force 15-24)	18.0	19.1	20.0	20.4	20.6	20.5	25.1	28.2	30.3	37.9	38.1
24. Long term unemployment rate (% labour force)	2.5	3.3	4.1	4.3	4.2	4.0	4.7	6.3	6.2	7.7	9.3
25. Youth unemployment ratio (% population aged 15-24)	6.6	6.7	6.9	6.9	6.9	6.8	7.9	8.2	11.7	14.3	13.5

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	5 042	5 083	5 115	5 125	5 133	5 141	5 149	5 147	5 152	5 126	5 062
2. Population aged 15-64	3 467	3 498	3 516	3 518	3 527	3 536	3 535	3 522	3 518	3 492	3 443
3. Total employment (000)	2 789	2 781	2 753	2 772	2 765	2 770	2 666	2 623	2 587	2 455	2 376
4. Population in employment aged 15-64	2 599	2 595	2 581	2 601	2 605	2 617	2 514	2 468	2 397	2 267	2 203
5. Employment rate (% population aged 20-64)	80.2	79.3	78.7	79.2	79.1	79.4	76.5	75.4	73.4	69.9	68.8
6. Employment rate (% population aged 15-64)	75.0	74.2	73.4	73.9	73.8	74.0	71.1	70.1	68.1	64.9	64.0
7. Employment rate (% population aged 15-24)	43.1	41.5	40.5	39.8	39.1	38.5	33.2	30.4	29.3	25.5	23.6
8. Employment rate (% population aged 25-54)	87.8	87.4	86.7	87.4	87.2	87.6	84.5	83.9	81.6	78.4	76.9
9. Employment rate (% population aged 55-64)	62.1	59.1	58.1	58.2	58.6	58.5	57.5	55.7	54.2	51.5	53.2
10. FTE employment rate (% population aged 15-64)	75.5	74.4	73.4	73.7	73.4	73.9	70.7	69.3	66.1	62.3	61.4
11. Self-employed (% total employment)	17.5	17.0	16.2	15.6	15.4	15.4	15.8	15.4	16.2	16.9	16.7
12. Part-time employment (% total employment)	7.3	7.1	7.0	7.4	8.0	7.4	7.5	8.2	10.7	12.1	11.9
13. Fixed term contracts (% total employees)	19.0	18.7	18.7	19.5	21.8	21.7	20.9	22.4	22.0	20.9	21.4
14. Employment in Services (% total employment)	48.1	49.2	50.0	50.7	50.6	51.2	52.3	53.2	53.0	54.0	56.2
15. Employment in Industry (% total employment)	40.5	39.7	39.3	38.4	38.6	38.3	36.7	35.7	35.1	33.3	31.1
16. Employment in Agriculture (% total employment)	11.4	11.1	10.6	10.9	10.8	10.6	11.0	11.1	11.9	12.7	12.7
17. Activity rate (% population aged 15-64)	79.6	79.1	79.0	79.5	79.4	79.5	78.5	78.2	78.5	77.9	77.1
18. Activity rate (% population aged 15-24)	49.2	47.9	46.9	46.6	45.3	44.4	40.8	38.6	41.1	40.1	37.1
19. Activity rate (% population aged 25-54)	92.3	92.2	92.4	92.9	92.8	93.2	92.4	92.5	92.3	92.0	91.0
20. Activity rate (% population aged 55-64)	65.2	62.8	62.4	62.7	63.0	63.0	62.7	61.8	61.6	60.3	62.4
21. Total unemployment (000)	192	203	231	228	229	224	300	329	350	434	436
22. Unemployment rate (% labour force)	6.7	7.1	8.1	8.0	8.0	7.8	10.7	11.8	12.6	15.9	16.3
23. Youth unemployment rate (% labour force 15-24)	16.2	17.6	17.9	19.3	17.8	17.6	24.7	28.0	29.0	36.7	36.7
24. Long term unemployment rate (% labour force)	2.2	3.1	3.8	4.1	3.8	3.8	4.4	6.1	6.0	7.8	9.4
25. Youth unemployment ratio (% population aged 15-24)	6.1	6.5	6.4	6.8	6.1	5.9	7.6	8.2	11.8	14.6	13.5

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	5 393	5 421	5 448	5 461	5 471	5 481	5 489	5 489	5 495	5 474	5 437
2. Population aged 15-64	3 572	3 586	3 599	3 598	3 608	3 609	3 607	3 592	3 579	3 547	3 518
3. Total employment (000)	2 332	2 336	2 347	2 355	2 359	2 377	2 348	2 314	2 274	2 201	2 149
4. Population in employment aged 15-64	2 193	2 211	2 219	2 229	2 232	2 255	2 222	2 195	2 160	2 082	2 048
5. Employment rate (% population aged 20-64)	65.9	66.1	66.0	66.3	66.3	67.0	66.1	65.6	64.8	63.1	62.4
6. Employment rate (% population aged 15-64)	61.4	61.7	61.7	62.0	61.9	62.5	61.6	61.1	60.4	58.7	58.2
7. Employment rate (% population aged 15-24)	34.4	32.5	31.4	31.6	30.6	30.8	29.4	26.5	24.9	21.6	20.8
8. Employment rate (% population aged 25-54)	74.3	74.9	74.9	75.3	74.9	75.8	74.9	74.6	74.1	72.5	72.2
9. Employment rate (% population aged 55-64)	42.4	42.5	43.7	42.8	44.0	43.9	42.7	43.5	42.1	42.0	40.7
10. FTE employment rate (% population aged 15-64)	57.9	58.6	58.4	58.7	58.3	58.8	58.3	57.9	56.2	54.3	53.9
11. Self-employed (% total employment)	15.5	14.6	14.4	14.0	13.4	13.6	12.9	12.3	11.1	11.5	11.4
12. Part-time employment (% total employment)	16.9	16.3	16.2	15.8	16.9	17.2	16.4	15.5	16.3	16.8	16.3
13. Fixed term contracts (% total employees)	22.3	21.1	20.4	21.7	23.0	24.1	23.2	23.6	22.4	20.5	21.5
14. Employment in Services (% total employment)	67.8	68.9	70.0	70.6	71.5	72.6	73.6	74.5	76.0	76.8	77.6
15. Employment in Industry (% total employment)	19.4	18.9	17.7	17.5	16.9	15.8	15.1	15.0	14.9	14.2	14.3
16. Employment in Agriculture (% total employment)	12.8	12.1	12.4	11.9	11.6	11.6	11.3	10.5	9.1	9.1	8.1
17. Activity rate (% population aged 15-64)	66.5	67.0	67.9	68.4	68.8	68.9	69.0	69.9	69.8	70.1	70.2
18. Activity rate (% population aged 15-24)	41.5	39.5	38.9	38.7	38.4	38.6	37.5	34.8	36.4	35.6	34.3
19. Activity rate (% population aged 25-54)	79.7	80.6	81.8	82.7	82.8	82.9	83.4	84.9	84.5	85.1	85.6
20. Activity rate (% population aged 55-64)	44.0	44.8	46.1	45.1	46.7	46.6	45.9	47.0	46.5	47.0	46.6
21. Total unemployment (000)	190	198	228	235	254	235	269	317	338	402	419
22. Unemployment rate (% labour force)	7.7	8.0	9.0	9.3	9.9	9.1	10.5	12.2	13.2	15.7	16.6
23. Youth unemployment rate (% labour force 15-24)	20.1	20.9	22.6	21.8	24.0	24.0	25.6	28.4	31.7	39.3	39.6
24. Long term unemployment rate (% labour force)	2.8	3.6	4.4	4.6	4.6	4.3	5.0	6.4	6.4	7.6	9.1
25. Youth unemployment ratio (% population aged 15-24)	7.0	6.9	7.4	7.1	7.8	7.8	8.1	8.2	11.5	13.9	13.5

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Source: Eurostat.

LFS indicators: Break in series 2011; Indicator 24: 2004-2010 Estimate.

Labour market indicators: Romania

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	21 686	21 638	21 609	21 575	21 551	21 517	21 484	21 447	21 384	21 336	21 286
2. Population aged 15-64	14 933	14 964	15 021	15 035	15 046	15 042	15 028	14 999	14 968	14 928	14 889
3. Total employment (000)	9 569	9 410	9 267	9 331	9 365	9 366	9 181	9 156	9 082	9 203	9 190
4. Population in employment aged 15-64	8 602	8 635	8 651	8 838	8 843	8 882	8 805	8 822	8 750	8 886	8 884
5. Employment rate (% population aged 20-64)	63.7	63.5	63.6	64.8	64.4	64.4	63.5	63.3	62.8	63.8	63.9
6. Employment rate (% population aged 15-64)	57.6	57.7	57.6	58.8	58.8	59.0	58.6	58.8	58.5	59.5	59.7
7. Employment rate (% population aged 15-24)	26.4	27.9	24.9	24.0	24.4	24.8	24.5	24.3	23.8	23.9	23.5
8. Employment rate (% population aged 25-54)	73.1	72.9	73.3	74.7	74.6	74.4	73.7	74.4	74.1	74.9	74.7
9. Employment rate (% population aged 55-64)	38.1	36.9	39.4	41.7	41.4	43.1	42.6	41.1	40.0	41.4	41.5
10. FTE employment rate (% population aged 15-64)	58.5	58.3	56.7	57.7	57.8	57.9	57.4	57.4	56.9	58.0	58.2
11. Self-employed (% total employment)	38.3	31.9	33.5	31.3	31.3	30.5	32.0	34.2	32.4	32.4	31.8
12. Part-time employment (% total employment)	11.5	10.6	10.2	9.7	9.7	9.9	9.8	11.0	10.5	10.2	9.9
13. Fixed term contracts (% total employees)	2.0	2.5	2.4	1.8	1.6	1.3	1.0	1.1	1.5	1.7	1.5
14. Employment in Services (% total employment)	32.3	35.1	35.1	37.0	37.9	38.9	40.1	39.6	41.0	40.8	41.3
15. Employment in Industry (% total employment)	30.7	33.2	32.0	32.3	31.5	31.5	29.8	28.8	29.1	28.7	28.8
16. Employment in Agriculture (% total employment)	36.9	31.7	32.9	30.7	30.6	29.6	30.1	31.6	30.0	30.5	30.0
17. Activity rate (% population aged 15-64)	62.2	63.0	62.3	63.6	63.0	62.9	63.1	63.6	63.3	64.2	64.6
18. Activity rate (% population aged 15-24)	32.9	35.8	31.2	30.6	30.5	30.4	30.9	31.2	31.1	30.9	30.8
19. Activity rate (% population aged 25-54)	78.0	78.3	78.2	79.9	79.0	78.3	78.5	79.5	79.1	79.8	79.9
20. Activity rate (% population aged 55-64)	38.8	37.9	40.4	42.8	42.4	44.2	43.9	42.5	41.5	42.9	43.1
21. Total unemployment (000)	686	800	704	728	641	576	681	725	730	701	730
22. Unemployment rate (% labour force)	6.8	8.0	7.2	7.3	6.4	5.8	6.9	7.3	7.4	7.0	7.3
23. Youth unemployment rate (% labour force 15-24)	19.5	21.0	19.7	21.0	20.1	18.6	20.8	22.1	23.7	22.7	23.6
24. Long term unemployment rate (% labour force)	4.2	4.7	4.0	4.2	3.2	2.4	2.2	2.5	3.1	3.2	3.4
25. Youth unemployment ratio (% population aged 15-24)	6.5	7.8	6.3	6.6	6.1	5.7	6.4	6.9	7.4	7.0	7.3

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	10 549	10 527	10 521	10 506	10 504	10 484	10 465	10 443	10 408	10 385	10 359
2. Population aged 15-64	7 397	7 423	7 467	7 481	7 502	7 501	7 495	7 481	7 466	7 450	7 432
3. Total employment (000)	5 215	5 092	5 063	5 073	5 123	5 156	5 066	5 065	4 996	5 093	5 096
4. Population in employment aged 15-64	4 718	4 705	4 760	4 835	4 863	4 925	4 890	4 916	4 849	4 952	4 962
5. Employment rate (% population aged 20-64)	70.5	69.7	70.4	71.2	71.0	71.6	70.7	70.8	69.9	71.4	71.6
6. Employment rate (% population aged 15-64)	63.8	63.4	63.7	64.6	64.8	65.7	65.2	65.7	65.0	66.5	66.8
7. Employment rate (% population aged 15-24)	29.9	30.7	28.2	27.3	28.3	29.1	28.3	28.1	27.0	27.4	27.3
8. Employment rate (% population aged 25-54)	80.1	79.2	80.0	80.8	80.6	80.9	80.5	81.5	80.7	81.7	81.6
9. Employment rate (% population aged 55-64)	43.5	43.1	46.7	50.0	50.3	53.0	52.3	50.3	48.9	51.2	51.5
10. FTE employment rate (% population aged 15-64)	65.2	64.3	63.2	63.9	64.3	65.0	64.4	64.6	63.8	65.3	65.5
11. Self-employed (% total employment)	37.8	32.2	34.0	32.0	31.5	30.6	32.3	34.8	32.5	32.6	32.1
12. Part-time employment (% total employment)	10.9	10.2	10.0	9.5	9.2	9.1	9.1	10.6	9.6	9.5	9.3
13. Fixed term contracts (% total employees)	2.2	2.9	2.8	2.0	1.7	1.3	1.1	1.3	1.8	2.0	1.8
14. Employment in Services (% total employment)	29.3	31.1	31.1	33.2	33.7	34.1	35.0	33.9	35.3	35.2	35.5
15. Employment in Industry (% total employment)	35.0	37.8	36.8	36.9	37.0	37.8	36.3	35.6	36.1	35.3	35.3
16. Employment in Agriculture (% total employment)	35.7	31.1	32.1	29.9	29.3	28.1	28.7	30.5	28.5	29.5	29.2
17. Activity rate (% population aged 15-64)	69.3	70.0	69.4	70.7	70.1	70.6	70.9	71.5	70.7	72.1	72.7
18. Activity rate (% population aged 15-24)	37.5	40.5	35.9	35.1	35.9	35.9	35.9	36.2	35.4	35.3	35.6
19. Activity rate (% population aged 25-54)	85.8	85.7	85.8	87.1	85.9	85.8	86.3	87.5	86.5	87.6	87.8
20. Activity rate (% population aged 55-64)	44.6	44.9	48.4	52.0	52.1	55.1	54.5	52.7	51.6	53.6	54.0
21. Total unemployment (000)	396	491	420	452	399	369	424	437	431	419	440
22. Unemployment rate (% labour force)	7.2	9.0	7.7	8.2	7.2	6.7	7.7	7.9	7.9	7.6	7.9
23. Youth unemployment rate (% labour force 15-24)	19.1	22.4	20.5	21.6	21.1	18.8	21.2	22.3	23.7	22.3	23.5
24. Long term unemployment rate (% labour force)	4.4	5.5	4.6	4.7	3.6	2.9	2.5	2.9	3.4	3.4	3.6
25. Youth unemployment ratio (% population aged 15-24)	7.6	9.8	7.7	7.8	7.6	6.8	7.6	8.0	8.4	7.9	8.4

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	11 136	11 111	11 089	11 069	11 047	11 032	11 019	11 004	10 976	10 951	10 927
2. Population aged 15-64	7 536	7 541	7 554	7 554	7 545	7 541	7 533	7 518	7 502	7 479	7 457
3. Total employment (000)	4 354	4 319	4 205	4 257	4 242	4 210	4 115	4 091	4 087	4 110	4 094
4. Population in employment aged 15-64	3 884	3 930	3 891	4 003	3 980	3 958	3 915	3 906	3 901	3 934	3 922
5. Employment rate (% population aged 20-64)	57.0	57.4	56.9	58.5	57.9	57.3	56.3	55.9	55.7	56.3	56.2
6. Employment rate (% population aged 15-64)	51.5	52.1	51.5	53.0	52.8	52.5	52.0	52.0	52.0	52.6	52.6
7. Employment rate (% population aged 15-24)	22.9	25.1	21.6	20.6	20.2	20.2	20.6	20.4	20.4	20.2	19.6
8. Employment rate (% population aged 25-54)	66.0	66.6	66.5	68.6	68.5	67.8	66.9	67.2	67.4	67.8	67.7
9. Employment rate (% population aged 55-64)	33.3	31.4	33.1	34.5	33.6	34.4	34.1	33.0	32.2	32.9	32.7
10. FTE employment rate (% population aged 15-64)	51.8	52.4	50.2	51.5	51.3	50.8	50.4	50.2	50.0	50.6	50.9
11. Self-employed (% total employment)	39.0	31.5	33.0	30.4	31.0	30.2	31.7	33.4	32.3	32.3	31.5
12. Part-time employment (% total employment)	12.2	11.2	10.5	9.8	10.4	10.8	10.6	11.4	11.5	11.1	10.8
13. Fixed term contracts (% total employees)	1.7	2.0	1.9	1.6	1.5	1.2	1.0	1.0	1.3	1.2	1.2
14. Employment in Services (% total employment)	36.0	39.8	39.9	41.6	43.1	44.9	46.5	46.7	47.9	47.8	48.5
15. Employment in Industry (% total employment)	25.5	27.8	26.2	26.7	24.7	23.8	21.8	20.3	20.4	20.6	20.5
16. Employment in Agriculture (% total employment)	38.5	32.4	33.9	31.7	32.2	31.3	31.8	33.0	31.8	31.7	30.9
17. Activity rate (% population aged 15-64)	55.3	56.2	55.3	56.6	56.0	55.2	55.4	55.8	56.0	56.4	56.5
18. Activity rate (% population aged 15-24)	28.2	31.0	26.5	25.9	24.9	24.7	25.8	26.1	26.7	26.2	25.7
19. Activity rate (% population aged 25-54)	70.1	70.9	70.7	72.6	72.0	70.7	70.6	71.4	71.7	71.9	71.9
20. Activity rate (% population aged 55-64)	33.6	31.9	33.5	34.8	33.9	34.7	34.7	33.5	32.7	33.5	33.5
21. Total unemployment (000)	290	309	284	276	242	206	257	288	299	282	290
22. Unemployment rate (% labour force)	6.3	6.9	6.4	6.1	5.4	4.7	5.8	6.5	6.8	6.4	6.6
23. Youth unemployment rate (% labour force 15-24)	20.1	18.9	18.4	20.2	18.7	18.3	20.1	21.8	23.8	23.2	23.9
24. Long term unemployment rate (% labour force)	4.0	3.8	3.4	3.6	2.7	1.8	1.8	2.1	2.8	2.9	3.2
25. Youth unemployment ratio (% population aged 15-24)	5.3	5.8	4.9	5.2	4.7	4.5	5.2	5.7	6.4	6.1	6.1

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Source: Eurostat.

Labour market indicators: Slovenia

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	1 996	1 997	1 999	2 006	2 015	2 033	2 037	2 048	2 051	2 056	2 059
2. Population aged 15-64	1 405	1 405	1 402	1 407	1 412	1 422	1 414	1 422	1 421	1 415	1 404
3. Total employment (000)	931	935	931	945	977	1 002	984	963	947	939	921
4. Population in employment aged 15-64	879	917	925	937	957	975	955	942	915	907	888
5. Employment rate (% population aged 20-64)	68.1	70.4	71.1	71.5	72.4	73.0	71.9	70.3	68.4	68.3	67.2
6. Employment rate (% population aged 15-64)	62.6	65.3	66.0	66.6	67.8	68.6	67.5	66.2	64.4	64.1	63.3
7. Employment rate (% population aged 15-24)	29.1	33.8	34.1	35.0	37.6	38.4	35.3	34.1	31.5	27.3	26.5
8. Employment rate (% population aged 25-54)	82.5	83.8	83.8	84.2	85.3	86.8	84.8	83.7	83.1	83.3	81.9
9. Employment rate (% population aged 55-64)	23.5	29.0	30.7	32.6	33.5	32.8	35.6	35.0	31.2	32.9	33.5
10. FTE employment rate (% population aged 15-64)	60.9	63.3	63.9	64.5	65.8	66.5	65.0	63.4	61.9	61.9	60.9
11. Self-employed (% total employment)	17.5	17.4	17.2	17.1	16.9	16.8	17.5	17.9	18.3	18.6	18.9
12. Part-time employment (% total employment)	6.2	9.3	9.0	9.2	9.3	9.0	10.6	11.4	10.4	9.8	10.1
13. Fixed term contracts (% total employees)	13.7	17.8	17.4	17.3	18.5	17.4	16.4	17.3	18.2	17.1	16.5
14. Employment in Services (% total employment)	54.5	55.3	55.6	56.6	57.0	57.4	59.0	60.5	61.1	61.7	62.2
15. Employment in Industry (% total employment)	35.2	34.7	34.6	34.1	34.2	34.2	32.6	31.0	30.6	29.9	29.4
16. Employment in Agriculture (% total employment)	10.3	10.0	9.8	9.3	8.8	8.4	8.4	8.4	8.3	8.3	8.4
17. Activity rate (% population aged 15-64)	67.1	69.8	70.7	70.9	71.3	71.8	71.8	71.5	70.3	70.4	70.5
18. Activity rate (% population aged 15-24)	35.2	40.3	40.5	40.6	41.8	42.9	40.9	39.9	37.4	34.4	33.8
19. Activity rate (% population aged 25-54)	87.5	88.6	88.8	89.0	89.3	90.1	89.6	90.0	90.1	90.8	90.7
20. Activity rate (% population aged 55-64)	24.3	29.9	32.1	33.4	34.6	34.2	36.9	36.5	33.3	35.1	36.0
21. Total unemployment (000)	64	63	66	61	50	46	61	75	83	90	102
22. Unemployment rate (% labour force)	6.7	6.3	6.5	6.0	4.9	4.4	5.9	7.3	8.2	8.9	10.1
23. Youth unemployment rate (% labour force 15-24)	17.3	16.1	15.9	13.9	10.1	10.4	13.6	14.7	15.7	20.6	21.6
24. Long term unemployment rate (% labour force)	3.5	3.2	3.1	2.9	2.2	1.9	1.8	3.2	3.6	4.3	5.2
25. Youth unemployment ratio (% population aged 15-24)	6.1	6.5	6.5	5.6	4.2	4.5	5.6	5.9	5.9	7.1	7.3

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	976	977	979	984	991	1 007	1 008	1 014	1 015	1 017	1 019
2. Population aged 15-64	712	712	713	716	721	732	727	732	731	727	722
3. Total employment (000)	509	509	506	515	535	546	532	522	512	508	503
4. Population in employment aged 15-64	479	499	502	510	525	532	516	509	495	490	484
5. Employment rate (% population aged 20-64)	73.2	75.4	75.8	76.3	77.5	77.4	75.6	74.0	71.8	71.8	71.2
6. Employment rate (% population aged 15-64)	67.4	70.0	70.4	71.1	72.7	72.7	71.0	69.6	67.7	67.4	67.1
7. Employment rate (% population aged 15-24)	33.7	38.8	38.1	39.2	43.2	43.0	39.1	37.6	35.7	30.4	29.7
8. Employment rate (% population aged 25-54)	85.7	86.4	86.4	87.1	88.1	88.6	86.4	85.2	84.8	85.4	84.3
9. Employment rate (% population aged 55-64)	33.2	40.9	43.1	44.5	45.3	44.7	46.4	45.5	39.5	40.7	41.8
10. FTE employment rate (% population aged 15-64)	66.1	68.3	69.0	69.8	71.5	71.5	69.4	68.0	66.1	66.3	65.7
11. Self-employed (% total employment)	20.7	19.8	19.6	19.7	19.2	19.6	20.6	20.8	21.5	21.9	22.0
12. Part-time employment (% total employment)	5.2	7.9	7.2	7.2	7.7	7.1	8.4	8.6	7.9	7.0	7.3
13. Fixed term contracts (% total employees)	12.6	16.7	15.7	15.5	16.5	15.3	15.1	15.4	16.5	15.7	15.8
14. Employment in Services (% total employment)	45.3	45.8	45.9	46.4	47.1	46.8	49.2	50.2	49.3	50.6	51.5
15. Employment in Industry (% total employment)	43.9	44.0	44.2	43.9	44.3	44.6	42.3	41.1	41.7	40.6	39.8
16. Employment in Agriculture (% total employment)	10.8	10.2	9.9	9.7	8.6	8.6	8.5	8.7	8.9	8.8	8.7
17. Activity rate (% population aged 15-64)	72.0	74.5	75.1	74.9	75.8	75.8	75.6	75.4	73.9	73.7	74.2
18. Activity rate (% population aged 15-24)	39.9	45.1	44.5	44.4	47.6	47.7	45.4	44.4	42.0	38.1	37.1
19. Activity rate (% population aged 25-54)	90.6	91.0	91.1	91.0	91.3	91.6	91.3	91.7	91.8	92.4	92.6
20. Activity rate (% population aged 55-64)	34.5	42.5	45.4	45.8	46.7	46.4	48.2	47.5	42.7	43.6	45.1
21. Total unemployment (000)	33	32	33	27	22	23	33	42	45	46	51
22. Unemployment rate (% labour force)	6.3	5.9	6.1	4.9	4.0	4.0	5.9	7.5	8.2	8.4	9.5
23. Youth unemployment rate (% labour force 15-24)	15.6	13.9	14.5	11.6	9.4	9.9	13.8	15.2	15.0	20.3	20.1
24. Long term unemployment rate (% labour force)	3.4	3.1	2.9	2.5	1.8	1.6	1.7	3.4	3.7	4.1	4.9
25. Youth unemployment ratio (% population aged 15-24)	6.2	6.2	6.5	5.2	4.5	4.7	6.2	6.8	6.3	7.7	7.5

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	1 020	1 020	1 021	1 022	1 024	1 026	1 030	1 034	1 036	1 039	1 040
2. Population aged 15-64	693	693	690	691	691	691	687	691	690	688	682
3. Total employment (000)	423	426	425	430	442	456	451	441	435	431	418
4. Population in employment aged 15-64	400	419	423	427	432	443	439	432	420	416	404
5. Employment rate (% population aged 20-64)	62.8	65.4	66.2	66.5	67.1	68.5	67.9	66.5	64.8	64.6	63.0
6. Employment rate (% population aged 15-64)	57.6	60.5	61.3	61.8	62.6	64.2	63.8	62.6	60.9	60.5	59.2
7. Employment rate (% population aged 15-24)	24.3	28.6	29.8	30.3	31.4	33.2	31.0	30.0	26.9	23.7	23.0
8. Employment rate (% population aged 25-54)	79.3	81.2	81.1	81.2	82.4	84.8	83.2	82.1	81.3	81.0	79.3
9. Employment rate (% population aged 55-64)	14.6	17.8	18.5	21.0	22.2	21.1	24.8	24.5	22.7	25.0	25.2
10. FTE employment rate (% population aged 15-64)	55.5	58.1	58.6	58.9	59.8	61.2	60.4	58.5	57.6	57.4	55.8
11. Self-employed (% total employment)	13.7	14.6	14.4	14.1	14.1	13.4	13.9	14.6	14.6	14.6	15.2
12. Part-time employment (% total employment)	7.5	11.0	11.1	11.6	11.3	11.4	13.2	14.7	13.3	13.1	13.5
13. Fixed term contracts (% total employees)	14.9	19.1	19.3	19.3	20.8	19.7	17.8	19.3	19.9	18.7	17.2
14. Employment in Services (% total employment)	65.4	66.3	67.0	68.6	68.9	69.9	70.5	72.6	74.8	74.7	74.8
15. Employment in Industry (% total employment)	24.8	23.9	23.4	22.6	22.1	21.9	21.2	19.4	17.6	17.6	17.2
16. Employment in Agriculture (% total employment)	9.8	9.8	9.6	8.9	9.0	8.1	8.2	8.0	7.6	7.7	8.0
17. Activity rate (% population aged 15-64)	62.1	65.0	66.1	66.7	66.6	67.5	67.9	67.4	66.5	66.9	66.6
18. Activity rate (% population aged 15-24)	30.3	35.4	36.3	36.4	35.4	37.4	35.8	34.8	32.3	30.0	30.2
19. Activity rate (% population aged 25-54)	84.3	86.1	86.4	87.0	87.3	88.5	87.9	88.1	88.4	89.1	88.7
20. Activity rate (% population aged 55-64)	14.9	18.1	18.9	21.4	23.1	22.2	25.6	25.5	23.7	26.5	27.0
21. Total unemployment (000)	31	31	33	34	28	23	28	33	38	44	50
22. Unemployment rate (% labour force)	7.1	6.9	7.1	7.2	5.9	4.8	5.8	7.1	8.2	9.4	10.9
23. Youth unemployment rate (% labour force 15-24)	19.8	19.2	17.8	16.8	11.2	11.3	13.4	13.8	16.8	21.0	23.7
24. Long term unemployment rate (% labour force)	3.6	3.4	3.3	3.5	2.7	2.1	1.9	2.9	3.5	4.4	5.5
25. Youth unemployment ratio (% population aged 15-24)	6.0	6.8	6.4	6.1	4.0	4.2	4.8	4.8	5.4	6.3	7.1

Source: Eurostat.

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Labour market indicators: Slovakia

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	5 389	5 370	5 379	5 389	5 391	5 396	5 409	5 422	5 392	5 404	5 411
2. Population aged 15-64	3 733	3 792	3 824	3 862	3 873	3 892	3 917	3 926	3 882	3 881	3 870
3. Total employment (000)	2 061	2 056	2 089	2 132	2 177	2 247	2 203	2 170	2 208	2 209	2 192
4. Population in employment aged 15-64	2 155	2 160	2 207	2 295	2 351	2 423	2 357	2 307	2 303	2 317	2 318
5. Employment rate (% population aged 20-64)	64.8	63.7	64.5	66.0	67.2	68.8	66.4	64.6	65.0	65.1	65.0
6. Employment rate (% population aged 15-64)	57.7	57.0	57.7	59.4	60.7	62.3	60.2	58.8	59.3	59.7	59.9
7. Employment rate (% population aged 15-24)	27.4	26.3	25.6	25.9	27.6	26.2	22.8	20.6	20.0	20.1	20.4
8. Employment rate (% population aged 25-54)	76.0	74.7	75.3	77.2	78.0	80.1	77.8	75.8	76.5	76.4	76.0
9. Employment rate (% population aged 55-64)	24.6	26.8	30.3	33.1	35.6	39.2	39.5	40.5	41.3	43.1	44.0
10. FTE employment rate (% population aged 15-64)	57.0	55.7	56.9	58.5	59.8	61.3	59.1	57.4	57.8	58.1	58.1
11. Self-employed (% total employment)	11.4	13.3	13.7	14.0	14.5	15.5	16.6	16.6	16.0	15.6	15.4
12. Part-time employment (% total employment)	2.4	2.7	2.5	2.8	2.6	2.7	3.6	3.9	4.2	4.1	4.8
13. Fixed term contracts (% total employees)	4.9	5.5	5.0	5.1	5.1	4.7	4.4	5.8	6.7	6.8	7.0
14. Employment in Services (% total employment)	60.9	61.5	61.5	62.0	62.3	62.0	63.9	64.6	64.7	65.3	65.6
15. Employment in Industry (% total employment)	34.2	33.8	33.9	34.0	33.9	34.4	32.6	32.1	32.0	31.5	31.2
16. Employment in Agriculture (% total employment)	4.9	4.7	4.5	4.0	3.8	3.6	3.5	3.4	3.3	3.2	3.2
17. Activity rate (% population aged 15-64)	70.0	69.7	68.9	68.6	68.3	68.8	68.4	68.7	68.7	69.4	69.9
18. Activity rate (% population aged 15-24)	41.1	39.3	36.6	35.3	34.6	32.4	31.4	31.1	30.1	30.5	30.8
19. Activity rate (% population aged 25-54)	89.5	88.9	88.0	87.6	86.9	87.8	87.2	86.9	87.0	87.1	87.2
20. Activity rate (% population aged 55-64)	28.5	31.7	35.0	36.7	38.8	41.9	42.8	45.1	46.0	48.5	49.5
21. Total unemployment (000)	457	480	427	353	293	254	321	386	363	378	386
22. Unemployment rate (% labour force)	17.7	18.4	16.4	13.5	11.2	9.6	12.1	14.5	13.7	14.0	14.2
23. Youth unemployment rate (% labour force 15-24)	33.8	33.4	30.4	27.0	20.6	19.3	27.6	33.9	33.7	34.0	33.7
24. Long term unemployment rate (% labour force)	11.5	11.9	11.8	10.3	8.3	6.7	6.5	9.3	9.3	9.4	10.0
25. Youth unemployment ratio (% population aged 15-24)	13.7	13.0	11.0	9.4	7.0	6.2	8.6	10.4	10.1	10.4	10.4

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	2 613	2 601	2 609	2 616	2 617	2 621	2 628	2 635	2 625	2 632	2 636
2. Population aged 15-64	1 847	1 878	1 899	1 922	1 928	1 940	1 954	1 961	1 944	1 945	1 941
3. Total employment (000)	1 119	1 130	1 162	1 197	1 221	1 259	1 235	1 203	1 233	1 237	1 219
4. Population in employment aged 15-64	1 170	1 186	1 227	1 288	1 319	1 357	1 320	1 279	1 285	1 296	1 288
5. Employment rate (% population aged 20-64)	71.4	70.9	72.5	74.6	76.0	77.4	74.6	71.9	72.5	72.8	72.2
6. Employment rate (% population aged 15-64)	63.3	63.2	64.6	67.0	68.4	70.0	67.6	65.2	66.1	66.7	66.4
7. Employment rate (% population aged 15-24)	29.3	28.0	28.1	29.2	30.9	30.8	26.8	23.8	24.8	24.1	24.4
8. Employment rate (% population aged 25-54)	80.5	80.0	81.4	84.1	85.0	86.4	84.2	81.4	82.5	83.0	82.2
9. Employment rate (% population aged 55-64)	41.0	43.8	47.8	49.8	52.5	56.7	54.9	54.0	52.5	53.6	53.3
10. FTE employment rate (% population aged 15-64)	63.2	62.5	64.3	66.6	68.1	69.5	66.7	64.2	65.1	65.5	65.1
11. Self-employed (% total employment)	15.2	17.8	18.6	18.5	19.4	20.7	21.5	22.2	21.0	20.0	20.0
12. Part-time employment (% total employment)	1.3	1.4	1.3	1.3	1.1	1.4	2.7	2.8	2.8	2.9	3.4
13. Fixed term contracts (% total employees)	5.3	6.0	5.1	5.0	4.9	4.6	4.6	5.6	6.4	6.4	6.7
14. Employment in Services (% total employment)	48.5	49.1	49.1	49.6	49.1	48.4	50.6	50.8	50.9	51.3	51.4
15. Employment in Industry (% total employment)	44.9	44.3	44.5	44.8	45.6	46.5	44.6	44.5	44.3	44.1	44.0
16. Employment in Agriculture (% total employment)	6.7	6.6	6.3	5.6	5.4	5.1	4.9	4.7	4.9	4.6	4.6
17. Activity rate (% population aged 15-64)	76.7	76.5	76.5	76.4	75.9	76.4	76.3	76.1	76.6	77.1	77.2
18. Activity rate (% population aged 15-24)	44.9	42.9	40.7	39.7	38.9	37.8	37.1	36.4	37.2	37.1	37.6
19. Activity rate (% population aged 25-54)	94.1	93.8	93.8	94.0	93.1	93.4	93.6	92.9	93.5	93.8	93.6
20. Activity rate (% population aged 55-64)	48.1	51.9	55.1	55.2	57.0	59.9	58.7	59.7	58.8	60.3	59.5
21. Total unemployment (000)	246	250	224	180	144	124	169	211	203	204	210
22. Unemployment rate (% labour force)	17.5	17.5	15.6	12.4	10.0	8.4	11.5	14.3	13.7	13.5	14.0
23. Youth unemployment rate (% labour force 15-24)	35.0	34.9	31.2	26.6	20.6	18.6	27.9	34.8	33.3	35.0	34.9
24. Long term unemployment rate (% labour force)	11.3	11.4	11.3	9.5	7.5	5.8	5.9	9.0	9.5	9.3	10.0
25. Youth unemployment ratio (% population aged 15-24)	15.6	14.9	12.6	10.5	7.9	7.0	10.3	12.6	12.3	13.0	13.1

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	2 777	2 768	2 770	2 773	2 774	2 775	2 781	2 787	2 767	2 773	2 775
2. Population aged 15-64	1 886	1 914	1 926	1 940	1 946	1 952	1 963	1 966	1 939	1 937	1 930
3. Total employment (000)	941	926	927	936	956	988	968	967	976	973	973
4. Population in employment aged 15-64	985	974	980	1 008	1 032	1 066	1 036	1 029	1 018	1 021	1 029
5. Employment rate (% population aged 20-64)	58.4	56.7	56.7	57.5	58.7	60.3	58.2	57.4	57.4	57.3	57.8
6. Employment rate (% population aged 15-64)	52.2	50.9	50.9	51.9	53.0	54.6	52.8	52.3	52.5	52.7	53.4
7. Employment rate (% population aged 15-24)	25.4	24.6	23.1	22.5	24.1	21.5	18.7	17.4	15.0	15.9	16.2
8. Employment rate (% population aged 25-54)	71.5	69.3	69.2	70.2	71.0	73.7	71.2	70.1	70.4	69.6	69.6
9. Employment rate (% population aged 55-64)	11.2	12.6	15.6	18.9	21.2	24.2	26.1	28.7	31.4	33.6	35.7
10. FTE employment rate (% population aged 15-64)	50.9	49.1	49.6	50.6	51.6	53.2	51.4	50.6	50.5	50.7	51.1
11. Self-employed (% total employment)	6.9	7.8	7.5	8.1	8.2	8.8	10.4	9.8	9.8	10.0	9.7
12. Part-time employment (% total employment)	3.8	4.2	4.1	4.7	4.5	4.2	4.7	5.4	5.9	5.7	6.4
13. Fixed term contracts (% total employees)	4.6	5.1	4.9	5.2	5.3	4.8	4.1	5.9	7.0	7.3	7.3
14. Employment in Services (% total employment)	74.9	75.6	76.2	76.9	77.9	78.0	79.7	80.6	81.0	81.7	82.3
15. Employment in Industry (% total employment)	22.3	21.9	21.4	21.0	20.1	20.1	18.4	17.6	17.5	16.8	16.1
16. Employment in Agriculture (% total employment)	2.9	2.5	2.4	2.1	2.0	1.9	1.9	1.8	1.5	1.6	1.5
17. Activity rate (% population aged 15-64)	63.5	63.0	61.5	60.9	60.8	61.3	60.6	61.3	60.8	61.7	62.5
18. Activity rate (% population aged 15-24)	37.2	35.7	32.4	30.9	30.2	26.7	25.4	25.5	22.7	23.6	23.7
19. Activity rate (% population aged 25-54)	84.8	84.1	82.1	81.2	80.7	82.1	80.7	80.9	80.4	80.4	80.5
20. Activity rate (% population aged 55-64)	12.4	14.8	18.1	20.9	23.3	26.4	29.0	32.3	34.6	38.0	40.4
21. Total unemployment (000)	212	230	203	173	149	130	152	175	160	174	176
22. Unemployment rate (% labour force)	17.9	19.3	17.4	14.8	12.8	11.0	12.9	14.7	13.7	14.5	14.5
23. Youth unemployment rate (% labour force 15-24)	32.3	31.7	29.4	27.5	20.7	20.3	27.1	32.6	34.3	32.5	31.6
24. Long term unemployment rate (% labour force)	11.8	12.5	12.4	11.3	9.4	7.7	7.4	9.6	9.1	9.5	9.9
25. Youth unemployment ratio (% population aged 15-24)	11.8	11.1	9.3	8.3	6.1	5.3	6.7	8.1	7.7	7.7	7.5

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Source: Eurostat.

LFS indicators: Break in series 2011.

Labour market indicators: Finland

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	5 193	5 205	5 225	5 242	5 266	5 289	5 317	5 343	5 365	5 392	5 418
2. Population aged 15-64	3 464	3 467	3 476	3 484	3 497	3 514	3 527	3 537	3 518	3 505	3 489
3. Total employment (000)	2 348	2 357	2 389	2 433	2 486	2 550	2 484	2 482	2 520	2 521	2 489
4. Population in employment aged 15-64	2 345	2 345	2 378	2 416	2 459	2 497	2 423	2 410	2 429	2 431	2 403
5. Employment rate (% population aged 20-64)	72.2	72.2	73.0	73.9	74.8	75.8	73.5	73.0	73.8	74.0	73.3
6. Employment rate (% population aged 15-64)	67.7	67.6	68.4	69.3	70.3	71.1	68.7	68.1	69.0	69.4	68.9
7. Employment rate (% population aged 15-24)	39.7	39.4	40.5	42.1	44.6	44.7	39.6	38.8	40.4	41.8	41.5
8. Employment rate (% population aged 25-54)	81.1	81.0	81.7	82.4	83.4	84.3	82.4	81.6	82.3	82.0	81.0
9. Employment rate (% population aged 55-64)	49.6	50.9	52.7	54.5	55.0	56.5	55.5	56.2	57.0	58.2	58.5
10. FTE employment rate (% population aged 15-64)	65.2	64.8	64.6	65.4	66.3	67.2	64.7	64.1	64.9	65.2	64.8
11. Self-employed (% total employment)	11.4	11.4	11.3	11.5	11.5	11.4	12.0	12.0	11.9	12.1	12.0
12. Part-time employment (% total employment)	13.0	13.5	13.7	14.0	14.1	13.3	14.0	14.6	14.9	15.1	15.1
13. Fixed term contracts (% total employees)	16.3	16.1	16.5	16.4	15.9	15.0	14.6	15.5	15.6	15.6	15.5
14. Employment in Services (% total employment)	68.8	69.3	69.4	69.5	69.5	69.6	70.5	71.0	71.2	71.6	71.6
15. Employment in Industry (% total employment)	25.9	25.4	25.4	25.5	25.6	25.6	24.6	24.1	24.1	23.9	23.8
16. Employment in Agriculture (% total employment)	5.3	5.2	5.2	5.0	4.9	4.8	4.9	4.9	4.7	4.6	4.6
17. Activity rate (% population aged 15-64)	74.5	74.2	74.7	75.2	75.6	76.0	75.0	74.5	74.9	75.2	75.2
18. Activity rate (% population aged 15-24)	50.7	49.7	50.7	51.8	53.4	53.5	50.4	49.4	50.5	51.6	51.8
19. Activity rate (% population aged 25-54)	87.5	87.4	87.7	87.8	88.0	88.6	88.2	87.5	87.7	87.3	86.8
20. Activity rate (% population aged 55-64)	53.7	54.9	56.6	58.5	58.8	59.7	59.1	60.2	60.9	62.3	62.9
21. Total unemployment (000)	235	229	220	204	183	172	221	224	209	207	219
22. Unemployment rate (% labour force)	9.0	8.8	8.4	7.7	6.9	6.4	8.2	8.4	7.8	7.7	8.2
23. Youth unemployment rate (% labour force 15-24)	21.8	20.7	20.1	18.7	16.5	16.5	21.5	21.4	20.1	19.0	19.9
24. Long term unemployment rate (% labour force)	2.3	2.1	2.2	1.9	1.6	1.2	1.4	2.0	1.7	1.6	1.7
25. Youth unemployment ratio (% population aged 15-24)	11.0	10.3	10.2	9.7	8.8	8.8	10.9	10.6	10.1	9.8	10.3

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	2 529	2 536	2 547	2 555	2 569	2 581	2 598	2 613	2 624	2 639	2 653
2. Population aged 15-64	1 741	1 742	1 747	1 750	1 758	1 766	1 774	1 779	1 770	1 764	1 756
3. Total employment (000)	1 218	1 225	1 237	1 261	1 287	1 325	1 269	1 277	1 302	1 297	1 278
4. Population in employment aged 15-64	1 213	1 214	1 228	1 249	1 268	1 291	1 233	1 234	1 249	1 244	1 228
5. Employment rate (% population aged 20-64)	74.4	74.5	75.1	76.3	77.2	78.4	74.7	74.5	75.6	75.5	74.7
6. Employment rate (% population aged 15-64)	69.7	69.7	70.3	71.4	72.1	73.1	69.5	69.4	70.6	70.5	69.9
7. Employment rate (% population aged 15-24)	40.1	39.4	40.4	42.6	44.5	44.3	37.7	37.7	39.5	41.0	39.1
8. Employment rate (% population aged 25-54)	83.3	83.8	84.4	85.2	86.0	87.3	84.3	83.9	84.8	84.4	83.9
9. Employment rate (% population aged 55-64)	51.0	51.4	52.8	54.8	55.1	57.1	54.6	55.6	56.8	56.6	56.5
10. FTE employment rate (% population aged 15-64)	68.4	68.3	67.9	69.0	69.8	70.8	67.1	66.9	67.8	67.9	67.5
11. Self-employed (% total employment)	14.7	14.8	14.8	15.2	15.1	14.9	15.9	15.8	15.8	16.1	15.9
12. Part-time employment (% total employment)	8.7	9.0	9.2	9.3	9.3	8.9	9.2	10.0	10.6	10.3	10.2
13. Fixed term contracts (% total employees)	12.6	12.6	12.9	12.6	12.4	11.2	10.6	12.4	12.7	12.7	12.4
14. Employment in Services (% total employment)	54.4	55.2	55.1	54.9	54.4	54.2	55.2	56.5	56.4	56.6	56.5
15. Employment in Industry (% total employment)	38.5	37.6	37.8	38.1	38.7	39.3	38.1	36.9	37.1	37.0	37.1
16. Employment in Agriculture (% total employment)	7.0	7.2	7.1	6.9	6.9	6.5	6.6	6.6	6.5	6.4	6.4
17. Activity rate (% population aged 15-64)	76.8	76.4	76.6	77.1	77.2	77.9	76.4	76.4	77.2	77.1	76.8
18. Activity rate (% population aged 15-24)	51.4	50.5	50.9	52.6	53.3	53.4	49.7	49.4	50.5	51.2	50.8
19. Activity rate (% population aged 25-54)	90.1	90.1	90.3	90.3	90.4	91.2	90.6	90.5	90.9	90.4	90.1
20. Activity rate (% population aged 55-64)	55.3	55.6	56.9	58.9	59.1	60.6	58.7	60.1	61.4	61.6	61.5
21. Total unemployment (000)	124	118	111	101	90	85	122	126	117	115	122
22. Unemployment rate (% labour force)	9.2	8.7	8.2	7.4	6.5	6.1	8.9	9.1	8.4	8.3	8.8
23. Youth unemployment rate (% labour force 15-24)	21.9	22.0	20.6	19.0	16.4	17.1	24.1	23.8	21.8	19.9	22.9
24. Long term unemployment rate (% labour force)	2.6	2.3	2.4	2.1	1.7	1.3	1.6	2.5	2.2	2.1	2.1
25. Youth unemployment ratio (% population aged 15-24)	11.3	11.1	10.5	10.0	8.8	9.2	12.0	11.8	11.0	10.2	11.6

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	2 664	2 669	2 678	2 687	2 697	2 708	2 719	2 731	2 741	2 753	2 764
2. Population aged 15-64	1 723	1 725	1 728	1 734	1 739	1 748	1 753	1 758	1 749	1 741	1 733
3. Total employment (000)	1 129	1 132	1 152	1 173	1 200	1 226	1 215	1 205	1 218	1 225	1 211
4. Population in employment aged 15-64	1 132	1 131	1 150	1 167	1 191	1 206	1 191	1 176	1 179	1 187	1 176
5. Employment rate (% population aged 20-64)	70.0	69.7	70.8	71.5	72.5	73.1	72.4	71.5	71.9	72.5	71.9
6. Employment rate (% population aged 15-64)	65.7	65.6	66.5	67.3	68.5	69.0	67.9	66.9	67.4	68.2	67.8
7. Employment rate (% population aged 15-24)	39.2	39.4	40.6	41.6	44.7	45.1	41.5	39.9	41.2	42.7	43.9
8. Employment rate (% population aged 25-54)	78.9	78.2	79.0	79.6	80.6	81.2	80.5	79.2	79.6	79.4	78.1
9. Employment rate (% population aged 55-64)	48.3	50.4	52.7	54.3	55.0	55.8	56.3	56.9	57.2	59.7	60.5
10. FTE employment rate (% population aged 15-64)	62.0	61.3	61.3	61.9	62.9	63.8	62.5	61.5	62.1	62.6	62.3
11. Self-employed (% total employment)	7.8	7.7	7.6	7.6	7.5	7.6	8.0	8.1	7.9	7.9	7.9
12. Part-time employment (% total employment)	17.7	18.4	18.6	19.2	19.3	18.2	19.0	19.6	19.6	20.1	20.2
13. Fixed term contracts (% total employees)	20.0	19.5	20.0	20.0	19.4	18.7	18.3	18.4	18.4	18.3	18.4
14. Employment in Services (% total employment)	84.2	84.5	84.7	85.2	85.7	86.4	86.6	86.5	87.4	87.8	87.9
15. Employment in Industry (% total employment)	12.3	12.3	12.1	11.8	11.5	10.7	10.3	10.4	9.9	9.6	9.6
16. Employment in Agriculture (% total employment)	3.5	3.2	3.1	3.0	2.8	2.9	3.0	3.1	2.7	2.6	2.5
17. Activity rate (% population aged 15-64)	72.2	72.0	72.8	73.3	73.8	73.9	73.5	72.5	72.7	73.4	73.4
18. Activity rate (% population aged 15-24)	50.0	48.9	50.4	51.0	53.6	53.5	51.2	49.3	50.5	52.0	52.9
19. Activity rate (% population aged 25-54)	84.8	84.5	85.1	85.3	85.6	85.9	85.7	84.4	84.3	84.1	83.3
20. Activity rate (% population aged 55-64)	52.2	54.3	56.4	58.2	58.4	58.8	59.5	60.3	60.4	62.9	64.3
21. Total unemployment (000)	111	111	109	104	93	87	99	98	91	92	97
22. Unemployment rate (% labour force)	8.9	8.9	8.6	8.1	7.2	6.7	7.6	7.6	7.1	7.1	7.5
23. Youth unemployment rate (% labour force 15-24)	21.6	19.4	19.5	18.4	16.6	15.8	19.0	19.0	18.4	18.0	17.1
24. Long term unemployment rate (% labour force)	2.0	2.0	2.0	1.8	1.4	1.1	1.1	1.5	1.2	1.2	1.3
25. Youth unemployment ratio (% population aged 15-24)	10.8	9.5	9.8	9.4	8.9	8.4	9.7	9.4	9.3	9.4	9.0

Source: Eurostat.

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Labour market indicators: Sweden

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	8 969	9 006	9 039	9 084	9 147	9 203	9 297	9 364	9 419	9 460	9 502
2. Population aged 15-64	5 821	5 855	5 896	5 951	6 002	6 046	6 080	6 103	6 115	6 114	6 120
3. Total employment (000)	4 368	4 337	4 349	4 423	4 525	4 565	4 455	4 498	4 594	4 627	4 672
4. Population in employment aged 15-64	4 242	4 220	4 272	4 352	4 453	4 494	4 391	4 403	4 498	4 510	4 554
5. Employment rate (% population aged 20-64)	77.9	77.4	78.1	78.8	80.1	80.4	78.3	78.1	79.4	79.4	79.8
6. Employment rate (% population aged 15-64)	72.9	72.1	72.5	73.1	74.2	74.3	72.2	72.1	73.6	73.8	74.4
7. Employment rate (% population aged 15-24)	41.2	39.2	38.7	40.3	42.2	42.2	38.3	38.8	40.9	40.2	41.7
8. Employment rate (% population aged 25-54)	83.5	82.9	83.9	84.7	86.1	86.5	84.5	84.0	85.1	85.2	85.4
9. Employment rate (% population aged 55-64)	68.6	69.1	69.4	69.6	70.0	70.1	70.0	70.4	72.0	73.0	73.6
10. FTE employment rate (% population aged 15-64)	67.6	66.2	65.9	66.5	67.6	67.8	65.7	65.8	67.3	67.6	68.3
11. Self-employed (% total employment)	5.5	5.7	5.7	5.7	5.7	5.4	5.6	5.6	5.3	5.2	5.1
12. Part-time employment (% total employment)	22.9	23.6	24.7	25.1	25.0	26.6	27.0	27.0	26.5	26.5	26.2
13. Fixed term contracts (% total employees)	15.1	15.5	16.0	17.3	17.5	16.1	15.3	16.4	17.0	16.4	16.9
14. Employment in Services (% total employment)	74.8	75.4	75.5	75.8	75.5	75.2	76.2	76.3	76.1	76.4	77.0
15. Employment in Industry (% total employment)	22.9	22.4	22.3	22.1	22.4	22.8	21.8	21.5	21.6	21.3	20.8
16. Employment in Agriculture (% total employment)	2.4	2.3	2.2	2.1	2.0	2.0	2.1	2.2	2.3	2.4	2.2
17. Activity rate (% population aged 15-64)	77.3	77.2	78.7	78.8	79.1	79.3	78.9	79.1	79.9	80.3	81.1
18. Activity rate (% population aged 15-24)	47.7	47.2	50.2	51.3	52.2	52.8	51.0	51.6	53.0	52.6	54.5
19. Activity rate (% population aged 25-54)	87.7	87.7	89.5	89.4	90.0	90.4	90.0	89.8	90.3	90.6	90.9
20. Activity rate (% population aged 55-64)	71.9	72.7	72.6	72.8	72.8	72.8	73.9	74.8	76.0	77.0	77.5
21. Total unemployment (000)	306	346	361	336	298	305	408	425	390	403	411
22. Unemployment rate (% labour force)	6.6	7.4	7.7	7.1	6.1	6.2	8.3	8.6	7.8	8.0	8.0
23. Youth unemployment rate (% labour force 15-24)	17.4	20.4	22.6	21.5	19.2	20.2	25.0	24.8	22.8	23.7	23.6
24. Long term unemployment rate (% labour force)	1.2	1.4	1.0	1.0	0.9	0.8	1.1	1.6	1.5	1.5	1.5
25. Youth unemployment ratio (% population aged 15-24)	6.5	8.0	11.5	11.0	10.1	10.7	12.8	12.8	12.1	12.4	12.8

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	4 443	4 463	4 479	4 504	4 540	4 567	4 628	4 664	4 694	4 715	4 736
2. Population aged 15-64	2 957	2 974	2 993	3 020	3 048	3 071	3 088	3 100	3 108	3 107	3 110
3. Total employment (000)	2 272	2 259	2 282	2 327	2 382	2 407	2 336	2 380	2 421	2 426	2 450
4. Population in employment aged 15-64	2 195	2 189	2 228	2 280	2 333	2 357	2 291	2 312	2 355	2 350	2 373
5. Employment rate (% population aged 20-64)	79.8	79.4	80.7	81.7	83.1	83.5	80.9	81.1	82.1	81.9	82.2
6. Employment rate (% population aged 15-64)	74.2	73.6	74.4	75.5	76.5	76.7	74.2	74.6	75.8	75.6	76.3
7. Employment rate (% population aged 15-24)	40.4	38.6	37.7	40.2	42.0	42.2	37.7	38.5	40.8	38.8	40.5
8. Employment rate (% population aged 25-54)	85.3	85.0	86.6	87.8	89.1	89.4	86.9	87.0	87.9	87.8	88.0
9. Employment rate (% population aged 55-64)	70.8	71.2	72.0	72.3	72.9	73.4	73.2	74.0	75.2	76.3	76.9
10. FTE employment rate (% population aged 15-64)	72.3	70.9	71.3	72.1	73.3	73.5	70.9	71.3	72.6	72.4	73.1
11. Self-employed (% total employment)	7.9	8.2	8.0	8.1	8.0	7.4	7.7	7.7	7.3	7.2	7.0
12. Part-time employment (% total employment)	11.2	12.0	11.5	11.8	11.8	13.3	14.2	14.5	14.2	14.6	14.9
13. Fixed term contracts (% total employees)	12.8	13.5	14.2	15.4	15.0	13.4	13.0	14.5	15.0	14.3	14.7
14. Employment in Services (% total employment)	61.7	62.4	62.9	63.2	62.9	62.0	63.3	63.9	63.5	64.0	65.2
15. Employment in Industry (% total employment)	34.7	34.1	33.9	33.6	34.0	34.9	33.6	32.9	33.1	32.6	31.6
16. Employment in Agriculture (% total employment)	3.6	3.5	3.3	3.2	3.1	3.1	3.1	3.2	3.4	3.4	3.3
17. Activity rate (% population aged 15-64)	79.2	79.1	80.9	81.2	81.4	81.7	81.4	81.9	82.4	82.6	83.3
18. Activity rate (% population aged 15-24)	47.3	47.1	49.1	50.8	51.8	52.6	51.1	52.0	53.2	51.8	53.9
19. Activity rate (% population aged 25-54)	89.9	90.0	92.4	92.5	92.9	93.1	92.8	92.9	93.2	93.5	93.6
20. Activity rate (% population aged 55-64)	74.9	75.6	76.2	76.0	76.2	76.5	77.8	79.3	79.9	80.9	81.6
21. Total unemployment (000)	169	186	191	173	149	152	222	227	207	218	220
22. Unemployment rate (% labour force)	6.9	7.6	7.7	6.9	5.9	5.9	8.6	8.7	7.8	8.2	8.2
23. Youth unemployment rate (% labour force 15-24)	18.2	21.3	22.6	21.0	18.7	19.7	26.3	25.9	23.3	25.0	24.8
24. Long term unemployment rate (% labour force)	1.4	1.6	1.2	1.2	0.9	0.8	1.2	1.8	1.7	1.7	1.7
25. Youth unemployment ratio (% population aged 15-24)	6.9	8.4	11.4	10.7	9.7	10.4	13.4	13.4	12.4	13.0	13.3

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	4 527	4 543	4 559	4 580	4 607	4 637	4 668	4 700	4 725	4 745	4 766
2. Population aged 15-64	2 864	2 881	2 903	2 931	2 954	2 975	2 992	3 003	3 007	3 007	3 010
3. Total employment (000)	2 096	2 078	2 067	2 096	2 143	2 158	2 119	2 118	2 173	2 200	2 222
4. Population in employment aged 15-64	2 047	2 031	2 044	2 072	2 121	2 137	2 101	2 092	2 143	2 160	2 181
5. Employment rate (% population aged 20-64)	76.0	75.3	75.5	75.8	77.1	77.2	75.7	75.0	76.5	76.8	77.2
6. Employment rate (% population aged 15-64)	71.5	70.5	70.4	70.7	71.8	71.8	70.2	69.6	71.3	71.8	72.5
7. Employment rate (% population aged 15-24)	42.1	39.7	39.8	40.4	42.3	42.1	38.9	39.2	41.0	41.6	42.9
8. Employment rate (% population aged 25-54)	81.7	80.9	81.1	81.5	83.0	83.5	81.9	80.9	82.2	82.5	82.7
9. Employment rate (% population aged 55-64)	66.3	67.0	66.7	66.9	67.0	66.7	66.7	66.9	68.9	69.6	70.3
10. FTE employment rate (% population aged 15-64)	63.0	61.6	60.6	61.0	62.0	62.1	60.7	60.3	62.1	62.9	63.6
11. Self-employed (% total employment)	2.9	3.0	3.1	3.1	3.1	3.0	3.2	3.3	3.0	2.9	3.0
12. Part-time employment (% total employment)	35.5	36.3	39.6	40.2	40.0	41.4	41.2	41.0	40.1	39.6	38.8
13. Fixed term contracts (% total employees)	17.4	17.5	17.7	19.1	19.9	18.7	17.6	18.3	19.0	18.5	19.1
14. Employment in Services (% total employment)	89.0	89.4	89.5	89.7	89.7	90.2	90.7	90.7	90.6	90.3	90.4
15. Employment in Industry (% total employment)	10.0	9.7	9.5	9.4	9.5	8.9	8.4	8.3	8.3	8.5	8.5
16. Employment in Agriculture (% total employment)	1.0	1.0	1.0	0.9	0.9	0.8	0.9	1.0	1.1	1.2	1.1
17. Activity rate (% population aged 15-64)	75.4	75.2	76.3	76.3	76.8	76.9	76.4	76.2	77.3	77.9	78.8
18. Activity rate (% population aged 15-24)	48.3	47.3	51.3	51.9	52.7	53.1	51.0	51.3	52.8	53.4	55.2
19. Activity rate (% population aged 25-54)	85.4	85.3	86.5	86.3	87.1	87.6	87.1	86.6	87.3	87.6	88.1
20. Activity rate (% population aged 55-64)	68.9	69.7	69.0	69.6	69.4	69.0	69.9	70.2	72.1	73.0	73.4
21. Total unemployment (000)	137	160	170	164	148	152	186	198	184	185	191
22. Unemployment rate (% labour force)	6.2	7.1	7.6	7.2	6.5	6.6	8.0	8.5	7.7	7.7	7.9
23. Youth unemployment rate (% labour force 15-24)	16.5	19.5	22.5	22.0	19.8	20.8	23.7	23.6	22.2	22.3	22.3
24. Long term unemployment rate (% labour force)	0.9	1.2	0.8	0.9	0.8	0.7	1.0	1.4	1.3	1.3	1.3
25. Youth unemployment ratio (% population aged 15-24)	6.2	7.6	11.5	11.4	10.4	11.0	12.1	12.1	11.8	11.9	12.3

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Source: Eurostat.

LFS indicators: Break in series 2005.

Labour market indicators: United Kingdom

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	58 542	58 815	59 156	59 518	59 862	60 305	60 734	61 099	61 515	61 906	62 378
2. Population aged 15-64	38 534	38 821	39 153	39 540	39 845	40 094	40 318	40 441	40 599	40 632	40 703
3. Total employment (000)	28 184	28 483	28 773	29 028	29 229	29 440	28 955	29 019	29 167	29 525	29 908
4. Population in employment aged 15-64	27 553	27 835	28 090	28 307	28 478	28 671	28 184	28 110	28 207	28 496	28 798
5. Employment rate (% population aged 20-64)	74.7	75.0	75.2	75.2	75.2	75.2	73.9	73.6	73.6	74.2	74.9
6. Employment rate (% population aged 15-64)	71.5	71.7	71.7	71.6	71.5	71.5	69.9	69.5	69.5	70.1	70.8
7. Employment rate (% population aged 15-24)	55.4	55.6	54.4	53.8	52.9	52.4	48.4	47.6	46.4	46.9	46.7
8. Employment rate (% population aged 25-54)	80.6	80.9	81.2	81.2	81.3	81.4	80.2	79.8	80.1	80.5	80.9
9. Employment rate (% population aged 55-64)	55.4	56.2	56.8	57.3	57.4	58.0	57.5	57.1	56.7	58.1	59.8
10. FTE employment rate (% population aged 15-64)	61.6	61.8	62.4	62.2	62.2	62.2	60.6	60.0	60.0	60.4	61.2
11. Self-employed (% total employment)	12.0	12.1	12.0	12.1	12.3	12.3	12.5	13.0	13.2	13.6	13.5
12. Part-time employment (% total employment)	25.6	25.7	25.2	25.3	25.2	25.3	26.1	26.9	26.8	27.2	26.9
13. Fixed term contracts (% total employees)	6.1	6.0	5.8	5.8	5.9	5.4	5.7	6.1	6.2	6.3	6.2
14. Employment in Services (% total employment)	79.3	79.8	80.3	80.5	80.7	81.0	81.7	82.2	82.3	82.5	82.9
15. Employment in Industry (% total employment)	19.5	19.0	18.5	18.3	18.1	17.7	17.1	16.5	16.4	16.2	16.0
16. Employment in Agriculture (% total employment)	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.2
17. Activity rate (% population aged 15-64)	75.3	75.3	75.4	75.7	75.5	75.8	75.7	75.5	75.7	76.3	76.6
18. Activity rate (% population aged 15-24)	63.2	63.2	62.3	62.5	61.7	61.7	59.7	59.2	58.8	59.3	58.7
19. Activity rate (% population aged 25-54)	83.8	83.8	84.1	84.5	84.5	84.9	85.1	85.0	85.3	85.6	85.8
20. Activity rate (% population aged 55-64)	57.2	57.8	58.4	59.1	59.3	59.9	60.3	59.9	59.7	61.1	62.8
21. Total unemployment (000)	1 465	1 399	1 444	1 642	1 623	1 753	2 363	2 440	2 534	2 511	2 418
22. Unemployment rate (% labour force)	5.0	4.7	4.8	5.4	5.3	5.6	7.6	7.8	8.0	7.9	7.5
23. Youth unemployment rate (% labour force 15-24)	12.2	12.1	12.8	14.0	14.3	15.0	19.1	19.6	21.1	21.0	20.5
24. Long term unemployment rate (% labour force)	1.1	1.0	1.0	1.2	1.3	1.4	1.9	2.5	2.7	2.7	2.7
25. Youth unemployment ratio (% population aged 15-24)	7.8	7.6	8.0	8.7	8.8	9.2	11.4	11.6	12.4	12.4	12.0

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	28 645	28 801	28 995	29 199	29 381	29 624	29 862	30 082	30 312	30 527	30 792
2. Population aged 15-64	19 127	19 278	19 448	19 644	19 789	19 918	20 047	20 123	20 210	20 240	20 287
3. Total employment (000)	15 268	15 409	15 532	15 661	15 807	15 879	15 465	15 532	15 623	15 845	16 009
4. Population in employment aged 15-64	14 878	15 012	15 116	15 219	15 341	15 395	15 005	14 994	15 052	15 227	15 343
5. Employment rate (% population aged 20-64)	81.9	82.1	82.0	82.0	82.2	81.8	79.6	79.3	79.4	80.0	80.5
6. Employment rate (% population aged 15-64)	77.8	77.9	77.7	77.5	77.5	77.3	74.8	74.5	74.5	75.2	75.6
7. Employment rate (% population aged 15-24)	57.0	57.0	56.0	54.9	54.4	53.8	48.5	48.5	47.0	47.1	46.8
8. Employment rate (% population aged 25-54)	87.5	87.7	87.8	87.9	88.2	87.7	85.7	85.4	85.9	86.6	86.7
9. Employment rate (% population aged 55-64)	64.8	65.7	65.9	66.0	66.3	67.3	66.2	65.0	64.2	65.5	66.9
10. FTE employment rate (% population aged 15-64)	73.6	73.7	73.8	73.5	73.5	73.1	70.6	70.0	70.0	70.5	70.9
11. Self-employed (% total employment)	16.0	16.2	16.0	16.1	16.3	16.3	16.6	17.0	17.1	17.5	17.4
12. Part-time employment (% total employment)	10.1	10.3	10.4	10.6	10.8	11.3	11.8	12.6	12.7	13.3	13.2
13. Fixed term contracts (% total employees)	5.4	5.5	5.3	5.2	5.3	4.9	5.3	5.8	5.9	5.9	5.8
14. Employment in Services (% total employment)	68.8	69.3	69.9	70.3	70.7	71.3	71.6	72.3	72.7	73.2	73.7
15. Employment in Industry (% total employment)	29.5	28.9	28.3	27.9	27.6	27.1	26.5	25.8	25.4	25.0	24.7
16. Employment in Agriculture (% total employment)	1.7	1.7	1.8	1.8	1.7	1.6	1.9	2.0	1.9	1.8	1.6
17. Activity rate (% population aged 15-64)	82.4	82.1	82.0	82.3	82.2	82.4	82.0	81.7	81.7	82.2	82.3
18. Activity rate (% population aged 15-24)	66.2	65.7	65.3	65.1	64.5	64.8	62.0	61.8	61.5	61.7	60.7
19. Activity rate (% population aged 25-54)	91.3	91.0	91.1	91.6	91.6	91.6	91.7	91.4	91.7	92.0	92.0
20. Activity rate (% population aged 55-64)	67.4	68.1	68.3	68.4	69.0	69.9	70.3	69.1	68.5	69.5	70.7
21. Total unemployment (000)	886	821	847	950	927	1 032	1 444	1 455	1 472	1 430	1 376
22. Unemployment rate (% labour force)	5.5	5.1	5.2	5.8	5.6	6.1	8.6	8.6	8.7	8.3	8.0
23. Youth unemployment rate (% labour force 15-24)	13.8	13.3	14.4	15.7	15.8	17.0	21.8	21.5	23.5	23.6	22.8
24. Long term unemployment rate (% labour force)	1.4	1.2	1.3	1.5	1.6	1.7	2.3	3.2	3.3	3.2	3.2
25. Youth unemployment ratio (% population aged 15-24)	9.2	8.7	9.3	10.2	10.2	11.0	13.5	13.3	14.4	14.6	13.8

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	29 897	30 014	30 161	30 318	30 480	30 681	30 872	31 017	31 204	31 379	31 585
2. Population aged 15-64	19 407	19 543	19 705	19 896	20 056	20 176	20 270	20 318	20 389	20 392	20 416
3. Total employment (000)	12 916	13 075	13 241	13 367	13 422	13 562	13 489	13 487	13 543	13 681	13 898
4. Population in employment aged 15-64	12 675	12 823	12 974	13 088	13 137	13 276	13 179	13 116	13 155	13 269	13 456
5. Employment rate (% population aged 20-64)	67.7	68.0	68.5	68.6	68.4	68.8	68.2	67.9	67.9	68.4	69.4
6. Employment rate (% population aged 15-64)	65.3	65.6	65.8	65.8	65.5	65.8	65.0	64.6	64.5	65.1	65.9
7. Employment rate (% population aged 15-24)	53.7	54.1	52.7	52.6	51.4	51.0	48.2	46.6	45.7	46.6	46.5
8. Employment rate (% population aged 25-54)	73.8	74.2	74.8	74.6	74.6	75.2	74.7	74.3	74.5	74.5	75.2
9. Employment rate (% population aged 55-64)	46.3	47.0	48.0	49.0	48.9	49.0	49.2	49.5	49.6	51.0	53.1
10. FTE employment rate (% population aged 15-64)	50.7	50.8	51.8	51.7	51.7	52.2	51.3	50.8	50.8	51.1	52.1
11. Self-employed (% total employment)	7.3	7.2	7.2	7.5	7.6	7.5	7.9	8.4	8.6	9.0	9.1
12. Part-time employment (% total employment)	43.9	43.8	42.6	42.5	42.2	41.8	42.5	43.3	43.1	43.3	42.6
13. Fixed term contracts (% total employees)	6.9	6.6	6.3	6.5	6.4	6.0	6.1	6.5	6.5	6.8	6.7
14. Employment in Services (% total employment)	91.2	91.6	91.7	91.8	91.9	91.8	92.8	93.1	93.0	92.9	93.0
15. Employment in Industry (% total employment)	8.3	7.9	7.6	7.6	7.5	7.4	6.6	6.3	6.3	6.4	6.4
16. Employment in Agriculture (% total employment)	0.5	0.6	0.6	0.6	0.6	0.8	0.6	0.7	0.7	0.7	0.6
17. Activity rate (% population aged 15-64)	68.3	68.5	68.8	69.2	69.0	69.4	69.5	69.4	69.7	70.3	71.0
18. Activity rate (% population aged 15-24)	60.0	60.5	59.2	59.7	58.7	58.4	57.4	56.4	56.0	56.8	56.7
19. Activity rate (% population aged 25-54)	76.4	76.7	77.3	77.6	77.6	78.2	78.7	78.6	79.1	79.3	79.6
20. Activity rate (% population aged 55-64)	47.2	47.9	48.9	50.1	50.0	50.2	50.6	51.1	51.3	52.9	55.3
21. Total unemployment (000)	578	577	597	692	696	721	919	985	1 061	1 081	1 042
22. Unemployment rate (% labour force)	4.3	4.2	4.3	4.9	5.0	5.1	6.4	6.8	7.3	7.4	7.0
23. Youth unemployment rate (% labour force 15-24)	10.5	10.7	11.1	12.0	12.5	12.7	16.0	17.3	18.4	18.0	18.0
24. Long term unemployment rate (% labour force)	0.7	0.6	0.7	0.8	0.9	0.9	1.4	1.8	2.0	2.2	2.2
25. Youth unemployment ratio (% population aged 15-24)	6.3	6.4	6.5	7.2	7.4	7.4	9.2	9.8	10.3	10.2	10.2

Source: Eurostat.

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Labour market indicators: Iceland

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	197	199	202	210	217	223	223	223	224	224	227
2. Population aged 15-64	179	181	184	192	199	204	204	203	203	202	204
3. Total employment (000)	:	:	:	:	:	:	:	:	:	:	:
4. Population in employment aged 15-64	149	149	154	162	170	171	160	159	159	161	165
5. Employment rate (% population aged 20-64)	85.1	84.4	85.5	86.3	86.7	85.3	80.6	80.4	80.6	81.8	82.8
6. Employment rate (% population aged 15-64)	83.3	82.3	83.8	84.6	85.1	83.6	78.3	78.2	78.5	79.7	81.1
7. Employment rate (% population aged 15-24)	67.4	66.0	70.5	72.1	74.3	71.7	61.5	61.7	62.5	65.4	69.7
8. Employment rate (% population aged 25-54)	88.2	87.4	87.7	88.4	88.5	87.3	83.0	82.9	83.4	84.5	84.7
9. Employment rate (% population aged 55-64)	83.0	81.8	84.3	84.3	84.7	82.9	80.2	79.8	79.2	79.1	81.1
10. FTE employment rate (% population aged 15-64)	78.3	77.3	76.0	76.9	77.3	76.2	70.4	70.3	71.6	72.3	73.5
11. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:
12. Part-time employment (% total employment)	22.1	22.2	22.2	17.1	21.7	20.5	23.6	22.9	20.8	21.2	21.4
13. Fixed term contracts (% total employees)	7.9	6.7	6.9	11.5	12.3	9.5	9.7	12.4	12.2	13.1	14.2
14. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:
16. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:
17. Activity rate (% population aged 15-64)	86.2	84.9	86.0	87.1	87.1	86.2	84.6	84.7	84.5	84.9	85.8
18. Activity rate (% population aged 15-24)	73.5	71.9	76.1	78.6	79.9	78.1	73.1	73.7	73.1	75.7	78.0
19. Activity rate (% population aged 25-54)	90.4	89.0	89.1	90.0	89.7	89.1	88.4	88.5	88.4	88.5	88.9
20. Activity rate (% population aged 55-64)	84.8	84.1	85.5	85.6	85.4	84.3	83.3	83.5	83.8	82.6	83.8
21. Total unemployment (000)	5	5	4	5	4	6	13	14	13	11	10
22. Unemployment rate (% labour force)	3.3	3.1	2.6	2.9	2.3	3.0	7.2	7.6	7.1	6.0	5.4
23. Youth unemployment rate (% labour force 15-24)	8.2	8.1	7.2	8.2	7.1	8.2	16.0	16.2	14.6	13.6	10.7
24. Long term unemployment rate (% labour force)	0.2	0.3	0.3	0.2	0.2	0.1	0.4	1.3	1.7	1.5	1.0
25. Youth unemployment ratio (% population aged 15-24)	6.2	5.9	5.6	6.5	5.6	6.4	11.6	12.0	10.6	10.2	8.3

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	99	100	102	108	112	115	114	112	113	113	115
2. Population aged 15-64	91	91	93	99	104	106	105	103	102	102	103
3. Total employment (000)	:	:	:	:	:	:	:	:	:	:	:
4. Population in employment aged 15-64	78	78	81	87	92	93	84	82	82	83	86
5. Employment rate (% population aged 20-64)	88.6	88.8	89.6	90.6	91.5	89.9	83.2	83.1	83.3	84.4	86.0
6. Employment rate (% population aged 15-64)	86.3	85.8	86.9	88.1	89.1	87.3	80.0	80.1	80.3	81.5	83.2
7. Employment rate (% population aged 15-24)	68.3	65.1	67.8	70.2	74.0	70.1	56.9	58.2	58.7	62.7	64.7
8. Employment rate (% population aged 25-54)	91.9	91.9	92.3	93.3	93.6	92.3	86.1	86.2	86.9	87.3	88.2
9. Employment rate (% population aged 55-64)	87.0	86.9	88.9	88.7	89.3	88.4	84.3	83.2	82.0	83.1	87.2
10. FTE employment rate (% population aged 15-64)	86.3	85.3	84.9	85.4	86.2	84.1	76.1	76.1	77.0	77.6	79.3
11. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:
12. Part-time employment (% total employment)	9.4	9.2	8.7	7.0	9.3	9.5	12.2	11.9	10.4	11.3	11.4
13. Fixed term contracts (% total employees)	7.4	5.5	6.0	10.4	11.0	9.1	8.9	12.0	12.2	13.2	14.3
14. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:
16. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:
17. Activity rate (% population aged 15-64)	89.6	88.5	89.3	90.5	91.2	90.3	87.7	87.6	87.2	87.1	88.2
18. Activity rate (% population aged 15-24)	75.5	71.8	74.3	77.1	80.2	77.0	70.9	71.3	71.7	73.5	74.8
19. Activity rate (% population aged 25-54)	94.1	93.5	93.8	94.8	94.6	94.3	92.8	92.7	92.1	91.6	92.2
20. Activity rate (% population aged 55-64)	89.6	89.5	89.7	89.7	90.1	90.6	88.6	87.8	88.3	87.1	89.9
21. Total unemployment (000)	3	3	2	3	2	3	8	8	7	6	5
22. Unemployment rate (% labour force)	3.6	3.2	2.6	2.7	2.3	3.3	8.6	8.3	7.8	6.4	5.7
23. Youth unemployment rate (% labour force 15-24)	9.4	9.3	8.5	8.9	8.0	9.0	19.9	18.4	18.4	14.7	13.6
24. Long term unemployment rate (% labour force)	0.3	0.2	0.3	0.2	0.2	0.1	0.5	1.6	1.7	1.6	1.1
25. Youth unemployment ratio (% population aged 15-24)	7.1	6.7	6.4	6.9	6.2	6.9	14.0	13.1	13.0	10.8	10.1

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	98	99	100	102	105	108	109	111	111	111	112
2. Population aged 15-64	89	90	90	92	95	98	99	100	101	100	101
3. Total employment (000)	:	:	:	:	:	:	:	:	:	:	:
4. Population in employment aged 15-64	71	71	73	75	77	78	76	77	77	78	80
5. Employment rate (% population aged 20-64)	81.5	79.9	81.2	81.8	81.4	80.4	77.8	77.6	77.9	79.1	79.5
6. Employment rate (% population aged 15-64)	80.1	78.8	80.5	80.8	80.8	79.6	76.5	76.2	76.6	77.8	79.0
7. Employment rate (% population aged 15-24)	66.4	67.1	73.3	74.2	74.6	73.5	66.4	65.3	66.6	68.4	75.2
8. Employment rate (% population aged 25-54)	84.6	82.8	82.9	83.1	82.9	82.0	79.8	79.6	79.9	81.6	81.3
9. Employment rate (% population aged 55-64)	78.9	76.7	79.6	79.8	79.8	77.2	76.0	76.4	76.3	75.0	75.1
10. FTE employment rate (% population aged 15-64)	71.4	70.3	68.2	69.1	69.1	68.7	65.2	65.2	66.9	67.6	68.2
11. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:
12. Part-time employment (% total employment)	36.2	36.8	37.5	30.1	36.7	33.7	36.4	34.9	32.2	32.0	32.3
13. Fixed term contracts (% total employees)	8.3	7.9	7.8	12.7	13.6	9.9	10.5	12.8	12.2	13.1	14.0
14. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:
16. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:
17. Activity rate (% population aged 15-64)	82.7	81.2	82.6	83.4	82.7	81.7	81.3	81.8	81.7	82.6	83.3
18. Activity rate (% population aged 15-24)	71.5	72.1	78.1	80.3	79.5	79.4	75.5	76.1	74.6	78.0	81.5
19. Activity rate (% population aged 25-54)	86.7	84.5	84.3	84.8	84.2	83.4	83.9	84.3	84.7	85.4	85.5
20. Activity rate (% population aged 55-64)	79.9	78.6	81.3	81.2	80.5	77.6	77.7	79.1	79.1	78.0	77.7
21. Total unemployment (000)	2	2	2	2	2	2	5	6	5	5	4
22. Unemployment rate (% labour force)	3.1	2.9	2.6	3.1	2.3	2.6	5.7	6.7	6.2	5.7	5.1
23. Youth unemployment rate (% labour force 15-24)	7.0	6.8	5.9	7.6	6.2	7.5	12.0	14.0	10.7	12.4	7.8
24. Long term unemployment rate (% labour force)	0.2	0.4	0.3	0.3	0.3	0.1	0.4	1.1	1.6	1.5	0.9
25. Youth unemployment ratio (% population aged 15-24)	5.1	5.0	4.7	6.1	5.0	5.9	9.0	10.8	8.0	9.6	6.3

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Source: Eurostat.

Indicator 1: Population aged 16-74.

Labour market indicators: Norway

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	3 246	3 273	3 307	3 390	3 437	3 496	3 551	3 610	3 673	3 737	3 790
2. Population aged 15-64	2 939	2 964	2 997	3 062	3 103	3 152	3 190	3 229	3 268	3 308	3 341
3. Total employment (000)	2 310	2 320	2 350	2 431	2 532	2 615	2 604	2 591	2 632	2 689	2 722
4. Population in employment aged 15-64	2 218	2 227	2 243	2 308	2 383	2 457	2 437	2 432	2 461	2 506	2 520
5. Employment rate (% population aged 20-64)	78.4	78.2	78.2	79.5	80.9	81.8	80.6	79.6	79.6	79.9	79.6
6. Employment rate (% population aged 15-64)	75.5	75.1	74.8	75.4	76.8	78.0	76.4	75.3	75.3	75.7	75.4
7. Employment rate (% population aged 15-24)	55.1	54.5	53.4	52.4	54.5	57.3	52.6	51.4	50.8	52.2	51.8
8. Employment rate (% population aged 25-54)	83.0	83.1	83.2	84.4	85.7	86.8	86.0	84.7	84.7	84.6	84.1
9. Employment rate (% population aged 55-64)	66.9	65.8	65.5	67.4	69.0	69.2	68.7	68.6	69.6	70.9	71.1
10. FTE employment rate (% population aged 15-64)	66.5	65.8	65.6	66.2	67.9	69.1	67.5	66.6	66.6	67.2	66.7
11. Self-employed (% total employment)	7.4	7.4	7.2	7.1	6.7	6.4	6.4	6.2	6.1	5.9	5.8
12. Part-time employment (% total employment)	28.8	29.2	28.2	28.7	28.2	28.2	28.6	28.4	28.1	28.1	27.9
13. Fixed term contracts (% total employees)	9.5	10.0	9.5	10.1	9.6	9.1	8.1	8.4	8.0	8.4	8.4
14. Employment in Services (% total employment)	76.3	76.8	76.7	76.2	76.0	76.2	77.0	77.3	77.3	77.3	77.2
15. Employment in Industry (% total employment)	20.0	19.7	20.1	20.7	21.1	21.0	20.4	20.0	20.1	20.2	20.4
16. Employment in Agriculture (% total employment)	3.6	3.5	3.3	3.1	2.9	2.8	2.7	2.7	2.6	2.5	2.4
17. Activity rate (% population aged 15-64)	78.7	78.4	78.3	78.0	78.8	80.0	78.9	78.1	77.8	78.2	78.2
18. Activity rate (% population aged 15-24)	61.9	61.5	60.3	57.4	58.8	62.0	57.9	56.7	55.6	57.0	57.0
19. Activity rate (% population aged 25-54)	85.9	86.1	86.5	86.9	87.4	88.5	88.1	87.3	87.0	86.8	86.6
20. Activity rate (% population aged 55-64)	67.8	66.7	66.5	68.2	69.6	69.9	69.5	69.6	70.4	71.8	72.0
21. Total unemployment (000)	100	102	109	84	63	66	82	93	87	85	95
22. Unemployment rate (% labour force)	4.2	4.3	4.5	3.4	2.5	2.5	3.2	3.6	3.3	3.2	3.5
23. Youth unemployment rate (% labour force 15-24)	11.2	11.2	11.4	8.8	7.2	7.3	9.2	9.2	8.7	8.6	9.1
24. Long term unemployment rate (% labour force)	0.6	0.8	0.8	0.8	0.5	0.3	0.5	0.7	0.8	0.6	0.7
25. Youth unemployment ratio (% population aged 15-24)	6.8	7.0	6.9	5.0	4.4	4.6	5.3	5.3	4.8	4.8	5.2

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	1 631	1 646	1 664	1 707	1 734	1 769	1 799	1 830	1 865	1 902	1 929
2. Population aged 15-64	1 486	1 500	1 518	1 550	1 574	1 604	1 624	1 647	1 668	1 693	1 710
3. Total employment (000)	1 214	1 220	1 240	1 284	1 333	1 376	1 364	1 362	1 382	1 417	1 435
4. Population in employment aged 15-64	1 164	1 169	1 181	1 215	1 252	1 290	1 273	1 272	1 286	1 315	1 321
5. Employment rate (% population aged 20-64)	81.8	81.5	81.6	83.2	84.3	84.8	83.1	82.1	82.1	82.4	82.1
6. Employment rate (% population aged 15-64)	78.3	77.9	77.8	78.4	79.5	80.5	78.3	77.3	77.1	77.6	77.3
7. Employment rate (% population aged 15-24)	54.2	53.1	53.1	51.9	52.8	56.5	50.9	50.4	49.4	50.7	49.9
8. Employment rate (% population aged 25-54)	86.3	86.3	86.5	87.7	89.1	89.4	88.3	87.1	87.1	87.0	86.5
9. Employment rate (% population aged 55-64)	71.5	71.0	70.8	73.1	73.8	74.1	72.8	72.2	72.9	74.8	74.9
10. FTE employment rate (% population aged 15-64)	74.6	73.5	73.5	74.4	75.5	76.3	73.9	72.9	72.9	73.2	72.8
11. Self-employed (% total employment)	10.2	10.2	9.8	9.7	9.2	8.9	8.7	8.6	8.4	8.1	7.7
12. Part-time employment (% total employment)	14.0	14.6	13.8	13.9	13.9	14.4	15.2	15.4	14.8	15.4	15.5
13. Fixed term contracts (% total employees)	7.7	8.4	7.5	7.8	7.6	7.1	6.5	7.0	6.5	6.8	6.6
14. Employment in Services (% total employment)	63.6	64.2	63.9	63.2	62.8	63.3	63.6	64.4	64.4	64.5	64.3
15. Employment in Industry (% total employment)	31.1	30.7	31.3	32.2	32.9	32.6	32.4	31.5	31.5	31.5	32.0
16. Employment in Agriculture (% total employment)	5.3	5.1	4.8	4.6	4.3	4.1	4.0	4.1	4.1	3.9	3.7
17. Activity rate (% population aged 15-64)	81.9	81.7	81.6	81.3	81.6	82.7	81.3	80.6	79.9	80.6	80.2
18. Activity rate (% population aged 15-24)	61.7	61.0	60.5	56.9	57.5	61.7	56.9	56.6	54.7	56.3	55.9
19. Activity rate (% population aged 25-54)	89.5	89.7	89.9	90.5	90.8	91.3	90.8	90.1	89.6	89.6	89.1
20. Activity rate (% population aged 55-64)	72.5	72.2	72.1	74.0	74.6	75.0	73.9	73.5	73.9	75.9	75.9
21. Total unemployment (000)	57	58	60	46	34	37	49	56	49	51	53
22. Unemployment rate (% labour force)	4.5	4.6	4.7	3.5	2.6	2.7	3.6	4.1	3.5	3.6	3.7
23. Youth unemployment rate (% labour force 15-24)	11.8	12.2	12.0	8.8	8.0	7.8	10.3	10.7	9.5	9.8	10.5
24. Long term unemployment rate (% labour force)	0.8	0.9	0.9	0.9	0.5	0.3	0.6	0.9	0.9	0.8	0.8
25. Youth unemployment ratio (% population aged 15-24)	7.5	7.9	7.4	5.0	4.7	5.2	6.0	6.2	5.2	5.6	6.0

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	1 615	1 627	1 643	1 683	1 703	1 727	1 752	1 780	1 808	1 835	1 861
2. Population aged 15-64	1 453	1 464	1 480	1 513	1 529	1 549	1 566	1 582	1 600	1 615	1 631
3. Total employment (000)	1 095	1 100	1 110	1 147	1 199	1 239	1 240	1 229	1 249	1 272	1 287
4. Population in employment aged 15-64	1 054	1 058	1 062	1 093	1 132	1 167	1 165	1 159	1 174	1 191	1 198
5. Employment rate (% population aged 20-64)	75.0	74.8	74.6	75.7	77.5	78.6	77.9	76.9	77.1	77.3	77.1
6. Employment rate (% population aged 15-64)	72.6	72.2	71.7	72.2	74.0	75.4	74.4	73.3	73.4	73.8	73.5
7. Employment rate (% population aged 15-24)	56.0	56.0	53.6	53.0	56.2	58.1	54.3	52.6	52.3	53.8	53.8
8. Employment rate (% population aged 25-54)	79.7	79.8	79.9	80.9	82.3	84.0	83.5	82.2	82.2	82.1	81.5
9. Employment rate (% population aged 55-64)	62.3	60.6	60.1	61.6	64.0	64.2	64.6	65.0	66.1	66.9	67.1
10. FTE employment rate (% population aged 15-64)	58.6	58.2	57.9	58.2	60.4	61.9	61.3	60.3	60.4	61.0	60.6
11. Self-employed (% total employment)	4.4	4.3	4.3	4.1	3.9	3.6	3.8	3.5	3.5	3.5	3.7
12. Part-time employment (% total employment)	45.3	45.4	44.2	45.2	44.1	43.6	43.4	42.9	42.8	42.2	41.8
13. Fixed term contracts (% total employees)	11.3	11.8	11.6	12.6	11.7	11.1	9.8	9.8	9.4	10.2	10.2
14. Employment in Services (% total employment)	90.1	90.6	90.7	90.7	90.6	90.9	91.7	91.8	91.6	91.6	91.6
15. Employment in Industry (% total employment)	8.0	7.8	7.7	7.8	8.0	7.8	7.1	7.1	7.4	7.5	7.4
16. Employment in Agriculture (% total employment)	1.9	1.7	1.6	1.4	1.3	1.3	1.2	1.1	1.0	0.9	1.0
17. Activity rate (% population aged 15-64)	75.4	75.1	74.9	74.7	75.9	77.2	76.4	75.5	75.7	75.8	76.0
18. Activity rate (% population aged 15-24)	62.2	62.1	60.1	58.0	60.1	62.2	58.9	56.8	56.6	57.8	58.2
19. Activity rate (% population aged 25-54)	82.2	82.4	82.9	83.3	83.9	85.5	85.2	84.3	84.3	84.0	84.0
20. Activity rate (% population aged 55-64)	63.0	61.2	60.9	62.1	64.5	64.7	65.0	65.5	66.9	67.5	67.9
21. Total unemployment (000)	43	44	49	39	29	29	33	37	38	35	42
22. Unemployment rate (% labour force)	3.9	3.9	4.3	3.4	2.5	2.4	2.7	3.0	3.1	2.8	3.3
23. Youth unemployment rate (% labour force 15-24)	10.4	10.2	10.9	8.8	6.5	6.8	8.0	7.7	7.9	7.3	7.6
24. Long term unemployment rate (% labour force)	0.4	0.6	0.8	0.7	0.4	0.3	0.5	0.5	0.7	0.5	0.7
25. Youth unemployment ratio (% population aged 15-24)	6.2	6.1	6.4	5.0	4.0	4.1	4.6	4.3	4.4	4.0	4.4

Source: Eurostat.

Indicator 24: Break in series 2006.

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Labour market indicators: Switzerland

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	6 092	6 151	6 210	6 266	6 326	6 417	6 523	6 612	6 690	6 747	6 829
2. Population aged 15-64	4 950	4 994	5 035	5 073	5 109	5 172	5 240	5 291	5 334	5 369	5 417
3. Total employment (000)	:	:	:	:	:	:	:	:	:	:	:
4. Population in employment aged 15-64	3 857	3 865	3 887	3 954	4 016	4 112	4 140	4 158	4 232	4 266	4 309
5. Employment rate (% population aged 20-64)	80.2	80.0	79.9	80.5	81.3	82.3	81.7	81.1	81.8	82.0	82.1
6. Employment rate (% population aged 15-64)	77.9	77.4	77.2	77.9	78.6	79.5	79.0	78.6	79.3	79.4	79.6
7. Employment rate (% population aged 15-24)	63.5	61.9	59.9	63.3	62.6	62.4	61.6	62.5	62.9	61.7	61.9
8. Employment rate (% population aged 25-54)	84.8	84.7	85.1	85.2	86.1	87.2	86.7	85.8	86.4	86.7	86.4
9. Employment rate (% population aged 55-64)	65.8	65.2	65.1	65.7	67.2	68.4	68.3	68.0	69.5	70.5	71.7
10. FTE employment rate (% population aged 15-64)	65.8	65.4	65.2	65.6	66.4	67.0	66.4	65.8	66.7	66.8	66.8
11. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:
12. Part-time employment (% total employment)	32.7	33.0	33.1	33.3	33.5	34.3	34.8	35.3	35.2	35.9	36.5
13. Fixed term contracts (% total employees)	12.0	12.1	12.8	13.5	12.9	13.2	13.3	13.1	12.9	12.9	12.9
14. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:
16. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:
17. Activity rate (% population aged 15-64)	81.3	81.0	80.9	81.2	81.6	82.3	82.5	82.4	82.8	83.0	83.3
18. Activity rate (% population aged 15-24)	69.4	67.1	65.7	68.6	67.4	67.1	67.3	67.9	68.2	67.4	67.7
19. Activity rate (% population aged 25-54)	88.1	88.2	88.5	88.3	88.9	89.8	90.0	89.6	89.7	90.0	90.1
20. Activity rate (% population aged 55-64)	67.4	67.4	67.6	67.8	69.3	70.2	70.2	70.5	71.8	72.7	73.9
21. Total unemployment (000)	:	:	:	:	:	:	:	:	:	:	:
22. Unemployment rate (% labour force)	:	:	:	:	:	:	:	:	:	:	:
23. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	:	:	:
24. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	:	:	:
25. Youth unemployment ratio (% population aged 15-24)	5.9	5.2	5.8	5.3	4.8	4.7	5.7	5.3	5.2	5.7	5.8

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	2 948	2 978	3 009	3 039	3 071	3 122	3 183	3 229	3 269	3 303	3 347
2. Population aged 15-64	2 480	2 502	2 523	2 543	2 563	2 597	2 637	2 663	2 685	2 705	2 731
3. Total employment (000)	:	:	:	:	:	:	:	:	:	:	:
4. Population in employment aged 15-64	2 110	2 113	2 118	2 154	2 193	2 219	2 226	2 252	2 292	2 304	2 312
5. Employment rate (% population aged 20-64)	87.9	87.5	87.1	87.8	88.7	88.5	87.7	87.6	88.2	87.9	87.4
6. Employment rate (% population aged 15-64)	85.1	84.4	83.9	84.7	85.6	85.4	84.4	84.6	85.4	85.2	84.6
7. Employment rate (% population aged 15-24)	64.6	62.7	60.9	64.6	65.4	63.6	60.9	64.1	64.1	63.2	62.7
8. Employment rate (% population aged 25-54)	92.4	92.3	92.6	92.9	93.6	93.7	92.8	92.0	92.8	92.7	91.8
9. Employment rate (% population aged 55-64)	77.7	76.6	74.9	74.9	76.4	77.0	77.1	77.6	79.1	79.5	79.9
10. FTE employment rate (% population aged 15-64)	82.0	81.4	80.7	81.2	82.2	81.9	80.8	80.6	81.5	81.2	80.7
11. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:
12. Part-time employment (% total employment)	11.6	11.8	11.8	12.6	12.4	13.5	13.6	14.1	14.4	14.9	15.5
13. Fixed term contracts (% total employees)	11.7	11.8	12.6	13.1	12.7	13.3	13.1	13.0	12.6	12.9	12.7
14. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:
16. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:
17. Activity rate (% population aged 15-64)	88.5	88.0	87.4	87.8	88.2	88.0	87.8	88.3	88.7	88.8	88.6
18. Activity rate (% population aged 15-24)	70.4	68.1	66.6	70.2	70.2	68.1	66.1	69.1	69.3	69.3	68.8
19. Activity rate (% population aged 25-54)	95.6	95.7	95.6	95.5	95.8	95.9	96.0	95.7	95.9	95.9	95.6
20. Activity rate (% population aged 55-64)	79.7	79.1	77.8	77.1	78.4	78.9	79.5	80.5	81.7	82.0	82.4
21. Total unemployment (000)	:	:	:	:	:	:	:	:	:	:	:
22. Unemployment rate (% labour force)	:	:	:	:	:	:	:	:	:	:	:
23. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	:	:	:
24. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	:	:	:
25. Youth unemployment ratio (% population aged 15-24)	5.8	5.5	5.6	5.6	4.8	4.5	5.3	5.1	5.2	6.1	6.0

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	3 144	3 172	3 200	3 227	3 255	3 295	3 341	3 383	3 421	3 445	3 482
2. Population aged 15-64	2 470	2 492	2 512	2 530	2 547	2 574	2 602	2 628	2 649	2 664	2 686
3. Total employment (000)	:	:	:	:	:	:	:	:	:	:	:
4. Population in employment aged 15-64	1 747	1 752	1 769	1 800	1 823	1 893	1 915	1 906	1 941	1 961	1 998
5. Employment rate (% population aged 20-64)	72.5	72.4	72.7	73.2	73.9	76.0	75.6	74.6	75.4	76.0	76.6
6. Employment rate (% population aged 15-64)	70.7	70.3	70.4	71.1	71.6	73.5	73.6	72.5	73.3	73.6	74.4
7. Employment rate (% population aged 15-24)	62.3	61.1	58.8	62.0	59.7	61.2	62.4	60.9	61.7	60.1	61.0
8. Employment rate (% population aged 25-54)	77.3	77.1	77.5	77.6	78.5	80.6	80.4	79.5	80.0	80.6	80.9
9. Employment rate (% population aged 55-64)	54.1	54.1	55.6	56.6	58.1	60.0	59.6	58.5	60.0	61.5	63.6
10. FTE employment rate (% population aged 15-64)	50.0	50.0	50.1	50.6	51.1	52.5	52.5	51.2	52.0	52.4	53.0
11. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:
12. Part-time employment (% total employment)	58.4	58.8	58.8	58.4	59.0	59.0	59.8	60.6	60.1	60.9	61.1
13. Fixed term contracts (% total employees)	12.4	12.5	13.0	13.9	13.1	13.1	13.4	13.2	13.3	12.9	13.1
14. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:
16. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:
17. Activity rate (% population aged 15-64)	74.1	73.9	74.3	74.7	75.0	76.6	77.1	76.4	76.7	77.2	78.0
18. Activity rate (% population aged 15-24)	68.3	66.0	64.7	67.0	64.5	66.1	68.5	66.5	67.0	65.4	66.5
19. Activity rate (% population aged 25-54)	80.5	80.8	81.3	81.2	81.9	83.6	83.9	83.5	83.4	84.1	84.5
20. Activity rate (% population aged 55-64)	55.4	56.0	57.7	58.6	60.3	61.6	61.0	60.6	62.1	63.5	65.4
21. Total unemployment (000)	:	:	:	:	:	:	:	:	:	:	:
22. Unemployment rate (% labour force)	:	:	:	:	:	:	:	:	:	:	:
23. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	:	:	:
24. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	:	:	:
25. Youth unemployment ratio (% population aged 15-24)	6.0	4.9	5.9	5.0	4.8	4.9	6.2	5.6	5.2	5.3	5.5

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Source: Eurostat.

LFS indicators: Break in series 2010.

Labour market indicators: Macedonia FYR

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	:	:	:	2 038	2 042	2 044	2 046	2 051	2 055	2 062	2 060
2. Population aged 15-64	:	:	:	1 421	1 433	1 435	1 439	1 448	1 455	1 464	1 463
3. Total employment (000)	:	:	:	:	:	:	:	:	:	:	:
4. Population in employment aged 15-64	:	:	:	563	583	602	623	630	639	644	673
5. Employment rate (% population aged 20-64)	:	:	:	43.9	45.0	46.3	47.9	48.1	48.4	48.2	50.3
6. Employment rate (% population aged 15-64)	:	:	:	39.6	40.7	41.9	43.3	43.5	43.9	44.0	46.0
7. Employment rate (% population aged 15-24)	:	:	:	14.4	15.2	15.7	15.7	15.4	14.4	15.5	16.2
8. Employment rate (% population aged 25-54)	:	:	:	51.6	52.8	53.9	55.3	55.8	56.4	55.8	57.9
9. Employment rate (% population aged 55-64)	:	:	:	27.9	28.8	31.7	34.6	34.2	35.4	35.4	37.9
10. FTE employment rate (% population aged 15-64)	:	:	:	38.9	39.8	41.1	42.4	42.6	42.9	42.9	45.1
11. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:
12. Part-time employment (% total employment)	:	:	:	6.6	6.7	5.8	5.6	5.9	6.3	6.4	4.6
13. Fixed term contracts (% total employees)	:	:	:	11.9	12.6	14.7	15.5	16.4	14.9	14.4	15.2
14. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:
16. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:
17. Activity rate (% population aged 15-64)	:	:	:	62.2	62.8	63.5	64.0	64.2	64.2	63.9	64.9
18. Activity rate (% population aged 15-24)	:	:	:	35.8	35.9	35.9	35.0	33.3	32.1	33.6	33.6
19. Activity rate (% population aged 25-54)	:	:	:	77.3	77.9	78.1	78.5	79.4	79.2	78.5	79.2
20. Activity rate (% population aged 55-64)	:	:	:	39.0	40.0	44.3	46.9	47.4	49.2	47.2	49.9
21. Total unemployment (000)	:	:	:	:	:	:	:	:	:	:	:
22. Unemployment rate (% labour force)	:	:	:	:	:	:	:	:	:	:	:
23. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	:	:	:
24. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	:	:	:
25. Youth unemployment ratio (% population aged 15-24)	:	:	:	21.4	20.7	20.2	19.3	17.9	17.7	18.1	17.5

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	:	:	:	1 020	1 024	1 025	1 026	1 028	1 030	1 033	1 033
2. Population aged 15-64	:	:	:	718	726	727	729	733	737	742	742
3. Total employment (000)	:	:	:	:	:	:	:	:	:	:	:
4. Population in employment aged 15-64	:	:	:	347	354	369	385	387	385	389	404
5. Employment rate (% population aged 20-64)	:	:	:	53.6	54.0	56.2	58.4	58.4	57.8	57.5	59.7
6. Employment rate (% population aged 15-64)	:	:	:	48.3	48.8	50.7	52.8	52.8	52.3	52.4	54.5
7. Employment rate (% population aged 15-24)	:	:	:	17.2	18.6	19.2	20.6	19.5	17.7	18.1	18.9
8. Employment rate (% population aged 25-54)	:	:	:	61.8	62.1	64.0	65.7	66.1	65.7	65.4	67.4
9. Employment rate (% population aged 55-64)	:	:	:	39.0	38.6	43.0	47.6	46.7	47.3	46.6	49.4
10. FTE employment rate (% population aged 15-64)	:	:	:	47.7	48.0	50.1	52.1	52.0	51.2	51.3	53.5
11. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:
12. Part-time employment (% total employment)	:	:	:	6.0	6.5	4.7	4.7	5.0	5.8	5.9	4.4
13. Fixed term contracts (% total employees)	:	:	:	13.2	14.1	16.2	17.4	18.6	16.7	15.5	16.1
14. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:
16. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:
17. Activity rate (% population aged 15-64)	:	:	:	75.0	74.8	76.6	77.6	77.7	76.8	76.6	76.8
18. Activity rate (% population aged 15-24)	:	:	:	42.0	43.8	43.3	43.4	42.2	39.9	40.5	39.9
19. Activity rate (% population aged 25-54)	:	:	:	91.1	90.4	91.8	92.7	93.3	92.0	92.2	91.9
20. Activity rate (% population aged 55-64)	:	:	:	56.9	56.4	62.9	66.0	65.6	67.7	63.9	65.7
21. Total unemployment (000)	:	:	:	:	:	:	:	:	:	:	:
22. Unemployment rate (% labour force)	:	:	:	:	:	:	:	:	:	:	:
23. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	:	:	:
24. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	:	:	:
25. Youth unemployment ratio (% population aged 15-24)	:	:	:	24.7	25.1	24.1	22.9	22.7	22.2	22.3	20.9

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	:	:	:	1 018	1 019	1 020	1 020	1 023	1 025	1 029	1 027
2. Population aged 15-64	:	:	:	702	707	708	711	715	718	722	721
3. Total employment (000)	:	:	:	:	:	:	:	:	:	:	:
4. Population in employment aged 15-64	:	:	:	216	229	233	238	243	254	255	269
5. Employment rate (% population aged 20-64)	:	:	:	34.0	35.8	36.2	37.1	37.5	38.8	38.7	40.7
6. Employment rate (% population aged 15-64)	:	:	:	30.7	32.3	32.9	33.5	34.0	35.3	35.3	37.3
7. Employment rate (% population aged 15-24)	:	:	:	11.4	11.5	12.0	10.6	11.2	10.8	12.6	13.3
8. Employment rate (% population aged 25-54)	:	:	:	41.0	43.0	43.4	44.5	45.1	46.8	45.8	48.0
9. Employment rate (% population aged 55-64)	:	:	:	17.5	19.6	21.1	22.4	22.4	24.0	24.5	26.6
10. FTE employment rate (% population aged 15-64)	:	:	:	30.0	31.5	31.9	32.5	33.0	34.3	34.2	36.5
11. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:
12. Part-time employment (% total employment)	:	:	:	7.6	7.2	7.6	7.0	7.4	7.1	7.2	5.0
13. Fixed term contracts (% total employees)	:	:	:	10.1	10.5	12.4	12.6	13.3	12.3	12.9	14.0
14. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:
16. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:
17. Activity rate (% population aged 15-64)	:	:	:	49.2	50.4	50.2	50.0	50.4	51.2	50.8	52.7
18. Activity rate (% population aged 15-24)	:	:	:	29.3	27.5	28.1	26.2	24.0	23.9	26.2	27.1
19. Activity rate (% population aged 25-54)	:	:	:	63.0	65.0	63.9	63.9	65.0	65.8	64.4	66.0
20. Activity rate (% population aged 55-64)	:	:	:	22.3	24.6	26.9	29.0	30.2	31.7	31.2	34.5
21. Total unemployment (000)	:	:	:	:	:	:	:	:	:	:	:
22. Unemployment rate (% labour force)	:	:	:	:	:	:	:	:	:	:	:
23. Youth unemployment rate (% labour force 15-24)	:	:	:	:	:	:	:	:	:	:	:
24. Long term unemployment rate (% labour force)	:	:	:	:	:	:	:	:	:	:	:
25. Youth unemployment ratio (% population aged 15-24)	:	:	:	17.8	16.0	16.1	15.6	12.8	13.1	13.6	13.8

Source: Eurostat.

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Labour market indicators: Turkey

All	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	:	:	:	68 063	68 897	69 721	70 537	71 340	72 371	73 600	74 452
2. Population aged 15-64	:	:	:	44 584	45 303	45 988	46 771	47 533	48 431	49 433	50 186
3. Total employment (000)	:	:	:	:	:	:	:	:	:	:	:
4. Population in employment aged 15-64	:	:	:	19 885	20 219	20 633	20 698	22 003	23 450	24 171	24 856
5. Employment rate (% population aged 20-64)	:	:	:	48.2	48.2	48.4	47.8	50.0	52.2	52.8	53.4
6. Employment rate (% population aged 15-64)	:	:	:	44.6	44.6	44.9	44.3	46.3	48.4	48.9	49.5
7. Employment rate (% population aged 15-24)	:	:	:	30.3	30.2	30.3	28.9	30.0	32.0	31.5	32.2
8. Employment rate (% population aged 25-54)	:	:	:	53.2	53.2	53.4	52.8	55.4	57.5	58.3	59.1
9. Employment rate (% population aged 55-64)	:	:	:	27.7	27.2	27.5	28.2	29.6	31.4	31.9	31.5
10. FTE employment rate (% population aged 15-64)	:	:	:	42.8	42.7	42.7	41.5	43.3	45.3	45.7	46.1
11. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:
12. Part-time employment (% total employment)	:	:	:	7.6	8.4	9.3	11.3	11.7	12.0	12.0	12.5
13. Fixed term contracts (% total employees)	:	:	:	12.5	11.9	11.2	10.7	11.5	12.2	12.0	11.9
14. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:
16. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:
17. Activity rate (% population aged 15-64)	:	:	:	49.0	49.1	49.8	50.8	51.9	53.2	53.3	54.4
18. Activity rate (% population aged 15-24)	:	:	:	36.3	36.5	37.1	37.4	37.4	38.5	37.4	38.8
19. Activity rate (% population aged 25-54)	:	:	:	57.4	57.5	58.2	59.4	61.1	62.3	62.8	64.0
20. Activity rate (% population aged 55-64)	:	:	:	28.7	28.1	28.7	29.9	31.1	32.8	33.2	33.0
21. Total unemployment (000)	:	:	2 030	1 953	2 013	2 275	3 047	2 697	2 328	2 201	2 438
22. Unemployment rate (% labour force)	:	:	9.2	8.7	8.8	9.7	12.5	10.7	8.8	8.1	8.7
23. Youth unemployment rate (% labour force 15-24)	:	:	17.4	16.4	17.2	18.4	22.7	19.7	16.8	15.7	17.0
24. Long term unemployment rate (% labour force)	:	:	:	2.7	2.3	2.3	2.8	2.8	2.1	1.8	1.9
25. Youth unemployment ratio (% population aged 15-24)	:	:	:	6.0	6.3	6.9	8.5	7.4	6.4	5.9	6.6

Male	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	:	:	:	33 754	34 176	34 587	34 998	35 400	35 907	36 585	37 022
2. Population aged 15-64	:	:	:	22 088	22 464	22 821	23 226	23 620	24 078	24 654	25 052
3. Total employment (000)	:	:	:	:	:	:	:	:	:	:	:
4. Population in employment aged 15-64	:	:	:	14 772	15 012	15 192	14 992	15 744	16 671	17 054	17 403
5. Employment rate (% population aged 20-64)	:	:	:	73.2	73.0	72.7	70.4	72.7	75.1	75.0	75.3
6. Employment rate (% population aged 15-64)	:	:	:	66.9	66.8	66.6	64.5	66.7	69.2	69.2	69.5
7. Employment rate (% population aged 15-24)	:	:	:	41.9	41.6	41.3	39.0	40.2	43.3	42.5	43.1
8. Employment rate (% population aged 25-54)	:	:	:	80.7	80.7	80.2	77.9	80.5	82.7	82.8	83.2
9. Employment rate (% population aged 55-64)	:	:	:	41.6	40.6	41.0	41.1	42.7	45.4	46.3	45.2
10. FTE employment rate (% population aged 15-64)	:	:	:	65.7	65.5	65.1	62.6	64.5	67.1	67.0	67.2
11. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:
12. Part-time employment (% total employment)	:	:	:	4.3	4.7	5.3	6.5	6.9	6.8	6.9	7.2
13. Fixed term contracts (% total employees)	:	:	:	12.6	12.0	11.1	10.5	11.1	12.4	12.5	12.5
14. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:
16. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:
17. Activity rate (% population aged 15-64)	:	:	:	73.3	73.4	73.8	74.0	74.5	75.6	75.0	75.6
18. Activity rate (% population aged 15-24)	:	:	:	49.8	50.2	50.5	50.6	49.8	51.3	49.8	51.0
19. Activity rate (% population aged 25-54)	:	:	:	87.2	87.2	87.5	87.6	88.6	89.2	88.8	89.4
20. Activity rate (% population aged 55-64)	:	:	:	43.7	42.5	43.4	44.3	45.7	48.1	48.7	47.9
21. Total unemployment (000)	:	:	1 504	1 428	1 474	1 653	2 200	1 873	1 548	1 443	1 544
22. Unemployment rate (% labour force)	:	:	9.1	8.6	8.7	9.6	12.5	10.4	8.3	7.6	7.9
23. Youth unemployment rate (% labour force 15-24)	:	:	17.2	15.9	17.0	18.2	22.8	19.3	15.6	14.5	15.6
24. Long term unemployment rate (% labour force)	:	:	:	2.3	2.0	2.0	2.5	2.3	1.6	1.4	1.4
25. Youth unemployment ratio (% population aged 15-24)	:	:	:	7.9	8.6	9.2	11.6	9.6	8.0	7.2	7.9

Female	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Total population (000)	:	:	:	34 309	34 721	35 133	35 540	35 940	36 464	37 015	37 430
2. Population aged 15-64	:	:	:	22 496	22 839	23 167	23 545	23 912	24 353	24 779	25 135
3. Total employment (000)	:	:	:	:	:	:	:	:	:	:	:
4. Population in employment aged 15-64	:	:	:	5 112	5 207	5 442	5 706	6 258	6 779	7 117	7 452
5. Employment rate (% population aged 20-64)	:	:	:	24.0	24.2	24.9	25.8	28.0	29.7	30.9	31.8
6. Employment rate (% population aged 15-64)	:	:	:	22.7	22.8	23.5	24.2	26.2	27.8	28.7	29.6
7. Employment rate (% population aged 15-24)	:	:	:	19.3	19.4	19.8	19.3	20.2	21.2	20.7	21.5
8. Employment rate (% population aged 25-54)	:	:	:	25.5	25.6	26.5	27.6	30.1	32.2	33.7	34.8
9. Employment rate (% population aged 55-64)	:	:	:	14.8	14.7	14.8	16.0	17.1	17.9	18.0	18.3
10. FTE employment rate (% population aged 15-64)	:	:	:	20.5	20.3	20.8	20.9	22.5	23.8	24.6	25.3
11. Self-employed (% total employment)	:	:	:	:	:	:	:	:	:	:	:
12. Part-time employment (% total employment)	:	:	:	17.3	19.1	20.2	23.7	23.8	24.7	24.4	24.8
13. Fixed term contracts (% total employees)	:	:	:	12.1	11.5	11.6	11.5	12.5	11.8	10.8	10.4
14. Employment in Services (% total employment)	:	:	:	:	:	:	:	:	:	:	:
15. Employment in Industry (% total employment)	:	:	:	:	:	:	:	:	:	:	:
16. Employment in Agriculture (% total employment)	:	:	:	:	:	:	:	:	:	:	:
17. Activity rate (% population aged 15-64)	:	:	:	25.1	25.2	26.2	27.8	29.6	31.0	31.8	33.2
18. Activity rate (% population aged 15-24)	:	:	:	23.4	23.5	24.4	24.9	25.5	26.2	25.2	26.8
19. Activity rate (% population aged 25-54)	:	:	:	27.5	27.6	28.8	31.0	33.4	35.2	36.7	38.4
20. Activity rate (% population aged 55-64)	:	:	:	14.9	14.8	15.0	16.3	17.3	18.1	18.3	18.7
21. Total unemployment (000)	:	:	527	525	539	622	847	824	780	758	894
22. Unemployment rate (% labour force)	:	:	9.3	9.1	9.1	10.0	12.6	11.4	10.1	9.4	10.5
23. Youth unemployment rate (% labour force 15-24)	:	:	17.9	17.4	17.5	18.9	22.4	20.6	19.0	17.9	19.6
24. Long term unemployment rate (% labour force)	:	:	:	3.6	3.1	3.1	3.8	3.9	3.2	2.7	3.0
25. Youth unemployment ratio (% population aged 15-24)	:	:	:	4.1	4.1	4.6	5.6	5.3	5.0	4.5	5.3

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Source: Eurostat.

Indicator 24: Break in series 2007.

Data sources and definitions

Main data sources

Most of the data used in this report originates from Eurostat, the Statistical Office of the European Union. The main data sources used are:

- European Union Labour Force Survey
- ESA95 National Accounts

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 report 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 (**ESA95 National Accounts**). The changeover to ESA2010 had not taken place yet at the time this publication was prepared. 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.

Forecasts for central economic indicators are produced by the Commission's Directorate-General for Economic and Financial Affairs (DG ECFIN) in spring and autumn, covering two years ahead.

Physically, data is generally obtained from Eurobase, Eurostat's online dissemination database, or in specific cases from AMECO, DG ECFIN's annual macroeconomic database. Both databases are open to public access.

Data shown here represents availability and revision status of mid-July 2014.

Definitions and data sources of macro-economic indicators

Some figures for 2013 are forecasts and bound to change as real data becomes available. The same holds for earlier years where actual data are not available yet.

1. Real GDP: Gross Domestic Product (GDP), volume, annual change (Source: Eurostat, ESA95 National Accounts, except for TR: DG ECFIN, AMECO).

2. Total employment: Employment, total economy, annual change (Source: Eurostat, ESA95 National Accounts, except for IS, MK, TR, US, JP: DG ECFIN, AMECO).

3. Labour productivity: GDP volume per person employed, annual change (Source: Eurostat, ESA95 National Accounts, except for IS, MK, TR, US, JP: DG ECFIN, AMECO).

4. Annual average hours worked per person employed, annual change (Source: DG ECFIN, AMECO: Average annual hours worked per person employed).

5. Productivity per hour worked: GDP volume per hour worked, annual change (Source: DG ECFIN, AMECO: Gross domestic product at 2005 market prices per hour worked).

6. Harmonised CPI: harmonised consumer price index, annual change (Source: DG ECFIN, AMECO: Harmonised consumer price index) (Note: Figures for US and Japan are national consumer price indices and not fully comparable with those for European countries.).

7. Price deflator GDP: Implicit price deflator of GDP, annual change (Source: Eurostat, ESA95 National Accounts).

8. Nominal compensation per employee, total economy, annual change (Source: Eurostat, ESA95 National Accounts, except for IS, MK, TR, US, JP: DG ECFIN, AMECO).

9. Real compensation per employee (GDP deflator): nominal compensation deflated with the implicit deflator of GDP, per employee, annual change (Source: Eurostat, ESA95 National Accounts, except for IS, MK, TR, US, JP: DG ECFIN, AMECO).

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, ESA95 National Accounts, except for IS, MK, TR, US, JP: DG ECFIN, AMECO).

11. Nominal unit labour costs: Nominal compensation per employee divided by labour productivity, annual change (Source: Eurostat, ESA95 National Accounts, except for IS, MK, TR, US, JP: DG ECFIN, AMECO).

12. Real unit labour costs: Real compensation per employee divided by labour productivity, annual change (Source: Eurostat, ESA95 National Accounts, except for IS, MK, TR, US, JP: DG ECFIN, AMECO).

Definitions and data sources of key employment indicators

Certain figures in particular but not only for 2013 for a number of countries and indicators may still be based on forecasts and bound to change as real data becomes available.

1. Total population in 1 000s, excluding population living in institutional households (Source: Eurostat, EU-LFS).

2. Total population aged 15-64 (the 'working age population') in 1 000s (Source: Eurostat, EU-LFS).

3. Total employment in 1 000s (Source: Eurostat, ESA95 National Accounts).

4. Population in employment aged 15-64 in 1 000s (Source: Eurostat, EU-LFS).

5-8. Employment rates: calculated by the number of employed divided by the population in the corresponding age bracket (Source: Eurostat, EU-LFS).

9. Full-time equivalent employment rate: calculated by dividing the full-time equivalent employment by the total population in the 15-64 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).

10. Self-employed in total employment: number of self-employed as a share of total employment (Source: Eurostat, ESA95 National Accounts).

11. Part-time employment in total employment: number of part-time employed as a share of total employment (Source: Eurostat, EU-LFS).

12. Fixed-term contracts in total employees: number of employees with contracts of limited duration as a share of total employees (Source: Eurostat, EU-LFS).

13. Employment in services: employed in services (NACE Rev. 2 sections G-U) as a share of total employment (Source: Eurostat, ESA95 National Accounts).

14. Employment in industry: employed in industry, including construction (NACE Rev. 2 sections B-F) as a share of total employment (Source: Eurostat, ESA95 National Accounts).

15. Employment in agriculture: employed in agriculture, forestry and fishing (NACE Rev. 2 section A) as a share of total employment (Source: Eurostat, ESA95 National Accounts).

16-19.Activity rates: labour force (employed and unemployed) as a share of total population in the corresponding age group (Source: Eurostat, EU-LFS).

20. Total unemployment in 1 000s (Source: Eurostat, EU-LFS).

21-22. Unemployment rates: unemployed as a share of the labour force (employed and unemployed persons) in the corresponding age group (Source: Eurostat, EU-LFS).

23. Long-term unemployment rate: persons unemployed for a duration of 12 months or more as a share of the labour force (Source: Eurostat, EU-LFS).

24. Youth unemployment ratio: young unemployed (aged 15-24) as a share of the total population in the same age group (Source: Eurostat, EU-LFS).

Note: For indicators for which the ESA95 National Accounts are the main source, the split into male and female indicators is done using additionally EU-LFS data.

3. SOCIAL INDICATORS

Social Inclusion Indicators: European Union 28

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)				23.8	24.4	24.8	24.5 e
At-risk-of-poverty (% of total population)				16.5	17.0	16.9	16.7 e
At-risk-of-poverty threshold (PPS single person)							
Poverty gap (%)				23.5	23.4	23.5	23.8
Persistent at-risk-of-poverty (% of total population)					9.6 e	10.2 e	
At-risk-of-poverty before social transfers excl. pensions (% of total population)				26.0	26.4	25.8	25.8 e
Impact of social transfers (excl. pensions) in reducing poverty (%)				36.5	35.6	34.5	35.3
Severe Material Deprivation (% of total population)				8.4	8.9	9.9	9.6 e
Share of people living in low work intensity households (% of people aged 0-59)				10.2	10.4	10.5	10.7 e
Gross Household Disposable income adjusted for consumer prices (growth %)	1.9	1.0	0.7	-0.4	-0.2	-1.1	-0.2
Income quintile share ratio S80/S20				5.0	5.1	5.0	5.0
GINI coefficient				30.5	30.8	30.4	30.5
Early leavers from education and training (% of population aged 18-24)	14.9	14.7	14.2	13.9	13.4	12.7	12.0
NEET: Young people not in employment, education or training (% of total population aged 15-24)	10.9	10.8	12.4	12.7	12.9	13.1	13.0

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)				22.6	23.3	23.8	23.6 e
At-risk-of-poverty (% of male population)				15.8	16.2	16.3	16.1 e
Poverty gap (%)				24.3	24.5	24.5	24.5
Persistent at-risk-of-poverty (% of male population)					9.1 e	9.5 e	
Severe Material Deprivation (% of male population)				8.2	8.6	9.6	9.4 e
Share of people living in low work intensity households (% of males aged 0-59)				9.5	9.8	9.9	10.2 e
Life expectancy at birth (years)				77.0	77.4	77.5	
Healthy life years at birth (years)				61.9	61.7	61.5	
Early leavers from education and training (% of males aged 18-24)	16.9	16.6	16.1	15.8	15.3	14.4	13.6
NEET: Young people not in employment, education or training (% of males aged 15-24)	9.7	9.7	12.0	12.3	12.5	12.9	12.8

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)				24.8	25.4	25.8	25.4 e
At-risk-of-poverty (% of female population)				17.2	17.7	17.5	17.2 e
Poverty gap (%)				22.5	22.5	22.6	23.1
Persistent at-risk-of-poverty (% of female population)					10.1 e	10.8 e	
Severe Material Deprivation (% of female population)				8.6	9.2	10.2	9.8 e
Share of people living in low work intensity households (% of females aged 0-59)				10.9	11.1	11.0	11.2 e
Life expectancy at birth (years)				82.9	83.2	83.1	
Healthy life years at birth (years)				62.7	62.2	62.1	
Early leavers from education and training (% of females aged 18-24)	12.8	12.6	12.3	11.9	11.5	10.9	10.2
NEET: Young people not in employment, education or training (% of females aged 15-24)	12.1	12.0	12.9	13.2	13.3	13.4	13.3

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)				27.4	27.4	28.1	27.6 e
At-risk-of-poverty (% of Children population)				20.8	20.8	20.7	20.3 e
Severe Material Deprivation (% of Children population)				9.8	10.1	11.8	11.0 e
Share of children living in low work intensity households (% of Children population)				9.3	9.2	9.1	9.3 e
Risk of poverty of children in households at work (Working Intensity > 0.2)				15.7	15.7	15.9	15.6 e
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)				40.7	40.6	39.3	41.3

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)				23.7	24.5	25.4	25.3 e
At-risk-of-poverty (% of Working age population)				15.4	16.1	16.5	16.4 e
Severe Material Deprivation (% of Working age population)				81	91	101	101 e
Very low work intensity (18-59)				10.5	10.8	10.9	11.1 e
In-work at-risk-of poverty rate (% of persons employed)				8.4	8.9	9.1	8.9 e
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)				38.2	37.1	35.0	36.2

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)				19.9	20.4	19.4	18.3 e
At-risk-of-poverty (% of Elderly population)				15.9	15.9	14.6	13.8 e
Severe Material Deprivation (% of Elderly population)				6.7	7.2	7.5	7.0 e
Relative median income of elderly (ratio with median income of people younger than 65)				0.88	0.89	0.91	0.93
Aggregate replacement ratio (ratio)				0.53	0.54	0.54	0.56

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care		7.6 p	8.4 p	8.3 p	8.3 p		
Disability		2.0 p	2.1 p	2.1 p	2.1 p		
Old age and survivors		11.8 p	12.8 p	12.8 p	12.8 p		
Family/Children		2.1 p	2.3 p	2.3 p	2.2 p		
Unemployment		1.3 p	1.7 p	1.6 p	1.5 p		
Housing and Social exclusion n.e.c.		0.9 p	1.0 p	1.0 p	1.0 p		
Total (including Admin and Other expenditures)		26.7 p	29.5 p	29.4 p	29.0 p		
of which: Means tested benefits		2.7 p	3.0 p	3.0 p	3.0 p		

Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

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Social Inclusion Indicators: European Union 27

All	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of total population)	24.4	23.8	23.3	23.7	24.3	24.8	24.4 e
At-risk-of-poverty (% of total population)	16.5 e	16.6	16.4	16.5	16.9	16.9	16.6 e
At-risk-of-poverty threshold (PPS single person)							
Poverty gap (%)	23.2	21.8	22.6	23.4	23.3	23.4	23.8
Persistent at-risk-of-poverty (% of total population)		8.6 e	8.9 e	9.7	9.6 e	10.2 e	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	25.8	25.3	25.2	25.9	26.3	25.7	25.8 e
Impact of social transfers (excl. pensions) in reducing poverty (%)	36.1	34.4	34.9	36.3	35.7	34.2	35.7
Severe Material Deprivation (% of total population)	9.1	8.5	8.2 e	8.4	8.8	9.9	9.6 e
Share of people living in low work intensity households (% of people aged 0-59)	9.7	9.1	9.1	10.1	10.4	10.4	10.6 e
Gross Household Disposable income adjusted for consumer prices (growth %)							
Income quintile share ratio S80/S20	5.0	5.0	5.0	5.0	5.1	5.0	5.0
GINI coefficient	30.6	30.9	30.5	30.5	30.8	30.4	30.5
Early leavers from education and training (% of population aged 18-24)	15.0	14.8	14.3	14.0	13.5	12.8	12.0
NEET: Young people not in employment, education or training (% of total population aged 15-24)	10.9	10.9	12.4	12.7	12.9	13.1	12.9

By gender

Male	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of male population)	22.9	22.3	22.0	22.6	23.2	23.8	23.5 e
At-risk-of-poverty (% of male population)	15.7 e	15.6	15.5	15.7	16.2	16.3	16.1 e
Poverty gap (%)	24.1	22.4	23.4	24.2	24.4	24.4	24.5
Persistent at-risk-of-poverty (% of male population)		8.0 e	8.2 e	9.0	9.1 e	9.5 e	
Severe Material Deprivation (% of male population)	8.7	8.2	7.9 e	8.1	8.5	9.6	9.4 e
Share of people living in low work intensity households (% of males aged 0-59)	8.8	8.3	8.4	9.5	9.7	9.9	10.2 e
Life expectancy at birth (years)	76.1	76.4	76.7	77.0			
Healthy life years at birth (years)	61.7	61.1	61.3	61.9			
Early leavers from education and training (% of males aged 18-24)	17.0	16.8	16.2	15.9	15.4	14.5	13.7
NEET: Young people not in employment, education or training (% of males aged 15-24)	9.7	9.7	12.0	12.3	12.5	12.8	12.7

Female	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of female population)	25.9	25.1	24.5	24.8	25.4	25.7	25.3 e
At-risk-of-poverty (% of female population)	17.3 e	17.5	17.2	17.2	17.6	17.5	17.2 e
Poverty gap (%)	22.6	21.3	22.0	22.5	22.5	22.5	23.1
Persistent at-risk-of-poverty (% of female population)		9.2 e	9.6 e	10.3	10.1 e	10.8 e	
Severe Material Deprivation (% of female population)	9.5	8.8	8.4 e	8.6	9.1	10.1	9.8 e
Share of people living in low work intensity households (% of females aged 0-59)	10.7	9.9	9.9	10.8	11.0	11.0	11.1 e
Life expectancy at birth (years)	82.2	82.4	82.6	82.9			
Healthy life years at birth (years)	62.6	62.2	62.0	62.7			
Early leavers from education and training (% of females aged 18-24)	12.9	12.7	12.4	12.0	11.6	10.9	10.3
NEET: Young people not in employment, education or training (% of females aged 15-24)	12.1	12.0	12.9	13.2	13.3	13.4	13.2

By age

Children (0-17)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	26.4	26.6	26.3	27.4	27.3	28.0	27.6 e
At-risk-of-poverty (% of Children population)	19.7 e	20.4	20.2	20.8	20.8	20.7	20.3 e
Severe Material Deprivation (% of Children population)	10.1	9.9	9.5 e	9.8	10.1	11.7	11.0 e
Share of children living in low work intensity households (% of Children population)	8.4	7.7	8.1	9.3	9.2	9.0	9.3 e
Risk of poverty of children in households at work (Working Intensity > 0.2)	15.3	16.1	15.7	15.8	15.7	15.9	15.6 e
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	41.9	39.1	39.9	40.9	40.6	39.3	41.3

Working age (18-64)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of Working age population)	23.8	23.0	22.8	23.6	24.5	25.3	25.3 e
At-risk-of-poverty (% of Working age population)	15.1 e	14.8	14.9	15.4	16.1	16.4	16.4 e
Severe Material Deprivation (% of Working age population)	91	81	81 e	81	91	101	101 e
Very low work intensity (18-59)	10.2	9.6	9.5	10.4	10.8	10.9	11.1 e
In-work at-risk-of poverty rate (% of persons employed)	8.4	8.5	8.4	8.4	8.9	9.1	9.0 e
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	37.1	36.8	36.9	38.2	37.1	35.4	36.2

Elderly (65+)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	24.4	23.4	21.7	19.8	20.3	19.2	18.2 e
At-risk-of-poverty (% of Elderly population)	18.2 e	19.0	17.8	15.7	15.8	14.5	13.7 e
Severe Material Deprivation (% of Elderly population)	8.6	7.5	6.7 e	6.6	7.2	7.5	6.9 e
Relative median income of elderly (ratio with median income of people younger than 65)	0.84	0.85	0.86	0.88	0.89	0.91	0.93
Aggregate replacement ratio (ratio)	0.49	0.50	0.51	0.53	0.54	0.54	0.56

Expenditure in social protection indicators (% of GDP)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Sickness/Health care	7.3	7.6 p	8.4 p	8.3 p	8.3 p		
Disability	2.0	2.0 p	2.1 p	2.1 p	2.1 p		
Old age and survivors	11.5	11.8 p	12.8 p	12.8 p	12.8 p		
Family/Children	2.1	2.1 p	2.3 p	2.3 p	2.2 p		
Unemployment	1.3	1.3 p	1.7 p	1.6 p	1.5 p		
Housing and Social exclusion n.e.c.	0.9	0.9 p	1.0 p	1.0 p	1.0 p		
Total (including Admin and Other expenditures)	26.1	26.7 p	29.6 p	29.4 p	29.0 p		
of which: Means tested benefits	2.7	2.7 p	3.0 p	3.0 p	3.0 p		

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: European Union 15

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	21.6	21.7	21.3	21.8	22.7	23.2	23.0 e
At-risk-of-poverty (% of total population)	16.0 e	16.4	16.2	16.4	16.8	16.8	16.5 e
At-risk-of-poverty threshold (PPS single person)							
Poverty gap (%)	22.1	21.0	21.9	23.0	22.9	22.9	23.2
Persistent at-risk-of-poverty (% of total population)		8.6 e	8.9	9.2	9.2 e	9.8 e	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	25.7	25.0	25.3	26.2	26.6	26.1	26.2 e
Impact of social transfers (excl. pensions) in reducing poverty (%)	37.7	34.4	36.0	37.4	36.8	35.6	37.0
Severe Material Deprivation (% of total population)	4.9	5.4	5.1 e	5.3	6.2	7.3	7.2 e
Share of people living in low work intensity households (% of people aged 0-59)	9.8	9.4	9.6	10.8	11.0	11.0	11.3 e
Gross Household Disposable income adjusted for consumer prices (growth %)							
Income quintile share ratio S80/S20	4.9	4.9	4.9	5.0	5.1	5.0	4.9
GINI coefficient	30.3	30.8	30.5	30.6	30.9	30.5	30.4
Early leavers from education and training (% of population aged 18-24)	16.8	16.5	15.8	15.3	14.7	13.7	12.8
NEET: Young people not in employment, education or training (% of total population aged 15-24)	10.8	11.0	12.5	12.6	12.7	12.9	12.7

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	20.1	20.2	20.1	20.7	21.6	22.2	22.1 e
At-risk-of-poverty (% of male population)	15.1 e	15.4	15.3	15.5	15.9	16.1	15.9 e
Poverty gap (%)	22.8	21.6	22.7	23.7	23.9	23.9	23.9
Persistent at-risk-of-poverty (% of male population)		7.9 e	8.1	8.6	8.6 e	9.0 e	
Severe Material Deprivation (% of male population)	4.6	5.1	5.0 e	5.2	5.9	7.1	7.1 e
Share of people living in low work intensity households (% of males aged 0-59)	8.8	8.5	8.9	10.1	10.3	10.4	10.8 e
Life expectancy at birth (years)							
Healthy life years at birth (years)							
Early leavers from education and training (% of males aged 18-24)	19.2	18.9	18.0	17.6	16.8	15.6	14.5
NEET: Young people not in employment, education or training (% of males aged 15-24)	9.7	10.1	12.2	12.3	12.3	12.7	12.5

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	23.2	23.1	22.5	22.9	23.8	24.2	23.9 e
At-risk-of-poverty (% of female population)	16.9 e	17.4	17.1	17.1	17.6	17.4	17.1 e
Poverty gap (%)	21.5	20.6	21.4	22.0	22.2	22.0	22.6
Persistent at-risk-of-poverty (% of female population)		9.3 e	9.7	9.9	9.8 e	10.5 e	
Severe Material Deprivation (% of female population)	5.3	5.6	5.3 e	5.5	6.4	7.5	7.4 e
Share of people living in low work intensity households (% of females aged 0-59)	10.8	10.3	10.4	11.5	11.7	11.6	11.8 e
Life expectancy at birth (years)							
Healthy life years at birth (years)							
Early leavers from education and training (% of females aged 18-24)	14.3	14.1	13.5	13.0	12.6	11.8	11.0
NEET: Young people not in employment, education or training (% of females aged 15-24)	11.9	12.0	12.8	13.0	13.1	13.1	12.8

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	23.4	24.4	24.1	25.5	25.4	26.1	25.9 e
At-risk-of-poverty (% of Children population)	18.2 e	19.7	19.3	20.3	20.0	19.9	19.4 e
Severe Material Deprivation (% of Children population)	5.8	6.7	6.3 e	6.6	7.2	9.1	8.6 e
Share of children living in low work intensity households (% of Children population)	8.5	8.0	8.6	10.0	9.8	9.5	9.8 e
Risk of poverty of children in households at work (Working Intensity > 0.2)	14.2	15.2	14.6	14.8	14.6	14.9	14.6 e
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	45.5	40.3	42.6	42.7	43.0	41.8	44.3

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	21.1	21.0	21.0	21.9	23.0	24.1	24.1 e
At-risk-of-poverty (% of Working age population)	14.6 e	14.6	14.8	15.3	16.0	16.5	16.4 e
Severe Material Deprivation (% of Working age population)	51	51	51 e	61	61	81	81 e
Very low work intensity (18-59)	10.3	9.9	10.0	11.1	11.4	11.5	11.8 e
In-work at-risk-of poverty rate (% of persons employed)	7.9	8.0	7.9	7.9	8.5	8.8	8.6 e
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	38.7	37.1	37.8	39.3	38.2	36.3	37.6

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	21.7	21.0	19.5	17.8	18.7	17.3	16.5 e
At-risk-of-poverty (% of Elderly population)	18.6 e	19.2	17.8	16.0	16.2	14.6	13.8 e
Severe Material Deprivation (% of Elderly population)	3.8	3.6	3.3 e	3.3	4.3	4.6	4.4 e
Relative median income of elderly (ratio with median income of people younger than 65)	0.83	0.84	0.86	0.88	0.89	0.91	0.93
Aggregate replacement ratio (ratio)	0.49	0.49	0.50	0.52	0.53	0.54	0.55

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	7.5	7.8 p	8.6 p	8.6 p	8.6 p		
Disability	2.0	2.0 p	2.2 p	2.2 p	2.1 p		
Old age and survivors	11.7	12.1 p	13.1 p	13.1 p	13.1 p		
Family/Children	2.1	2.1 p	2.3 p	2.3 p	2.3 p		
Unemployment	1.3	1.3 p	1.8 p	1.7 p	1.6 p		
Housing and Social exclusion n.e.c.	0.9	0.9 p	1.1 p	1.1 p	1.1 p		
Total (including Admin and Other expenditures)	26.7	27.5 p	30.3 p	30.2 p	29.9 p		
of which: Means tested benefits	2.8	2.9 p	3.2 p	3.2 p	3.2 p		

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Euro Area 18

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	21.8	21.7	21.5	21.9	23.0	23.4	23.0 e
At-risk-of-poverty (% of total population)	16.3 e	16.1	16.1	16.3	17.0	17.0	16.7 e
At-risk-of-poverty threshold (PPS single person)							
Poverty gap (%)	22.1	21.2	22.3	23.4	23.3	23.4	24.0
Persistent at-risk-of-poverty (% of total population)		8.8 e	9.3	9.7	9.8 e	10.1 e	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	24.7	24.1	24.1	25.1	25.7	25.2	25.3 e
Impact of social transfers (excl. pensions) in reducing poverty (%)	34.0	33.2	33.2	35.1	33.9	32.5	34.0
Severe Material Deprivation (% of total population)	5.5	5.9	5.9	5.9	6.8	7.7	7.4 e
Share of people living in low work intensity households (% of people aged 0-59)	9.7	9.2	9.0	10.4	10.9	10.6	10.9 e
Gross Household Disposable income adjusted for consumer prices (growth %)	2.1	0.6	0.1	-0.5	-0.4	-1.7	-0.5
Income quintile share ratio S80/S20	4.8	4.9	4.9	5.0	5.1	5.0	5.0
GINI coefficient	30.0	30.4	30.3	30.3	30.6	30.5	30.6
Early leavers from education and training (% of population aged 18-24)	16.8	16.4	15.8	15.4	14.7	13.8	12.9
NEET: Young people not in employment, education or training (% of total population aged 15-24)	10.7	11.0	12.5	12.7	12.6	13.0	12.8

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	20.2	20.2	20.2	20.8	21.9	22.3	22.1 e
At-risk-of-poverty (% of male population)	15.3 e	15.1	15.1	15.5	16.2	16.3	16.0 e
Poverty gap (%)	22.8	21.9	23.1	23.9	24.3	24.3	24.7
Persistent at-risk-of-poverty (% of male population)		8.0 e	8.4	8.9	9.2 e	9.3 e	
Severe Material Deprivation (% of male population)	5.1	5.6	5.7	5.7	6.6	7.5	7.3 e
Share of people living in low work intensity households (% of males aged 0-59)	8.6	8.3	8.2	9.7	10.3	10.0	10.5 e
Life expectancy at birth (years)							
Healthy life years at birth (years)							
Early leavers from education and training (% of males aged 18-24)	19.5	19.0	18.3	17.9	17.0	15.9	14.8
NEET: Young people not in employment, education or training (% of males aged 15-24)	9.7	10.2	12.5	12.6	12.4	13.0	12.9

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	23.4	23.1	22.8	23.0	24.0	24.4	23.8 e
At-risk-of-poverty (% of female population)	17.2 e	17.1	17.0	17.1	17.7	17.7	17.3 e
Poverty gap (%)	21.5	20.7	21.8	22.7	22.7	22.6	23.4
Persistent at-risk-of-poverty (% of female population)		9.5 e	10.2	10.4	10.4 e	10.8 e	
Severe Material Deprivation (% of female population)	5.9	6.1	6.0	6.0	7.1	7.8	7.6 e
Share of people living in low work intensity households (% of females aged 0-59)	10.7	10.1	9.8	11.1	11.6	11.3	11.4 e
Life expectancy at birth (years)							
Healthy life years at birth (years)							
Early leavers from education and training (% of females aged 18-24)	14.0	13.7	13.3	12.9	12.4	11.6	11.0
NEET: Young people not in employment, education or training (% of females aged 15-24)	11.8	11.8	12.6	12.8	12.8	13.0	12.8

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	23.0	23.8	24.0	25.2	25.6	25.7	25.0 e
At-risk-of-poverty (% of Children population)	18.6 e	19.2	19.4	20.6	20.8	20.6	19.9 e
Severe Material Deprivation (% of Children population)	6.1	7.2	7.1	7.0	7.8	8.9	8.3 e
Share of children living in low work intensity households (% of Children population)	7.4	6.9	7.1	8.6	9.0	8.2	8.4 e
Risk of poverty of children in households at work (Working Intensity > 0.2)	14.4	15.3	15.3	15.5	15.4	15.6	14.9 e
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	41.7	39.2	38.8	38.7	38.3	37.2	39.7

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	21.6	21.4	21.4	22.3	23.6	24.4	24.3 e
At-risk-of-poverty (% of Working age population)	14.8 e	14.6	14.8	15.4	16.4	16.8	16.7 e
Severe Material Deprivation (% of Working age population)	61	61	61	61	71	81	81 e
Very low work intensity (18-59)	10.4	9.9	9.6	11.0	11.6	11.5	11.8 e
In-work at-risk-of poverty rate (% of persons employed)	7.9	8.1	8.2	8.2	8.6	8.8	8.7 e
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	36.5	36.0	35.7	37.4	35.4	33.9	35.0

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	21.3	20.4	19.2	17.2	18.1	17.5	16.5 e
At-risk-of-poverty (% of Elderly population)	19.1 e	18.2	17.2	15.0	15.1	14.2	13.3 e
Severe Material Deprivation (% of Elderly population)	4.7	4.4	4.1	4.1	5.3	5.6	5.2 e
Relative median income of elderly (ratio with median income of people younger than 65)	0.85	0.86	0.87	0.89	0.90	0.92	0.94
Aggregate replacement ratio (ratio)	0.49	0.50	0.51	0.53	0.54	0.54	0.56

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	7.5	7.8 p	8.6 p	8.6 p	8.5 p		
Disability	1.9	1.9 p	2.0 p	2.0 p	2.0 p		
Old age and survivors	11.9	12.2 p	13.1 p	13.2 p	13.1 p		
Family/Children	2.1	2.1 p	2.3 p	2.3 p	2.3 p		
Unemployment	1.5	1.5 p	2.0 p	1.9 p	1.8 p		
Housing and Social exclusion n.e.c.	0.8	0.8 p	0.9 p	0.9 p	0.9 p		
Total (including Admin and Other expenditures)	26.8	27.5 p	30.3 p	30.3 p	30.0 p		
of which: Means tested benefits	2.7	2.8 p	3.1 p	3.1 p	3.1 p		

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Social Inclusion Indicators: Belgium

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	21.6	20.8	20.2	20.8	21.0	21.6	20.8
At-risk-of-poverty (% of total population)	15.2	14.7	14.6	14.6	15.3	15.3	15.1
At-risk-of-poverty threshold (PPS single person)	9787	10046	10501	10399	10895	11103	11865
Poverty gap (%)	17.8	17.2	18.1	18.0	18.6	18.7	19.2
Persistent at-risk-of-poverty (% of total population)	7.8	9.0	9.2	9.3	8.0	9.8	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	27.5	27.0	26.7	26.7	27.8	27.7	26.3
Impact of social transfers (excl. pensions) in reducing poverty (%)	44.7	45.6	45.3	45.3	45.0	44.8	42.6
Severe Material Deprivation (% of total population)	5.7	5.6	5.2	5.9	5.7	6.3	5.1
Share of people living in low work intensity households (% of people aged 0-59)	13.8	11.7	12.3	12.7	13.8	13.9	14.0
Gross Household Disposable income adjusted for consumer prices (growth %)	2.5	2.1	2.6	-1.1	-0.9	1.2	
Income quintile share ratio S80/S20	3.9	4.1	3.9	3.9	3.9	4.0	3.8
GINI coefficient	26.3	27.5	26.4	26.6	26.3	26.5	25.9
Early leavers from education and training (% of population aged 18-24)	12.1	12.0	11.1	11.9	12.3	12.0	11.0
NEET: Young people not in employment, education or training (% of total population aged 15-24)	11.2	10.1	11.1	10.9	11.8	12.3	12.7

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	19.9	19.1	18.5	20.0	20.4	20.9	20.4
At-risk-of-poverty (% of male population)	14.4	13.6	13.4	13.9	14.6	14.7	14.6
Poverty gap (%)	19.2	18.2	18.9	18.0	19.9	18.9	20.1
Persistent at-risk-of-poverty (% of male population)	7.3	8.3	7.8	8.5	8.2	9.2	
Severe Material Deprivation (% of male population)	5.2	5.2	4.9	5.7	5.9	6.3	5.5
Share of people living in low work intensity households (% of males aged 0-59)	12.6	10.3	11.1	11.9	13.2	13.4	14.0
Life expectancy at birth (years)	77.1	76.9	77.3	77.6	78.0	77.8	
Healthy life years at birth (years)	63.5	63.3	63.9	64.0	63.4	64.3	
Early leavers from education and training (% of males aged 18-24)	13.9	13.4	12.8	13.8	14.9	14.4	13.2
NEET: Young people not in employment, education or training (% of males aged 15-24)	10.2	9.2	10.5	10.8	11.6	12.5	13.2

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	23.1	22.4	21.8	21.7	21.5	22.3	21.2
At-risk-of-poverty (% of female population)	15.9	15.9	15.7	15.2	16.0	15.9	15.5
Poverty gap (%)	16.9	16.6	17.7	18.0	17.4	18.5	18.5
Persistent at-risk-of-poverty (% of female population)	8.3	9.7	10.4	10.0	7.8	10.4	
Severe Material Deprivation (% of female population)	6.2	6.0	5.5	6.0	5.4	6.3	4.7
Share of people living in low work intensity households (% of females aged 0-59)	15.0	13.2	13.6	13.5	14.4	14.3	14.0
Life expectancy at birth (years)	82.6	82.6	82.8	83.0	83.3	83.1	
Healthy life years at birth (years)	63.9	64.2	63.7	62.6	63.6	65.4	
Early leavers from education and training (% of females aged 18-24)	10.3	10.6	9.3	10.0	9.7	9.5	8.7
NEET: Young people not in employment, education or training (% of females aged 15-24)	12.2	11.1	11.7	10.9	12.0	12.2	12.1

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	21.6	21.3	20.5	23.2	23.3	22.8	21.9
At-risk-of-poverty (% of Children population)	16.9	17.2	16.6	18.3	18.7	17.3	17.2
Severe Material Deprivation (% of Children population)	7.0	7.3	6.5	7.7	8.2	8.3	5.5
Share of children living in low work intensity households (% of Children population)	12.2	8.9	11.0	12.0	14.0	13.0	12.2
Risk of poverty of children in households at work (Working Intensity > 0.2)	9.2	11.1	8.8	10.3	8.5	8.6	9.2
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	46.2	45.6	48.6	42.5	44.7	46.6	46.6

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	20.7	20.1	19.3	20.0	20.0	21.3	20.8
At-risk-of-poverty (% of Working age population)	12.6	12.2	12.1	12.1	12.9	13.5	13.4
Severe Material Deprivation (% of Working age population)	61	61	51	61	61	71	61
Very low work intensity (18-59)	14.4	12.8	12.8	12.9	13.7	14.2	14.7
In-work at-risk-of poverty rate (% of persons employed)	4.3	4.7	4.5	4.4	4.1	4.5	4.4
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	52.3	53.1	51.8	52.9	51.1	50.6	47.7

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	25.0	22.9	23.1	21.0	21.6	21.2	19.5
At-risk-of-poverty (% of Elderly population)	23.0	21.2	21.6	19.4	20.2	19.4	18.4
Severe Material Deprivation (% of Elderly population)	3.6	3.2	3.1	2.8	2.6	2.8	2.0
Relative median income of elderly (ratio with median income of people younger than 65)	0.74	0.74	0.74	0.75	0.74	0.74	0.76
Aggregate replacement ratio (ratio)	0.44	0.45	0.45	0.46	0.44	0.46	0.47

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	7.2	7.6	8.3	8.2	8.3		
Disability	1.8	1.9	2.1	2.1	2.2		
Old age and survivors	10.2	10.8	11.6	11.3	11.6		
Family/Children	2.1	2.1	2.2	2.2	2.2		
Unemployment	3.2	3.3	3.8	3.7	3.7		
Housing and Social exclusion n.e.c.	0.9	0.9	1.0	1.0	1.0		
Total (including Admin and Other expenditures)	26.9	28.3	30.6	30.1	30.4		
of which: Means tested benefits	1.2	1.4	1.5	1.5	1.4		

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Bulgaria

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	60.7	44.8 b	46.2	49.2	49.1	49.3	48.0
At-risk-of-poverty (% of total population)	22.0	21.4	21.8	20.7	22.2	21.2	21.0
At-risk-of-poverty threshold (PPS single person)	1 979	2 859	3 436	3 531	3 499	3 517	3 633
Poverty gap (%)	33.5	27.0	27.4	29.6	29.4	31.4	30.9
Persistent at-risk-of-poverty (% of total population)			10.7	16.4	16.9	12.9	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	25.5	27.1	26.4	27.1	27.4	25.9	26.7
Impact of social transfers (excl. pensions) in reducing poverty (%)	13.7	21.0	17.4	23.6	19.0	18.2	21.4
Severe Material Deprivation (% of total population)	57.6	41.2	41.9	45.7	43.6	44.1	43.0
Share of people living in low work intensity households (% of people aged 0-59)	16.0	8.1 b	6.9	8.0	11.0	12.5	13.0
Gross Household Disposable income adjusted for consumer prices (growth %)	3.3	15.1	-3.1	-0.9	2.7	-1.9	
Income quintile share ratio S80/S20	7.0	6.5	5.9	5.9	6.5	6.1	6.6
GINI coefficient	35.3	35.9	33.4	33.2	35.0	33.6	35.4
Early leavers from education and training (% of population aged 18-24)	14.9	14.8	14.7	13.9	11.8	12.5	12.5
NEET: Young people not in employment, education or training (% of total population aged 15-24)	19.1	17.4	19.5	21.8	21.8	21.5	21.6

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	59.4	43.0 b	44.1	47.3	47.7	47.6	46.5
At-risk-of-poverty (% of male population)	20.9	19.8	19.8	19.0	20.8	19.5	19.7
Poverty gap (%)	37.1	26.8	27.3	29.0	31.0	32.6	31.8
Persistent at-risk-of-poverty (% of male population)			9.8	13.7	15.9	11.0	
Severe Material Deprivation (% of male population)	56.6	39.6	40.1	44.2	42.5	42.9	41.6
Share of people living in low work intensity households (% of males aged 0-59)	15.6	7.8 b	7.0	7.8	11.1	12.5	12.9
Life expectancy at birth (years)	69.5	69.8	70.1	70.3	70.7	70.9	
Healthy life years at birth (years)	67.1	62.1 bd	62.1	63.0	62.1	62.1	
Early leavers from education and training (% of males aged 18-24)	15.2	14.1	13.7	13.2	11.2	12.1	12.3
NEET: Young people not in employment, education or training (% of males aged 15-24)	17.7	15.6	18.1	20.7	21.8	21.6	22.1

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	61.9	46.4 b	48.1	50.9	50.5	50.9	49.4
At-risk-of-poverty (% of female population)	23.0	22.9	23.7	22.3	23.6	22.8	22.2
Poverty gap (%)	31.6	27.0	27.5	30.2	29.0	30.5	30.4
Persistent at-risk-of-poverty (% of female population)			11.5	18.9	17.8	14.6	
Severe Material Deprivation (% of female population)	58.6	42.8	43.5	47.2	44.6	45.3	44.4
Share of people living in low work intensity households (% of females aged 0-59)	16.4	8.3 b	6.8	8.2	11.0	12.4	13.2
Life expectancy at birth (years)	76.7	77.0	77.4	77.4	77.8	77.9	
Healthy life years at birth (years)	73.9	65.7 bd	65.9	67.1	65.9	65.7	
Early leavers from education and training (% of females aged 18-24)	14.7	15.5	15.8	14.5	12.6	13.0	12.7
NEET: Young people not in employment, education or training (% of females aged 15-24)	20.6	19.3	20.9	23.0	21.9	21.5	21.1

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	60.8	44.2 b	47.3	49.8	51.8	52.3	51.5
At-risk-of-poverty (% of Children population)	29.9	25.5	24.9	26.7	28.4	28.2	28.4
Severe Material Deprivation (% of Children population)	58.3	40.8	43.6	46.5	45.6	46.6	46.3
Share of children living in low work intensity households (% of Children population)	18.9	9.5 b	7.6	10.4	14.1	16.8	18.2
Risk of poverty of children in households at work (Working Intensity > 0.2)	16.6	18.2	19.3	19.3	19.0	17.0	16.6
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	11.8	18.0	17.3	21.7	19.3	21.5	25.5

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	57.9	39.5 b	40.6	45.0	45.2	45.6	44.3
At-risk-of-poverty (% of Working age population)	19.4	17.0	16.4	16.0	18.2	17.4	17.1
Severe Material Deprivation (% of Working age population)	551	361	371	421	401	411	401
Very low work intensity (18-59)	15.1	7.7 b	6.7	7.3	10.2	11.2	11.6
In-work at-risk-of poverty rate (% of persons employed)	5.9	7.6	7.5	7.7	8.2	7.4	7.2
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	14.5	24.1	21.2	28.9	21.9	21.3	24.7

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	71.1	65.5 b	66.0	63.9	61.1	59.1	57.6
At-risk-of-poverty (% of Elderly population)	23.9	33.8	39.3	32.2	31.2	28.2	27.9
Severe Material Deprivation (% of Elderly population)	67.2	61.0	58.4	58.1	53.7	53.2	50.7
Relative median income of elderly (ratio with median income of people younger than 65)	0.78	0.66	0.63	0.74	0.72	0.74	0.76
Aggregate replacement ratio (ratio)	0.37	0.34	0.34	0.43	0.41	0.42	0.39

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	3.7	4.4	3.9	4.2	4.5	4.4	
Disability	1.1	1.2	1.4	1.4	1.4	1.4	
Old age and survivors	7.0	7.4	8.6	9.0	8.6	8.5	
Family/Children	1.2	1.3	2.0	2.0	1.9	1.8	
Unemployment	0.3	0.3	0.5	0.6	0.6	0.6	
Housing and Social exclusion n.e.c.	0.3	0.3	0.2	0.3	0.3	0.3	
Total (including Admin and Other expenditures)	14.1	15.5	17.2	18.1	17.7	17.4	
of which: Means tested benefits	0.7	0.7	0.7	0.8	0.7	0.7	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Czech Republic

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	15.8	15.3	14.0	14.4	15.3	15.4	14.6
At-risk-of-poverty (% of total population)	9.6	9.0	8.6	9.0	9.8	9.6	8.6
At-risk-of-poverty threshold (PPS single person)	5 305	5 835	5 666	5 796	5 993	6 188	6 389
Poverty gap (%)	18.1	18.5	18.8	21.1	17.2	19.1	16.6
Persistent at-risk-of-poverty (% of total population)		3.9	3.7	5.5	4.2	4.3	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	20.1	20.0	17.9	18.1	18.0	17.6	16.6
Impact of social transfers (excl. pensions) in reducing poverty (%)	52.2	55.0	52.0	50.3	45.6	45.5	48.2
Severe Material Deprivation (% of total population)	7.4	6.8	6.1	6.2	6.1	6.6	6.6
Share of people living in low work intensity households (% of people aged 0-59)	8.6	7.2	6.0	6.4	6.6	6.8	6.9
Gross Household Disposable income adjusted for consumer prices (growth %)	3.7	2.0	2.7	0.4	-0.5	-1.2	
Income quintile share ratio S80/S20	3.5	3.4	3.5	3.5	3.5	3.5	3.4
GINI coefficient	25.3	24.7	25.1	24.9	25.2	24.9	24.6
Early leavers from education and training (% of population aged 18-24)	5.2	5.6	5.4	4.9	4.9	5.5	5.4
NEET: Young people not in employment, education or training (% of total population aged 15-24)	6.9	6.7	8.5	8.8	8.3	8.9	9.1

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	14.2	13.3	12.3	12.7	13.7	13.7	13.1
At-risk-of-poverty (% of male population)	8.7	8.0	7.5	8.0	8.9	8.7	7.7
Poverty gap (%)	19.0	21.4	22.0	23.6	19.1	20.2	17.8
Persistent at-risk-of-poverty (% of male population)		3.5	3.1	5.1	3.8	3.4	
Severe Material Deprivation (% of male population)	7.0	6.3	5.8	5.8	5.6	6.0	5.9
Share of people living in low work intensity households (% of males aged 0-59)	7.4	6.2	4.8	5.2	5.8	6.1	6.2
Life expectancy at birth (years)	73.8	74.1	74.2	74.5	74.8	75.1	
Healthy life years at birth (years)	61.4 bd	61.2	61.1	62.2	62.2	62.3	
Early leavers from education and training (% of males aged 18-24)	5.7	5.8	5.5	4.9	5.4	6.1	5.4
NEET: Young people not in employment, education or training (% of males aged 15-24)	4.9	4.8	7.2	7.5	7.1	8.1	7.5

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	17.4	17.2	15.7	16.0	16.9	16.9	16.1
At-risk-of-poverty (% of female population)	10.5	10.1	9.5	10.0	10.6	10.5	9.4
Poverty gap (%)	17.2	15.1	16.3	18.9	16.5	17.7	16.1
Persistent at-risk-of-poverty (% of female population)		4.3	4.2	5.9	4.5	5.2	
Severe Material Deprivation (% of female population)	7.7	7.3	6.5	6.5	6.7	7.2	7.2
Share of people living in low work intensity households (% of females aged 0-59)	9.9	8.2	7.1	7.6	7.4	7.5	7.7
Life expectancy at birth (years)	80.2	80.5	80.5	80.9	81.1	81.2	
Healthy life years at birth (years)	63.3 bd	63.4	62.7	64.5	63.6	64.1	
Early leavers from education and training (% of females aged 18-24)	4.7	5.4	5.2	4.8	4.4	4.9	5.5
NEET: Young people not in employment, education or training (% of females aged 15-24)	9.1	8.7	9.9	10.3	9.5	9.8	10.8

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	21.5	18.6	17.2	18.9	20.0	18.8	16.4
At-risk-of-poverty (% of Children population)	16.6	13.2	13.3	14.3	15.2	13.9	11.3
Severe Material Deprivation (% of Children population)	10.0	8.3	7.4	8.6	8.0	8.5	7.3
Share of children living in low work intensity households (% of Children population)	10.0	7.6	6.2	7.0	6.9	6.7	6.2
Risk of poverty of children in households at work (Working Intensity > 0.2)	9.0	8.1	8.6	9.2	10.5	9.6	7.3
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	46.1	55.6	47.4	45.0	43.7	46.5	49.6

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	15.3	15.0	13.7	14.1	15.1	15.5	15.2
At-risk-of-poverty (% of Working age population)	8.6	8.3	7.6	8.1	9.1	9.3	8.6
Severe Material Deprivation (% of Working age population)	71	71	61	61	61	61	71
Very low work intensity (18-59)	8.2	7.1	5.9	6.2	6.5	6.9	7.1
In-work at-risk-of poverty rate (% of persons employed)	3.3	3.6	3.2	3.7	4.1	4.6	4.1
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	54.3	55.4	54.5	52.6	47.7	47.2	49.7

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	10.9	12.5	11.7	10.1	10.7	10.8	10.4
At-risk-of-poverty (% of Elderly population)	5.5	7.4	7.2	6.8	6.6	6.0	5.8
Severe Material Deprivation (% of Elderly population)	6.5	6.4	5.7	4.3	5.4	6.0	5.3
Relative median income of elderly (ratio with median income of people younger than 65)	0.81	0.79	0.78	0.82	0.82	0.84	0.85
Aggregate replacement ratio (ratio)	0.51	0.51	0.51	0.54	0.53	0.55	0.56

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	5.9	5.8	6.4	6.3	6.3	6.4	
Disability	1.4	1.4	1.5	1.5	1.5	1.4	
Old age and survivors	7.7	8.0	9.0	9.2	9.7	10.0	
Family/Children	1.6	1.4	1.4	1.3	1.2	1.1	
Unemployment	0.6	0.6	1.0	0.8	0.7	0.7	
Housing and Social exclusion n.e.c.	0.3	0.2	0.3	0.3	0.4	0.5	
Total (including Admin and Other expenditures)	18.0	18.0	20.3	20.2	20.4	20.8	
of which: Means tested benefits	0.6	0.4	0.4	0.4	0.4	0.4	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Denmark

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	16.8	16.3	17.6	18.3	18.9	19.0	18.9
At-risk-of-poverty (% of total population)	11.7	11.8	13.1	13.3	13.0	13.1	12.3
At-risk-of-poverty threshold (PPS single person)	10121	10561	10751	10770	11277	11183	11481
Poverty gap (%)	17.0	18.0	18.4	21.6	21.4	22.8	23.7
Persistent at-risk-of-poverty (% of total population)	4.7	4.9	2.7	6.3	6.4	5.7	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	27.1	27.8	31.2	29.1	28.4	28.3	28.1
Impact of social transfers (excl. pensions) in reducing poverty (%)	56.8	57.6	58.0	54.3	54.2	53.7	56.2
Severe Material Deprivation (% of total population)	3.3	2.0	2.3	2.7	2.6	2.8	3.8
Share of people living in low work intensity households (% of people aged 0-59)	10.1	8.5	8.8	10.6	11.7	11.3	12.9
Gross Household Disposable income adjusted for consumer prices (growth %)	0.6	0.6	1.0	2.6	0.4	-0.6	0.2
Income quintile share ratio S80/S20	3.7	3.6	4.6	4.4	4.4	4.5	4.3
GINI coefficient	25.2	25.1	26.9	26.9	27.8	28.1	27.5
Early leavers from education and training (% of population aged 18-24)	12.9 b	12.5	11.3	11.0	9.6	9.1	8.0
NEET: Young people not in employment, education or training (% of total population aged 15-24)	4.3 b	4.3	5.4	6.0	6.3	6.6	6.0

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	15.9	15.7	17.0	17.7	18.2	19.1	18.7
At-risk-of-poverty (% of male population)	11.3	11.7	12.8	13.1	13.0	13.3	12.6
Poverty gap (%)	18.8	19.3	21.9	23.3	25.1	23.5	25.7
Persistent at-risk-of-poverty (% of male population)	4.5	5.2	4.0	5.5	6.7	6.0	
Severe Material Deprivation (% of male population)	2.9	1.5	2.2	2.8	2.0	2.7	3.6
Share of people living in low work intensity households (% of males aged 0-59)	9.1	8.4	8.2	9.7	11.1	11.7	13.3
Life expectancy at birth (years)	76.2	76.5	76.9	77.2	77.8	78.1	
Healthy life years at birth (years)	67.4	62.1 bd	61.8	62.3	63.6	60.6	
Early leavers from education and training (% of males aged 18-24)	16.2 b	15.0	14.3	14.1	12.1	10.8	9.9
NEET: Young people not in employment, education or training (% of males aged 15-24)	4.7 b	4.4	5.9	6.7	6.4	6.6	6.3

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	17.7	17.0	18.2	19.0	19.5	18.9	19.2
At-risk-of-poverty (% of female population)	12.0	12.0	13.4	13.4	13.0	12.9	12.1
Poverty gap (%)	16.4	17.2	17.1	20.9	17.1	19.1	18.2
Persistent at-risk-of-poverty (% of female population)	4.9	4.6	1.5	7.0	6.1	5.3	
Severe Material Deprivation (% of female population)	3.6	2.4	2.4	2.5	3.3	3.0	4.1
Share of people living in low work intensity households (% of females aged 0-59)	11.1	8.6	9.4	11.4	12.3	11.0	12.5
Life expectancy at birth (years)	80.6	81.0	81.1	81.4	81.9	82.1	
Healthy life years at birth (years)	67.4	61.0 bd	60.4	61.4	59.4	61.4	
Early leavers from education and training (% of females aged 18-24)	9.5 b	10.0	8.1	7.7	7.0	7.4	6.2
NEET: Young people not in employment, education or training (% of females aged 15-24)	3.8 b	4.2	4.9	5.4	6.1	6.7	5.8

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	14.2	12.7	14.0	15.1	16.0	15.3	15.5
At-risk-of-poverty (% of Children population)	9.6	9.1	10.6	10.9	10.2	10.2	8.5
Severe Material Deprivation (% of Children population)	4.8	2.5	2.1	3.1	3.3	3.6	3.9
Share of children living in low work intensity households (% of Children population)	6.9	4.3	5.5	7.4	8.9	5.8	8.6
Risk of poverty of children in households at work (Working Intensity > 0.2)	6.2	7.6	7.9	6.8	7.1	7.5	6.0
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	59.8	58.8	56.4	54.6	60.3	58.4	65.7

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	17.4	17.1	18.1	19.5	20.5	21.5	22.3
At-risk-of-poverty (% of Working age population)	10.9	11.3	12.2	12.9	13.1	13.9	14.1
Severe Material Deprivation (% of Working age population)	31	21	31	31	31	31	51
Very low work intensity (18-59)	11.5	10.2	10.1	11.9	12.8	13.6	14.6
In-work at-risk-of poverty rate (% of persons employed)	4.2	5.0	5.9	6.3	6.3	5.7	4.3
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	58.9	59.4	58.9	56.1	56.5	55.5	56.1

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	18.3	18.6	20.6	18.4	16.6	14.6	11.4
At-risk-of-poverty (% of Elderly population)	17.7	18.1	20.1	17.7	16.0	14.1	10.6
Severe Material Deprivation (% of Elderly population)	0.8	0.9	0.9	0.9	1.1	0.6	1.0
Relative median income of elderly (ratio with median income of people younger than 65)	0.70	0.70	0.71	0.71	0.72	0.75	0.76
Aggregate replacement ratio (ratio)	0.39	0.41	0.42	0.44	0.42	0.42	0.44

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	6.3	6.5	7.3	7.0	6.9		
Disability	3.8	3.7	4.1	4.2	4.1		
Old age and survivors	12.6	12.7	14.0	13.8	14.2		
Family/Children	4.0	4.0	4.5	4.3	4.1		
Unemployment	1.2	0.9	1.6	1.8	1.8		
Housing and Social exclusion n.e.c.	1.5	1.4	1.6	1.7	1.8		
Total (including Admin and Other expenditures)	30.7	30.7	34.7	34.3	34.3		
of which: Means tested benefits	1.5	1.4	1.6	1.6	1.7		

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Germany

All	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of total population)	20.6	20.1	20.0	19.7	19.9	19.6	20.3
At-risk-of-poverty (% of total population)	15.2	15.2	15.5	15.6	15.8	16.1	16.1
At-risk-of-poverty threshold (PPS single person)	10 395	10 804	10 770	10 544	11 037	11 525	11 622
Poverty gap (%)	23.2	22.2	21.5	20.7	21.4	21.1	20.4
Persistent at-risk-of-poverty (% of total population)		7.2	8.1	9.1	10.4	10.4	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	24.8	24.2	24.1	24.2	25.1	24.3	24.4
Impact of social transfers (excl. pensions) in reducing poverty (%)	38.7	37.2	35.7	35.5	37.1	33.7	34.0
Severe Material Deprivation (% of total population)	4.8	5.5	5.4	4.5	5.3	4.9	5.4
Share of people living in low work intensity households (% of people aged 0-59)	11.5	11.7	10.9	11.2	11.2	9.9	9.9
Gross Household Disposable income adjusted for consumer prices (growth %)	0.3	1.1	-0.3	1.0	1.7	0.8	
Income quintile share ratio S80/S20	4.9	4.8	4.5	4.5	4.5	4.3	4.6
GINI coefficient	30.4	30.2	29.1	29.3	29.0	28.3	29.7
Early leavers from education and training (% of population aged 18-24)	12.5	11.8	11.1	11.9	11.7	10.6	9.9
NEET: Young people not in employment, education or training (% of total population aged 15-24)	8.9	8.4	8.8	8.3	7.5	7.1	6.3

By gender

Male	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of male population)	18.8	18.5	18.8	18.6	18.5	18.1	18.8
At-risk-of-poverty (% of male population)	14.1	14.2	14.7	14.9	14.9	14.9	15.0
Poverty gap (%)	24.4	23.7	22.3	21.5	22.6	21.8	20.9
Persistent at-risk-of-poverty (% of male population)		6.6	7.0	9.0	10.0	9.9	
Severe Material Deprivation (% of male population)	4.3	5.3	5.3	4.4	5.0	4.5	5.2
Share of people living in low work intensity households (% of males aged 0-59)	10.5	10.9	10.5	10.7	10.5	9.2	9.4
Life expectancy at birth (years)	77.4	77.6	77.8	78.0	78.4	78.6	
Healthy life years at birth (years)	59.0	56.3 bd	57.1	57.9	57.9	57.4	
Early leavers from education and training (% of males aged 18-24)	13.1	12.4	11.5	12.7	12.7	11.3	10.4
NEET: Young people not in employment, education or training (% of males aged 15-24)	8.0	7.5	8.2	7.7	6.7	6.4	5.6

Female	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of female population)	22.3	21.6	21.2	20.9	21.3	21.1	21.9
At-risk-of-poverty (% of female population)	16.3	16.2	16.3	16.4	16.8	17.2	17.2
Poverty gap (%)	22.4	21.1	20.8	19.6	20.6	20.6	20.1
Persistent at-risk-of-poverty (% of female population)		7.7	9.0	9.2	10.8	10.9	
Severe Material Deprivation (% of female population)	5.3	5.6	5.4	4.7	5.7	5.2	5.6
Share of people living in low work intensity households (% of females aged 0-59)	12.6	12.4	11.3	11.7	11.9	10.7	10.5
Life expectancy at birth (years)	82.7	82.7	82.8	83.0	83.2	83.3	
Healthy life years at birth (years)	58.6	57.7 bd	58.1	58.7	58.7	57.9	
Early leavers from education and training (% of females aged 18-24)	11.9	11.2	10.7	11.0	10.8	9.9	9.3
NEET: Young people not in employment, education or training (% of females aged 15-24)	9.8	9.5	9.4	9.0	8.3	7.9	7.0

By age

Children (0-17)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	19.7	20.1	20.4	21.7	19.9	18.4	19.4
At-risk-of-poverty (% of Children population)	14.1	15.2	15.0	17.5	15.6	15.2	14.7
Severe Material Deprivation (% of Children population)	5.4	6.9	7.1	5.2	5.4	4.8	5.6
Share of children living in low work intensity households (% of Children population)	9.2	9.1	9.0	8.9	8.6	6.8	6.9
Risk of poverty of children in households at work (Working Intensity > 0.2)	9.2	9.6	9.7	11.7	10.5	10.8	11.3
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	53.6	50.3	50.8	46.7	52.7	50.7	51.7

Working age (18-64)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of Working age population)	21.9	21.5	21.1	20.8	21.3	21.2	22.0
At-risk-of-poverty (% of Working age population)	15.2	15.4	15.8	15.6	16.4	16.6	16.9
Severe Material Deprivation (% of Working age population)	61	61	61	51	61	61	61
Very low work intensity (18-59)	12.3	12.4	11.4	11.9	12.0	10.8	10.8
In-work at-risk-of poverty rate (% of persons employed)	7.4	7.1	6.8	7.1	7.7	7.7	8.6
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	40.4	38.2	36.3	37.4	37.2	34.1	33.7

Elderly (65+)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	16.8	15.5	16.0	14.8	15.3	15.8	16.0
At-risk-of-poverty (% of Elderly population)	16.2	14.9	15.0	14.1	14.2	15.0	14.9
Severe Material Deprivation (% of Elderly population)	2.2	2.1	2.5	2.1	3.2	2.8	3.2
Relative median income of elderly (ratio with median income of people younger than 65)	0.87	0.87	0.88	0.89	0.90	0.88	0.89
Aggregate replacement ratio (ratio)	0.46	0.44	0.47	0.49	0.51	0.47	0.47

Expenditure in social protection indicators (% of GDP)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Sickness/Health care	8.0	8.3	9.7	9.5	9.4	9.6 p	
Disability	2.1	2.2	2.3	2.3	2.2	2.3 p	
Old age and survivors	11.4	11.4	12.2	11.8	11.4	11.4 p	
Family/Children	2.8	2.8	3.2	3.2	3.1	3.2 p	
Unemployment	1.5	1.4	1.9	1.7	1.3	1.2 p	
Housing and Social exclusion n.e.c.	0.8	0.8	0.8	0.8	0.8	0.8 p	
Total (including Admin and Other expenditures)	27.7	28.0	31.5	30.6	29.4	29.5 p	
of which: Means tested benefits	3.3	3.3	3.6	3.5	3.4	3.4 p	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Estonia

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	22.0	21.8	23.4	21.7	23.1	23.4	23.5
At-risk-of-poverty (% of total population)	19.4	19.5	19.7	15.8	17.5	17.5	18.6
At-risk-of-poverty threshold (PPS single person)	3 895	4 538	4 861	4 448	4 491	4 734	5 130
Poverty gap (%)	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	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	25.2	24.7	25.9	24.9	24.9	24.8	25.4
Impact of social transfers (excl. pensions) in reducing poverty (%)	23.0	21.1	23.9	36.6	29.7	29.4	26.8
Severe Material Deprivation (% of total population)	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)	6.2	5.3	5.6	9.0	10.0	9.1	8.4
Gross Household Disposable income adjusted for consumer prices (growth %)	11.7	-0.3	-5.4	-3.4	4.0	-3.4	
Income quintile share ratio S80/S20	5.5	5.0	5.0	5.0	5.3	5.4	5.5
GINI coefficient	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)	14.4	14.0	13.5	11.0	10.6	10.3	9.7
NEET: Young people not in employment, education or training (% of total population aged 15-24)	8.9	8.7	14.5	14.0	11.6	12.2	11.3

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	19.4	18.9	21.1	21.5	23.2	22.3	22.5
At-risk-of-poverty (% of male population)	16.7	16.5	17.5	15.4	17.6	16.8	17.2
Poverty gap (%)	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	
Severe Material Deprivation (% of male population)	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)	6.6	6.0	6.5	9.7	10.9	9.6	9.5
Life expectancy at birth (years)	67.2	68.7	69.8	70.6	71.4	71.4	
Healthy life years at birth (years)	49.7	53.0 bd	55.0	54.1	54.3	53.1	
Early leavers from education and training (% of males aged 18-24)	21.4	19.8	17.9	14.4	12.8	13.3	13.6
NEET: Young people not in employment, education or training (% of males aged 15-24)	8.5	8.0	14.4	14.6	11.8	11.2	10.8

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	24.2	24.3	25.5	22.0	22.9	24.4	24.4
At-risk-of-poverty (% of female population)	21.7	22.0	21.6	16.2	17.4	18.1	19.9
Poverty gap (%)	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	
Severe Material Deprivation (% of female population)	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)	5.8	4.7	4.8	8.3	9.2	8.6	7.3
Life expectancy at birth (years)	78.8	79.5	80.2	80.8	81.3	81.5	
Healthy life years at birth (years)	54.9	57.5 bd	59.2	58.2	57.9	57.2	
Early leavers from education and training (% of females aged 18-24)	7.2	8.3	9.1	7.6	8.4	7.3	5.8
NEET: Young people not in employment, education or training (% of females aged 15-24)	9.2	9.4	14.5	13.5	11.4	13.2	11.8

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	20.1	19.4	24.5	24.0	24.8	22.4	22.3
At-risk-of-poverty (% of Children population)	18.2	17.1	20.6	17.3	19.5	17.0	18.1
Severe Material Deprivation (% of Children population)	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)	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)	14.4	14.3	17.8	12.1	13.7	12.8	13.4
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	35.5	35.0	30.6	44.4	35.9	40.6	34.2

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	19.1	17.5	19.9	21.8	24.2	24.2	22.7
At-risk-of-poverty (% of Working age population)	16.1	15.0	15.8	15.6	18.0	17.7	17.3
Severe Material Deprivation (% of Working age population)	61	51	61	91	91	101	81
Very low work intensity (18-59)	6.8	5.8	5.9	9.1	10.3	9.8	9.0
In-work at-risk-of poverty rate (% of persons employed)	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) (%)	25.1	24.6	28.2	37.6	30.2	28.9	28.8

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	35.4	40.9	35.6	19.0	17.0	21.8	28.0
At-risk-of-poverty (% of Elderly population)	33.2	39.0	33.9	15.1	13.1	17.2	24.4
Severe Material Deprivation (% of Elderly population)	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)	0.65	0.62	0.66	0.73	0.75	0.72	0.69
Aggregate replacement ratio (ratio)	0.47	0.45	0.52	0.55	0.54	0.50	0.50

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	4.0	4.8	5.3	4.8	4.4	4.3	
Disability	1.1	1.5	1.9	1.9	1.8	1.8	
Old age and survivors	5.2	6.4	8.0	7.9	7.0	6.8	
Family/Children	1.4	1.8	2.2	2.3	2.0	1.8	
Unemployment	0.1	0.3	1.2	0.8	0.5	0.5	
Housing and Social exclusion n.e.c.	0.1	0.1	0.1	0.2	0.2	0.2	
Total (including Admin and Other expenditures)	12.1	14.9	19.0	18.0	16.1	15.4	
of which: Means tested benefits	0.1	0.1	0.1	0.2	0.2	0.1	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Ireland

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	23.1	23.7	25.7	27.3	29.4	30.0	
At-risk-of-poverty (% of total population)	17.2	15.5	15.0	15.2	15.2	15.7	
At-risk-of-poverty threshold (PPS single person)	10633	10901	10386	10102	9999	9713	
Poverty gap (%)	17.6	17.7	16.2	15.5	17.5	19.1	
Persistent at-risk-of-poverty (% of total population)	11.6						
At-risk-of-poverty before social transfers excl. pensions (% of total population)	33.1	34.0	37.5	39.9	39.6	39.3	
Impact of social transfers (excl. pensions) in reducing poverty (%)	48.0	54.4	60.0	61.9	61.6	60.1	
Severe Material Deprivation (% of total population)	4.5	5.5	6.1	5.7	7.8	9.8	
Share of people living in low work intensity households (% of people aged 0-59)	14.3	13.7	20.0	22.9	24.2	23.4	
Gross Household Disposable income adjusted for consumer prices (growth %)	5.1	5.0	0.1	-2.8	-3.7	-1.6	
Income quintile share ratio S80/S20	4.8	4.4	4.2	4.7	4.6	4.7	
GINI coefficient	31.3	29.9	28.8	30.7	29.8	29.9	
Early leavers from education and training (% of population aged 18-24)	11.6	11.3	11.7	11.5	10.8	9.7	8.4
NEET: Young people not in employment, education or training (% of total population aged 15-24)	10.7	14.9	18.6	19.2	18.8	18.7	16.1

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	21.6	22.7	25.0	26.5	29.0	29.7	
At-risk-of-poverty (% of male population)	16.0	14.5	14.9	14.6	15.4	15.6	
Poverty gap (%)	17.7	18.9	17.1	15.5	18.7	22.4	
Persistent at-risk-of-poverty (% of male population)	11.6						
Severe Material Deprivation (% of male population)	4.0	5.3	5.5	5.5	7.4	9.7	
Share of people living in low work intensity households (% of males aged 0-59)	13.7	13.1	18.8	21.4	23.4	23.2	
Life expectancy at birth (years)	77.3	77.8	77.7	78.7	78.6	78.7	
Healthy life years at birth (years)	62.9	63.5	63.9	65.9	66.1	65.9	
Early leavers from education and training (% of males aged 18-24)	14.6	14.5	14.7	13.4	12.8	11.2	9.8
NEET: Young people not in employment, education or training (% of males aged 15-24)	10.0	15.4	20.4	20.4	20.0	20.1	16.5

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	24.6	24.7	26.4	28.1	29.8	30.4	
At-risk-of-poverty (% of female population)	18.5	16.4	15.1	15.8	14.9	15.9	
Poverty gap (%)	17.1	17.4	14.9	15.5	16.6	17.4	
Persistent at-risk-of-poverty (% of female population)	11.7						
Severe Material Deprivation (% of female population)	4.9	5.8	6.8	5.9	8.3	10.0	
Share of people living in low work intensity households (% of females aged 0-59)	15.0	14.3	21.2	24.5	25.1	23.6	
Life expectancy at birth (years)	82.1	82.4	82.7	83.2	83.0	83.2	
Healthy life years at birth (years)	65.6	65.0	65.2	67.0	68.3	68.5	
Early leavers from education and training (% of females aged 18-24)	8.4	8.0	8.6	9.6	8.8	8.2	6.9
NEET: Young people not in employment, education or training (% of females aged 15-24)	11.4	14.3	16.9	18.0	17.5	17.3	15.8

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	26.2	26.6	31.4	34.1	34.1	33.1	
At-risk-of-poverty (% of Children population)	19.2	18.0	18.8	18.9	17.1	18.0	
Severe Material Deprivation (% of Children population)	7.6	6.8	8.4	8.2	10.0	12.4	
Share of children living in low work intensity households (% of Children population)	15.8	15.1	23.4	25.6	26.0	22.9	
Risk of poverty of children in households at work (Working Intensity > 0.2)	10.1	11.0	7.5	9.3	6.3	6.8	
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	50.6	55.2	59.7	62.9	65.2	60.8	

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	20.7	22.6	24.8	27.2	30.5	31.7	
At-risk-of-poverty (% of Working age population)	14.4	13.4	13.2	14.6	15.1	15.4	
Severe Material Deprivation (% of Working age population)	41	61	61	51	81	101	
Very low work intensity (18-59)	13.7	13.1	18.4	21.7	23.4	23.6	
In-work at-risk-of poverty rate (% of persons employed)	5.5	6.3	4.9	5.5	5.3	5.4	
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	50.3	56.6	61.4	61.8	61.4	61.2	

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	28.7	22.5	17.9	11.3	13.8	14.7	
At-risk-of-poverty (% of Elderly population)	28.3	21.1	16.2	9.9	11.0	12.2	
Severe Material Deprivation (% of Elderly population)	1.2	2.2	2.6	1.5	3.0	2.9	
Relative median income of elderly (ratio with median income of people younger than 65)	0.69	0.74	0.78	0.85	0.86	0.88	
Aggregate replacement ratio (ratio)	0.49	0.49	0.48	0.47	0.43	u	

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	6.7	7.9	9.8	11.4	12.8		
Disability	0.9	1.1	1.3	1.4	1.3		
Old age and survivors	4.7	5.5	6.3	6.7	6.7		
Family/Children	2.6	3.1	3.6	3.5	3.4		
Unemployment	1.4	1.8	3.0	3.8	3.7		
Housing and Social exclusion n.e.c.	0.5	0.6	0.8	0.9	0.8		
Total (including Admin and Other expenditures)	18.0	21.2	26.2	29.0	30.2		
of which: Means tested benefits	4.2	5.0	6.5	7.8	8.2		

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Greece

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	28.3	28.1	27.6	27.7	31.0	34.6	35.7
At-risk-of-poverty (% of total population)	20.3	20.1	19.7	20.1	21.4	23.1	23.1
At-risk-of-poverty threshold (PPS single person)	6 873	7 219	7 521	7 559	6 976	6 038	5 452
Poverty gap (%)	26.0	24.7	24.1	23.4	26.1	29.9	32.7
Persistent at-risk-of-poverty (% of total population)	13.1	13.0	16.1	17.6	10.5	13.8	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	23.7	23.3	22.7	23.8	24.8	26.8	28.0
Impact of social transfers (excl. pensions) in reducing poverty (%)	14.4	13.7	13.2	15.6	13.7	13.8	17.5
Severe Material Deprivation (% of total population)	11.5	11.2	11.0	11.6	15.2	19.5	20.3
Share of people living in low work intensity households (% of people aged 0-59)	8.1	7.5	6.6	7.6	12.0	14.2	18.2
Gross Household Disposable income adjusted for consumer prices (growth %)	6.9	-2.3	-0.1	-10.9	-10.1	-9.8	
Income quintile share ratio S80/S20	6.0	5.9	5.8	5.6	6.0	6.6	6.6
GINI coefficient	34.3	33.4	33.1	32.9	33.5	34.3	34.4
Early leavers from education and training (% of population aged 18-24)	14.3	14.4	14.2	13.5	12.9	11.3	10.1
NEET: Young people not in employment, education or training (% of total population aged 15-24)	11.3	11.4	12.4	14.8	17.4	20.2	20.4

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	26.8	26.3	26.1	26.0	29.6	33.9	34.6
At-risk-of-poverty (% of male population)	19.6	19.6	19.1	19.3	20.9	22.5	22.4
Poverty gap (%)	25.6	24.4	24.4	23.4	27.2	29.9	32.9
Persistent at-risk-of-poverty (% of male population)	12.4	11.3	15.6	16.3	10.4	14.0	
Severe Material Deprivation (% of male population)	10.6	10.1	10.2	10.9	14.9	19.9	20.3
Share of people living in low work intensity households (% of males aged 0-59)	6.5	6.0	5.3	6.5	11.0	12.9	17.5
Life expectancy at birth (years)	77.1	77.7	77.8	78.4	78.0	78.0	
Healthy life years at birth (years)	66.1	65.8 bd	66.1	66.3	66.2	64.8	
Early leavers from education and training (% of males aged 18-24)	18.2	18.0	17.9	16.4	15.9	13.7	12.7
NEET: Young people not in employment, education or training (% of males aged 15-24)	8.1	8.8	9.5	12.7	16.1	19.0	20.9

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	29.9	29.8	29.0	29.3	32.3	35.2	36.8
At-risk-of-poverty (% of female population)	20.9	20.7	20.2	20.9	21.9	23.6	23.8
Poverty gap (%)	26.3	25.0	24.1	23.4	25.6	29.1	32.6
Persistent at-risk-of-poverty (% of female population)	13.8	14.7	16.6	18.7	10.6	13.5	
Severe Material Deprivation (% of female population)	12.3	12.2	11.7	12.2	15.4	19.1	20.3
Share of people living in low work intensity households (% of females aged 0-59)	9.8	9.0	8.0	8.6	13.0	15.6	18.9
Life expectancy at birth (years)	81.8	82.3	82.7	82.8	83.6	83.4	
Healthy life years at birth (years)	67.4	66.1 bd	66.8	67.7	66.9	64.9	
Early leavers from education and training (% of females aged 18-24)	10.3	10.6	10.5	10.6	10.0	8.9	7.5
NEET: Young people not in employment, education or training (% of females aged 15-24)	14.5	14.1	15.2	16.9	18.7	21.3	20.0

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	28.2	28.7	30.0	28.7	30.4	35.4	38.1
At-risk-of-poverty (% of Children population)	23.3	23.0	23.7	23.0	23.7	26.9	28.8
Severe Material Deprivation (% of Children population)	9.7	10.4	12.2	12.2	16.4	20.9	23.3
Share of children living in low work intensity households (% of Children population)	4.6	3.9	2.7	3.9	7.2	7.6	13.8
Risk of poverty of children in households at work (Working Intensity > 0.2)	21.3	21.4	22.8	21.6	19.2	22.1	20.4
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	14.0	10.9	6.0	10.9	10.6	9.7	18.2

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	27.8	27.9	27.1	27.7	31.6	37.7	39.1
At-risk-of-poverty (% of Working age population)	18.7	18.7	18.1	19.0	20.0	23.8	24.1
Severe Material Deprivation (% of Working age population)	101	101	101	111	151	211	221
Very low work intensity (18-59)	9.2	8.6	7.8	8.7	13.5	16.3	19.6
In-work at-risk-of poverty rate (% of persons employed)	14.1	14.2	13.7	13.9	11.9	15.1	13.0
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	13.4	13.8	13.0	14.4	13.0	14.4	16.3

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	30.6	28.1	26.8	26.7	29.3	23.5	23.1
At-risk-of-poverty (% of Elderly population)	22.9	22.3	21.4	21.3	23.6	17.2	15.1
Severe Material Deprivation (% of Elderly population)	17.4	14.8	12.1	12.4	13.1	14.3	13.7
Relative median income of elderly (ratio with median income of people younger than 65)	0.83	0.86	0.86	0.84	0.81	1.01	1.04
Aggregate replacement ratio (ratio)	0.40	0.41	0.41	0.42	0.45	0.52	0.60

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	6.8	7.4	8.0	8.2	7.5	6.4	
Disability	1.2	1.2	1.3	1.3	1.4	1.3	
Old age and survivors	12.5	12.9	13.6	14.1	15.0	17.8	
Family/Children	1.5	1.6	1.8	1.8	1.8	1.6	
Unemployment	1.1	1.3	1.6	1.7	2.1	1.9	
Housing and Social exclusion n.e.c.	1.1	1.1	1.1	1.0	1.0	0.9	
Total (including Admin and Other expenditures)	24.8	26.2	28.0	29.1	30.2	31.2	
of which: Means tested benefits	1.8	1.9	2.0	1.9	1.8	1.7	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Spain

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	23.3	24.5	24.5	26.7	27.7	28.2	27.3 b
At-risk-of-poverty (% of total population)	19.7	20.8	20.1	21.4	22.2	22.2	20.4 b
At-risk-of-poverty threshold (PPS single person)	7 614	8 161	8 114	7 780	7 532	7 416	8 543 b
Poverty gap (%)	25.9	24.4	28.9	32.3	30.9	31.4	30.9 b
Persistent at-risk-of-poverty (% of total population)	10.2	11.0	12.5	11.6	11.4	11.6	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	23.7	25.2	25.2	28.8	30.0	29.6	30.0 b
Impact of social transfers (excl. pensions) in reducing poverty (%)	16.9	17.5	20.2	25.7	26.0	25.0	32.0
Severe Material Deprivation (% of total population)	3.5	3.6	4.5	4.9	4.5	5.8	6.2
Share of people living in low work intensity households (% of people aged 0-59)	6.8	6.6	7.6	10.8	13.4	14.3	15.7
Gross Household Disposable income adjusted for consumer prices (growth %)	3.3	3.2	1.6	-4.4	-2.5	-5.2	
Income quintile share ratio S80/S20	5.5	5.7	6.4	7.2	7.1	7.2	6.3 b
GINI coefficient	31.9	31.9	33.0	34.4	34.5	35.0	33.7 b
Early leavers from education and training (% of population aged 18-24)	30.8	31.7	30.9	28.2	26.3	24.7	23.6
NEET: Young people not in employment, education or training (% of total population aged 15-24)	12.0	14.3	18.1	17.8	18.2	18.6	18.6

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	21.9	23.4	23.5	26.0	27.3	28.4	27.9 b
At-risk-of-poverty (% of male population)	18.6	19.5	19.1	20.8	21.6	22.2	20.9 b
Poverty gap (%)	26.0	25.5	31.0	33.5	32.0	32.1	31.4 b
Persistent at-risk-of-poverty (% of male population)	9.6	10.1	11.7	11.1	10.4	11.1	
Severe Material Deprivation (% of male population)	3.5	3.7	4.6	4.7	4.5	6.2	6.3
Share of people living in low work intensity households (% of males aged 0-59)	6.5	6.1	7.1	10.6	12.9	13.8	15.9
Life expectancy at birth (years)	77.9	78.2	78.7	79.1	79.5	79.5	
Healthy life years at birth (years)	63.5	64.1 bd	62.9	64.4	65.4	64.8	
Early leavers from education and training (% of males aged 18-24)	36.6	38.0	37.4	33.6	31.0	28.9	27.2
NEET: Young people not in employment, education or training (% of males aged 15-24)	10.4	13.9	19.4	18.8	19.2	19.6	19.4

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	24.6	25.7	25.4	27.5	28.0	28.1	26.7 b
At-risk-of-poverty (% of female population)	20.8	21.9	21.1	22.1	22.7	22.1	19.9 b
Poverty gap (%)	25.1	23.3	27.4	30.5	30.4	30.9	30.3 b
Persistent at-risk-of-poverty (% of female population)	10.9	11.9	13.3	12.2	12.5	12.1	
Severe Material Deprivation (% of female population)	3.6	3.5	4.4	5.1	4.6	5.5	6.1
Share of people living in low work intensity households (% of females aged 0-59)	7.1	7.0	8.0	11.1	13.8	14.8	15.4
Life expectancy at birth (years)	84.4	84.5	84.9	85.3	85.6	85.5	
Healthy life years at birth (years)	63.2	63.6 bd	62.2	63.9	65.8	65.8	
Early leavers from education and training (% of females aged 18-24)	24.7	25.1	24.1	22.6	21.5	20.5	19.8
NEET: Young people not in employment, education or training (% of females aged 15-24)	13.7	14.6	16.7	16.8	17.3	17.6	17.8

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	28.6	30.6	30.0	33.1	33.2	33.8	32.6 b
At-risk-of-poverty (% of Children population)	26.2	28.2	26.8	29.2	29.5	29.9	27.5 b
Severe Material Deprivation (% of Children population)	4.4	5.5	6.7	7.4	5.2	7.6	8.3
Share of children living in low work intensity households (% of Children population)	5.0	4.3	6.1	9.5	11.6	12.3	13.8
Risk of poverty of children in households at work (Working Intensity > 0.2)	23.7	26.1	23.2	23.9	22.7	22.3	19.3 b
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	14.1	13.0	16.0	20.0	20.3	18.8	27.6

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	20.8	22.1	23.0	26.3	27.8	29.7	29.2 b
At-risk-of-poverty (% of Working age population)	16.4	17.3	17.5	19.5	20.8	21.9	20.4 b
Severe Material Deprivation (% of Working age population)	31	41	51	51	51	61	71
Very low work intensity (18-59)	7.3	7.3	8.0	11.2	13.9	14.9	16.3
In-work at-risk-of poverty rate (% of persons employed)	10.2	11.1	11.6	12.6	12.1	12.3	10.6 b
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	20.8	22.1	24.2	29.9	29.7	28.0	34.6

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	27.8	27.7	24.3	21.4	20.9	16.6	14.5 b
At-risk-of-poverty (% of Elderly population)	26.1	26.9	23.1	20.5	19.5	14.8	12.7 b
Severe Material Deprivation (% of Elderly population)	3.6	1.9	2.3	2.2	2.7	2.9	2.7
Relative median income of elderly (ratio with median income of people younger than 65)	0.79	0.79	0.82	0.86	0.86	0.93	1.0 b
Aggregate replacement ratio (ratio)	0.48	0.49	0.50	0.53	0.56	0.58	0.60 b

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	6.4	6.8	7.3	7.2 p	7.1 p	6.7 p	
Disability	1.5	1.6	1.7	1.7 p	1.8 p	1.8 p	
Old age and survivors	8.7	9.1	10.1	10.7 p	11.1 p	11.6 p	
Family/Children	1.3	1.4	1.5	1.5 p	1.4 p	1.4 p	
Unemployment	2.0	2.3	3.6	3.4 p	3.7 p	3.6 p	
Housing and Social exclusion n.e.c.	0.4 e	0.4 e	0.4 e	0.5 e	0.4 e	0.4 e	
Total (including Admin and Other expenditures)	20.8	22.0	25.2	25.5 p	26.0 p	25.9 p	
of which: Means tested benefits	2.7	2.9	3.4	3.7 p	4.1 p	3.7 p	

Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

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Social Inclusion Indicators: France

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	19.0	18.5 b	18.5	19.2	19.3	19.1	18.1
At-risk-of-poverty (% of total population)	13.1	12.5 b	12.9	13.3	14.0	14.1	13.7
At-risk-of-poverty threshold (PPS single person)	9089	10496 b	10644	10669	10897	11271	11631
Poverty gap (%)	17.9	14.5 b	18.2	19.5	17.1	16.2	16.6
Persistent at-risk-of-poverty (% of total population)	6.4					7.0	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	26.4	23.5 b	24.0	24.9	24.7	23.8	24.2
Impact of social transfers (excl. pensions) in reducing poverty (%)	50.4	46.8	46.3	46.6	43.3	40.8	43.4
Severe Material Deprivation (% of total population)	4.7	5.4	5.6	5.8	5.2	5.3	5.1
Share of people living in low work intensity households (% of people aged 0-59)	9.6	8.8	8.4	9.9	9.4	8.4	7.9
Gross Household Disposable income adjusted for consumer prices (growth %)	3.0	0.5	1.2	1.0	0.6	-0.8	
Income quintile share ratio S80/S20	3.9	4.4 b	4.4	4.4	4.6	4.5	4.5
GINI coefficient	26.6	29.8 b	29.9	29.8	30.8	30.5	30.1
Early leavers from education and training (% of population aged 18-24)	12.6	11.5	12.2	12.5	11.9	11.5	9.7 b
NEET: Young people not in employment, education or training (% of total population aged 15-24)	10.3	10.2	12.4	12.3	11.9	12.1	11.2 b

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	18.0	17.3 b	17.1	18.4	18.6	18.4	17.2
At-risk-of-poverty (% of male population)	12.8	11.7 b	11.9	12.7	13.5	13.6	13.0
Poverty gap (%)	18.0	14.7 b	18.8	19.5	17.8	16.3	16.9
Persistent at-risk-of-poverty (% of male population)	5.9					6.3	
Severe Material Deprivation (% of male population)	4.4	5.1	5.2	5.7	5.1	5.1	4.6
Share of people living in low work intensity households (% of males aged 0-59)	8.6	8.1	7.6	9.2	9.0	8.4	7.3
Life expectancy at birth (years)	77.6	77.8	78.0	78.2	78.7	78.7	
Healthy life years at birth (years)	62.8	62.7	62.8	61.8	62.7	62.6	
Early leavers from education and training (% of males aged 18-24)	14.9	13.5	14.3	15.0	13.8	13.3	10.7 b
NEET: Young people not in employment, education or training (% of males aged 15-24)	9.6	10.0	12.9	12.3	11.5	12.4	11.0 b

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	20.0	19.7 b	19.7	19.9	19.9	19.6	19.0
At-risk-of-poverty (% of female population)	13.4	13.3 b	13.8	13.9	14.5	14.6	14.3
Poverty gap (%)	17.7	14.4 b	18.0	19.7	16.4	16.2	16.3
Persistent at-risk-of-poverty (% of female population)	6.9					7.7	
Severe Material Deprivation (% of female population)	5.0	5.7	5.9	5.8	5.4	5.5	5.5
Share of people living in low work intensity households (% of females aged 0-59)	10.6	9.6	9.1	10.5	9.7	8.5	8.5
Life expectancy at birth (years)	84.8	84.8	85.0	85.3	85.7	85.4	
Healthy life years at birth (years)	64.4	64.6	63.5	63.4	63.6	63.8	
Early leavers from education and training (% of females aged 18-24)	10.3	9.5	10.1	9.9	10.1	9.7	8.7 b
NEET: Young people not in employment, education or training (% of females aged 15-24)	11.0	10.4	11.9	12.4	12.2	11.8	11.5 b

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	19.6	21.2 b	21.2	22.9	23.0	23.2	21.3
At-risk-of-poverty (% of Children population)	15.3	15.6 b	16.8	18.1	18.8	19.0	18.0
Severe Material Deprivation (% of Children population)	5.4	6.6	6.5	7.0	7.0	7.2	6.0
Share of children living in low work intensity households (% of Children population)	7.7	7.4	6.6	8.8	8.2	7.2	6.4
Risk of poverty of children in households at work (Working Intensity > 0.2)	10.6	11.5	12.8	12.7	13.6	14.3	13.8
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	58.5	55.3	51.5	50.0	47.5	44.3	47.4

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	19.7	18.8 b	18.9	19.9	20.1	19.8	19.2
At-risk-of-poverty (% of Working age population)	12.3	11.6 b	11.8	12.7	13.5	13.7	13.6
Severe Material Deprivation (% of Working age population)	51	61	61	61	51	51	51
Very low work intensity (18-59)	10.4	9.4	9.1	10.3	9.8	8.9	8.5
In-work at-risk-of poverty rate (% of persons employed)	6.4	6.5 b	6.6	6.5	7.6	8.0	8.0
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	50.4	47.3	47.8	48.0	43.8	41.0	43.6

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	15.2	14.1 b	13.4	11.8	11.5	11.1	10.4
At-risk-of-poverty (% of Elderly population)	13.1	11.9 b	11.9	9.4	9.7	9.4	8.7
Severe Material Deprivation (% of Elderly population)	3.4	3.3	3.2	3.4	2.9	2.4	2.7
Relative median income of elderly (ratio with median income of people younger than 65)	0.91	0.95 b	0.96	0.98	1.01	1.0	1.02
Aggregate replacement ratio (ratio)	0.60	0.65 b	0.66	0.65	0.64	0.65	0.64

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	8.6	8.6	9.2 b	9.3	9.2	9.2 p	
Disability	1.8	1.8	2.0 b	2.0	2.0	2.1 p	
Old age and survivors	13.0	13.4	14.2 b	14.3	14.4	14.7 p	
Family/Children	2.6	2.6	2.6 b	2.5	2.5	2.6 p	
Unemployment	1.9	1.9	1.9 b	2.0	1.9	2.0 p	
Housing and Social exclusion n.e.c.	1.3	1.4	1.6 b	1.6	1.6	1.6 p	
Total (including Admin and Other expenditures)	30.9	31.3	33.6 b	33.7	33.4	34.2 p	
of which: Means tested benefits	3.3	3.3	3.4 b	3.4	3.4	3.5 p	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Croatia

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)				31.1	32.6	32.6	29.9
At-risk-of-poverty (% of total population)	18.0	17.3	17.9	20.6 b	20.9	20.4	19.5
At-risk-of-poverty threshold (PPS single person)				4567 b	4454	4417	4355
Poverty gap (%)	23.0	25.0	24.4	27.6	27.9	31.0	28.1
Persistent at-risk-of-poverty (% of total population)							
At-risk-of-poverty before social transfers excl. pensions (% of total population)	25.0	25.3	25.5	30.0 b	30.7	30.6	29.7
Impact of social transfers (excl. pensions) in reducing poverty (%)	28.0	31.6	29.8	31.3	31.9	33.3	34.3
Severe Material Deprivation (% of total population)				14.3	15.2	15.9	14.7
Share of people living in low work intensity households (% of people aged 0-59)				13.9	15.9	16.8	14.8
Gross Household Disposable income adjusted for consumer prices (growth %)	4.3	2.8	-2.3	-0.4	-1.6	-1.7	
Income quintile share ratio S80/S20	4.5	4.5	4.3	5.5 b	5.6	5.4	5.3
GINI coefficient	29.0	28.0	27.0	31.6	31.2	30.9	30.9
Early leavers from education and training (% of population aged 18-24)	3.9	3.7	3.9	3.7	4.1	4.2	4.5
NEET: Young people not in employment, education or training (% of total population aged 15-24)	11.3	10.1	11.9	14.9	15.7	16.7	19.6

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)				30.1	31.7	31.8	29.6
At-risk-of-poverty (% of male population)	16.0	15.4	16.0	19.7 b	19.7	19.4	18.8
Poverty gap (%)	23.0	25.8	25.5	28.6	28.2	32.3	28.8
Persistent at-risk-of-poverty (% of male population)							
Severe Material Deprivation (% of male population)				14.5	15.4	15.7	14.9
Share of people living in low work intensity households (% of males aged 0-59)				13.8	16.0	16.9	14.9
Life expectancy at birth (years)	72.3		73.0	73.5	73.8	73.9	
Healthy life years at birth (years)				57.3 d	59.9	61.9	
Early leavers from education and training (% of males aged 18-24)	5.1	4.1 u	4.1 u	4.6 u	4.8 u	4.6 u	5.5 u
NEET: Young people not in employment, education or training (% of males aged 15-24)	10.9	9.7	12.1	16.4	17.4	18.0	20.6

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)				32.1	33.4	33.3	30.2
At-risk-of-poverty (% of female population)	19.0	19.0	19.7	21.4 b	22.1	21.3	20.3
Poverty gap (%)	23.0	25.0	23.7	26.9	26.2	30.0	27.3
Persistent at-risk-of-poverty (% of female population)							
Severe Material Deprivation (% of female population)				14.2	15.0	16.1	14.5
Share of people living in low work intensity households (% of females aged 0-59)				14.0	15.8	16.6	14.7
Life expectancy at birth (years)	79.3		79.7	79.9	80.4	80.6	
Healthy life years at birth (years)				60.7 d	61.8	64.2	
Early leavers from education and training (% of females aged 18-24)	2.6 u	3.3 u	3.6 u	2.6 u	3.4 u	3.6 u	3.4 u
NEET: Young people not in employment, education or training (% of females aged 15-24)	11.8	10.6	11.6	13.2	14.0	15.2	18.6

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)				29.4	31.1	34.8	29.3
At-risk-of-poverty (% of Children population)	16.0	15.8	18.7	19.6 b	21.1	23.3	21.8
Severe Material Deprivation (% of Children population)				14.8	14.4	18.1	13.7
Share of children living in low work intensity households (% of Children population)				11.5	13.8	15.7	11.4
Risk of poverty of children in households at work (Working Intensity > 0.2)				11.5	13.0	14.0	14.8
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	40.7	45.7	35.3	37.0	37.2	34.4	37.2

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)				29.9	32.0	31.8	29.6
At-risk-of-poverty (% of Working age population)	14.0	12.8	13.5	18.2 b	18.6	18.1	17.8
Severe Material Deprivation (% of Working age population)				141	151	151	141
Very low work intensity (18-59)				14.7	16.6	17.1	15.9
In-work at-risk-of poverty rate (% of persons employed)				6.2	6.5	6.1	6.2
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	30.0	37.6	35.7	32.6	33.8	35.8	34.8

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)				37.5	36.4	33.1	31.9
At-risk-of-poverty (% of Elderly population)	30.0	31.2	31.3	30.5 b	29.4	25.6	23.4
Severe Material Deprivation (% of Elderly population)				15.7	16.3	15.5	16.9
Relative median income of elderly (ratio with median income of people younger than 65)	0.75	0.75	0.76	0.78 b	0.82	0.84	0.88
Aggregate replacement ratio (ratio)	0.50	0.47	0.49	0.32 b	0.36	0.36	0.37

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care		6.3	7.1	7.0	6.9	7.2	
Disability		3.2	3.5	3.6	3.5	3.5	
Old age and survivors		6.9	7.6	7.7	7.7	7.9	
Family/Children		1.5	1.6	1.7	1.6	1.6	
Unemployment		0.2	0.4	0.5	0.5	0.5	
Housing and Social exclusion n.e.c.		0.1	0.1	0.1	0.1	0.1	
Total (including Admin and Other expenditures)		18.7	20.8	21.0	20.7	21.2	
of which: Means tested benefits		1.2	1.3	1.3	1.4	1.4	

Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

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Social Inclusion Indicators: Italy

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	26.0	25.3	24.7	24.5	28.2	29.9	28.4
At-risk-of-poverty (% of total population)	19.8	18.7	18.4	18.2	19.6	19.4	19.1
At-risk-of-poverty threshold (PPS single person)	8 640	9 157	9 158	9 123	9 468	9 345	9 205
Poverty gap (%)	22.4	23.0	22.6	24.5	26.0	25.4	28.0
Persistent at-risk-of-poverty (% of total population)	14.6	12.7	13.0	11.6	11.8	13.1	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	24.1	23.4	23.2	23.3	24.4	24.4	24.6
Impact of social transfers (excl. pensions) in reducing poverty (%)	17.8	20.1	20.7	21.9	19.7	20.5	22.4
Severe Material Deprivation (% of total population)	6.8	7.5	7.0	6.9	11.2	14.5	12.4
Share of people living in low work intensity households (% of people aged 0-59)	10.0	9.8	8.8	10.2	10.4	10.3	11.0
Gross Household Disposable income adjusted for consumer prices (growth %)	1.1	-1.1	-2.6	-0.7	-0.7	-4.4	-1.1
Income quintile share ratio S80/S20	5.5	5.1	5.2	5.2	5.6	5.5	5.7
GINI coefficient	32.2	31.0	31.5	31.2	31.9	31.9	32.5
Early leavers from education and training (% of population aged 18-24)	19.7	19.7	19.2	18.8	18.2	17.6	17.0
NEET: Young people not in employment, education or training (% of total population aged 15-24)	16.2	16.6	17.7	19.1	19.8	21.1	22.2

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	23.8	23.2	22.8	22.6	26.4	28.0	27.2
At-risk-of-poverty (% of male population)	18.4	17.1	17.0	16.8	18.3	18.1	18.1
Poverty gap (%)	23.6	23.1	22.4	24.6	27.1	27.2	28.8
Persistent at-risk-of-poverty (% of male population)	13.4	11.5	11.8	9.9	10.9	11.4	
Severe Material Deprivation (% of male population)	6.4	7.2	6.7	6.7	10.9	14.1	12.5
Share of people living in low work intensity households (% of males aged 0-59)	8.5	8.3	7.4	8.8	9.2	9.2	10.2
Life expectancy at birth (years)	78.7	79.1	79.4	79.8	80.1	79.8	
Healthy life years at birth (years)	63.3 bd	63.0	63.4	67.6 bd	63.4	62.1	
Early leavers from education and training (% of males aged 18-24)	22.9	22.6	22.0	22.0	21.0	20.5	20.2
NEET: Young people not in employment, education or training (% of males aged 15-24)	15.1	15.2	17.1	19.0	19.5	21.2	22.8

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	28.1	27.2	26.4	26.3	29.9	31.7	29.6
At-risk-of-poverty (% of female population)	21.2	20.1	19.8	19.5	20.8	20.7	20.1
Poverty gap (%)	21.9	23.0	22.9	24.2	25.3	24.1	27.1
Persistent at-risk-of-poverty (% of female population)	15.6	13.7	14.1	13.3	12.7	14.8	
Severe Material Deprivation (% of female population)	7.2	7.8	7.3	7.1	11.4	14.9	12.4
Share of people living in low work intensity households (% of females aged 0-59)	11.6	11.3	10.3	11.6	11.6	11.5	11.9
Life expectancy at birth (years)	84.2	84.5	84.6	85.0	85.3	84.8	
Healthy life years at birth (years)	62.5 bd	61.9	62.6	67.6 bd	62.7	61.5	
Early leavers from education and training (% of females aged 18-24)	16.4	16.7	16.3	15.4	15.2	14.5	13.7
NEET: Young people not in employment, education or training (% of females aged 15-24)	17.3	18.0	18.3	19.2	20.1	21.0	21.5

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	29.3	29.1	28.8	28.9	32.2	33.8	31.9
At-risk-of-poverty (% of Children population)	25.4	24.7	24.4	24.7	26.3	26.0	24.8
Severe Material Deprivation (% of Children population)	7.9	9.3	8.3	8.0	12.2	16.9	13.7
Share of children living in low work intensity households (% of Children population)	6.6	6.5	5.8	7.3	7.7	6.8	7.9
Risk of poverty of children in households at work (Working Intensity > 0.2)	21.5	20.9	21.3	20.3	21.7	22.1	20.2
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	21.6	22.6	23.3	24.5	20.3	21.5	26.2

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	25.3	24.5	24.1	24.7	28.4	30.4	29.4
At-risk-of-poverty (% of Working age population)	17.6	16.3	16.4	16.9	18.5	18.6	18.8
Severe Material Deprivation (% of Working age population)	71	71	71	71	111	141	131
Very low work intensity (18-59)	11.1	10.8	9.8	11.1	11.3	11.4	12.0
In-work at-risk-of poverty rate (% of persons employed)	9.9	9.0	10.2	9.5	10.8	11.1	10.7
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	19.3	22.4	23.0	23.9	21.6	22.2	23.3

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	25.3	24.4	22.8	20.3	24.1	25.2	22.6
At-risk-of-poverty (% of Elderly population)	21.9	20.9	19.6	16.6	17.0	16.3	15.3
Severe Material Deprivation (% of Elderly population)	6.3	6.7	5.7	6.3	10.9	13.0	10.7
Relative median income of elderly (ratio with median income of people younger than 65)	0.86	0.88	0.89	0.92	0.92	0.95	0.96
Aggregate replacement ratio (ratio)	0.49	0.51	0.51	0.53	0.55	0.58	0.62

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	6.6	6.9	7.3	7.3	7.0	7.0 p	
Disability	1.5	1.6	1.7	1.7	1.6	1.7 p	
Old age and survivors	15.5	16.1	17.1	17.4	17.5	17.9 p	
Family/Children	1.2	1.3	1.4	1.3	1.4	1.4 p	
Unemployment	0.4	0.5	0.8	0.8	0.8	0.9 p	
Housing and Social exclusion n.e.c.	0.1	0.1	0.1	0.1	0.1	0.1 p	
Total (including Admin and Other expenditures)	26.6	27.7	29.9	29.9	29.7	30.3 p	
of which: Means tested benefits	1.7	1.8	2.0	1.8	1.8	1.8 p	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Cyprus

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	25.2	23.3 b	23.5	24.6	24.6	27.1	27.8
At-risk-of-poverty (% of total population)	15.5	15.9 b	15.8	15.6	14.8	14.7	15.3
At-risk-of-poverty threshold (PPS single person)	10951	10945 b	11256	10816	11497	11444	10896
Poverty gap (%)	19.7	15.3 b	17.2	18.0	19.0	19.0	17.7
Persistent at-risk-of-poverty (% of total population)		9.9	10.1	9.2	8.6	8.3	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	21.0	22.9 b	23.6	23.5	23.5	23.5	24.3
Impact of social transfers (excl. pensions) in reducing poverty (%)	26.2	30.6	33.1	33.6	37.0	37.5	37.0
Severe Material Deprivation (% of total population)	13.3	9.1 b	9.5	11.2	11.7	15.0	16.1
Share of people living in low work intensity households (% of people aged 0-59)	3.7	4.5 b	4.0	4.9	4.9	6.5	7.9
Gross Household Disposable income adjusted for consumer prices (growth %)	5.6	5.6	-0.7	3.8	0.8	-9.0	
Income quintile share ratio S80/S20	4.4	4.3 b	4.4	4.5	4.3	4.7	4.9
GINI coefficient	29.8	29.0 b	29.5	30.1	29.2	31.0	32.4
Early leavers from education and training (% of population aged 18-24)	12.5	13.7	11.7	12.7	11.3	11.4	9.1
NEET: Young people not in employment, education or training (% of total population aged 15-24)	9.0	9.7	9.9	11.7	14.6	16.0	18.7

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	22.7	20.5 b	20.9	22.8	22.8	25.1	26.8
At-risk-of-poverty (% of male population)	13.5	13.7 b	13.7	13.8	12.9	12.9	14.1
Poverty gap (%)	18.3	14.0 b	14.6	16.6	17.9	18.3	17.4
Persistent at-risk-of-poverty (% of male population)		8.2	7.4	7.3	7.5	6.3	
Severe Material Deprivation (% of male population)	12.5	9.0 b	9.1	11.5	12.0	15.1	16.6
Share of people living in low work intensity households (% of males aged 0-59)	2.9	3.3 b	3.0	4.2	4.2	5.8	7.6
Life expectancy at birth (years)	77.9	78.5	78.6	79.2	79.3	78.9	
Healthy life years at birth (years)	63.2	64.5 bd	64.9	65.1 d	61.6	63.4	
Early leavers from education and training (% of males aged 18-24)	19.5	19.0	15.2	16.2	15.1	16.5	14.8
NEET: Young people not in employment, education or training (% of males aged 15-24)	8.3	8.2	8.6	10.4	15.1	17.8	20.6

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	27.6	25.9 b	26.0	26.3	26.4	29.0	28.8
At-risk-of-poverty (% of female population)	17.4	18.1 b	17.8	17.2	16.6	16.4	16.5
Poverty gap (%)	20.5	16.3 b	19.3	20.1	19.7	19.4	17.8
Persistent at-risk-of-poverty (% of female population)		11.5	12.6	10.9	9.6	10.3	
Severe Material Deprivation (% of female population)	14.0	9.3 b	9.8	10.9	11.4	14.9	15.6
Share of people living in low work intensity households (% of females aged 0-59)	4.5	5.7 b	5.0	5.5	5.5	7.1	8.2
Life expectancy at birth (years)	82.2	83.1	83.6	83.9	83.1	83.4	
Healthy life years at birth (years)	62.9	65.4 bd	65.6	64.2 d	61.0	64.0	
Early leavers from education and training (% of females aged 18-24)	6.8	9.5	8.7	9.8	8.1	7.0	4.2
NEET: Young people not in employment, education or training (% of females aged 15-24)	9.6	10.9	11.1	12.8	14.2	14.4	17.0

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	20.8	21.5 b	20.2	21.8	23.4	27.5	27.7
At-risk-of-poverty (% of Children population)	12.4	14.0 b	12.3	12.6	12.8	13.9	15.5
Severe Material Deprivation (% of Children population)	11.7	9.7 b	9.3	12.5	14.8	18.1	18.7
Share of children living in low work intensity households (% of Children population)	2.8	3.4 b	3.1	3.6	3.2	5.0	6.4
Risk of poverty of children in households at work (Working Intensity > 0.2)	10.5	12.5 b	10.6	10.6	11.2	11.6	11.8
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	37.7	44.0	51.4	49.6	47.1	45.5	43.6

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	21.1	18.9 b	19.9	22.1	22.1	25.8	28.2
At-risk-of-poverty (% of Working age population)	10.1	10.8 b	11.2	11.9	11.5	12.2	14.4
Severe Material Deprivation (% of Working age population)	131	91 b	101	121	121	161	171
Very low work intensity (18-59)	4.0	5.0 b	4.4	5.3	5.5	6.9	8.4
In-work at-risk-of poverty rate (% of persons employed)	6.3	6.3 b	6.8	7.4	7.3	8.0	9.0
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	34.0	36.5	38.1	37.4	42.5	41.9	38.2

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	55.6	49.3 b	48.6	42.6	39.8	33.4	26.1
At-risk-of-poverty (% of Elderly population)	50.6	46.3 b	46.4	39.9	35.5	29.3	20.1
Severe Material Deprivation (% of Elderly population)	19.4	10.9 b	9.5	7.3	7.1	7.5	9.0
Relative median income of elderly (ratio with median income of people younger than 65)	0.57	0.59 b	0.61	0.65	0.67	0.70	0.77
Aggregate replacement ratio (ratio)	0.29	0.33 b	0.37	0.37	0.39	0.39	0.40

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	4.5	4.5	5.1	5.0	5.1	4.9	
Disability	0.7	0.7	0.8	0.7	0.8	0.8	
Old age and survivors	8.3	8.4	9.3	10.2	10.8	11.8	
Family/Children	1.9	2.1	2.2	2.1	2.0	1.6	
Unemployment	0.9	1.0	1.0	1.1	1.2	1.5	
Housing and Social exclusion n.e.c.	1.6	1.9	2.5	2.7	2.6	1.9	
Total (including Admin and Other expenditures)	18.2	19.5	21.1	22.1	22.8	23.1	
of which: Means tested benefits	1.8	2.2	2.8	3.0	2.9	3.2	

Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

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Social Inclusion Indicators: Latvia

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	35.1	34.2 b	37.9	38.2	40.1	36.2	35.1
At-risk-of-poverty (% of total population)	21.2	25.9	26.4	20.9	19.0	19.2	19.4
At-risk-of-poverty threshold (PPS single person)	3 355	4 288	4 283	3 512	3 537	3 714	3 971
Poverty gap (%)	24.8	28.6	29.0	28.9	31.7	28.6	27.5
Persistent at-risk-of-poverty (% of total population)		12.6	17.1	11.0	9.3	12.6 b	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	27.5	30.2	31.0	28.5	26.8	25.7	26.0
Impact of social transfers (excl. pensions) in reducing poverty (%)	22.9	14.2	14.8	26.7	29.1	25.3	25.4
Severe Material Deprivation (% of total population)	24.0	19.3	22.1	27.6	31.0	25.6	24.0
Share of people living in low work intensity households (% of people aged 0-59)	6.2	5.4	7.4	12.6	12.6	11.7	10.0
Gross Household Disposable income adjusted for consumer prices (growth %)	11.3	4.0	-18.2	-2.8	-0.4	4.1	
Income quintile share ratio S80/S20	6.4	7.3	7.4	6.8	6.5	6.5	6.3
GINI coefficient	35.4	37.5	37.5	35.9	35.1	35.7	35.2
Early leavers from education and training (% of population aged 18-24)	15.6	15.5	14.3	12.9	11.6 b	10.6	9.8
NEET: Young people not in employment, education or training (% of total population aged 15-24)	11.9	11.8	17.5	17.8	16.0 b	14.9	13.0

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	32.3	31.4 b	36.0	37.6	39.9	35.5	34.2
At-risk-of-poverty (% of male population)	18.7	23.3	24.4	21.4	19.8	19.3	18.9
Poverty gap (%)	27.7	26.7	31.7	31.5	34.0	31.8	30.3
Persistent at-risk-of-poverty (% of male population)		10.7	14.6	10.8	9.5	13.4 b	
Severe Material Deprivation (% of male population)	22.1	17.6	21.3	26.9	30.4	24.7	23.1
Share of people living in low work intensity households (% of males aged 0-59)	5.9	5.7	7.9	13.8	13.3	12.6	10.4
Life expectancy at birth (years)	65.8	67.0	68.1	68.6	68.6	68.9	
Healthy life years at birth (years)	51.0	51.8	52.8	53.5	53.7	54.6	
Early leavers from education and training (% of males aged 18-24)	20.6	20.0	17.6	16.7	15.8 b	14.7	13.6
NEET: Young people not in employment, education or training (% of males aged 15-24)	9.5	10.2	18.6	18.7	16.1 b	15.1	12.6

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	37.4	36.6 b	39.4	38.6	40.3	36.8	35.9
At-risk-of-poverty (% of female population)	23.4	28.1	28.0	20.4	18.3	19.1	19.8
Poverty gap (%)	24.1	29.3	27.4	25.9	28.7	25.7	25.8
Persistent at-risk-of-poverty (% of female population)		14.2	19.2	11.1	9.2	11.9 b	
Severe Material Deprivation (% of female population)	25.6	20.6	22.8	28.3	31.5	26.5	24.7
Share of people living in low work intensity households (% of females aged 0-59)	6.5	5.2	7.0	11.4	12.0	10.8	9.6
Life expectancy at birth (years)	76.5	77.8	78.0	78.4	78.8	78.9	
Healthy life years at birth (years)	54.1	54.6	56.2	56.7	56.6	59.0	
Early leavers from education and training (% of females aged 18-24)	10.5	10.8	11.0	9.0	7.5 b	6.3	5.8
NEET: Young people not in employment, education or training (% of females aged 15-24)	14.4	13.5	16.3	16.9	16.0 b	14.6	13.4

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	32.8	32.4 b	38.4	42.2	44.1	40.0	38.4
At-risk-of-poverty (% of Children population)	19.8	23.6	26.3	26.3	24.7	24.4	23.4
Severe Material Deprivation (% of Children population)	20.5	19.2	24.6	30.7	32.4	27.3	25.4
Share of children living in low work intensity households (% of Children population)	5.5	4.6	6.9	12.4	12.6	10.4	9.2
Risk of poverty of children in households at work (Working Intensity > 0.2)	16.7	20.1	21.3	18.5	17.4	18.3	18.5
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	33.1	22.9	22.0	28.5	32.3	28.5	28.2

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	31.4	28.0 b	32.8	37.4	41.1	35.9	34.0
At-risk-of-poverty (% of Working age population)	17.7	19.4	20.5	20.4	20.2	19.3	18.8
Severe Material Deprivation (% of Working age population)	221	171	211	271	311	251	231
Very low work intensity (18-59)	6.4	5.7	7.6	12.6	12.6	12.1	10.2
In-work at-risk-of poverty rate (% of persons employed)	9.5	10.7	11.2	9.7	9.6	8.9	9.1
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	25.3	17.5	18.0	27.1	28.9	25.2	25.4

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	51.4	58.8 b	55.5	36.8	33.0	33.7	36.1
At-risk-of-poverty (% of Elderly population)	35.6	52.0	47.6	17.2	9.1	13.9	17.6
Severe Material Deprivation (% of Elderly population)	35.8	28.7	25.3	27.5	28.9	26.4	26.6
Relative median income of elderly (ratio with median income of people younger than 65)	0.64	0.53	0.57	0.78	0.86	0.80	0.77
Aggregate replacement ratio (ratio)	0.38	0.30	0.34	0.47	0.53	0.49	0.47

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	3.4	3.7	3.9	3.7	3.2	3.0 p	
Disability	0.7	0.9	1.3	1.3	1.3	1.2 p	
Old age and survivors	5.0	5.7	7.9	9.4	8.1	7.7 p	
Family/Children	1.2	1.4	1.7	1.5	1.1	1.0 p	
Unemployment	0.4	0.5	1.6	1.3	0.7	0.5 p	
Housing and Social exclusion n.e.c.	0.2	0.3	0.3	0.4	0.4	0.3 p	
Total (including Admin and Other expenditures)	11.3	12.7	16.9	17.8	15.1	14.0 p	
of which: Means tested benefits	0.2	0.2	0.3	0.7	0.7	0.4 p	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Lithuania

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	28.7	27.6	29.6	34.0	33.1	32.5	30.8
At-risk-of-poverty (% of total population)	19.1	20.0	20.3	20.5	19.2	18.6	20.6
At-risk-of-poverty threshold (PPS single person)	3428	4170	4289	3611	3641	4034	4411
Poverty gap (%)	25.7	25.7	23.8	32.6	29.0	22.6	24.8
Persistent at-risk-of-poverty (% of total population)		10.9	11.7	7.6	7.5	12.3 b	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	25.5	27.2	28.6	31.3	30.2	28.4	30.3
Impact of social transfers (excl. pensions) in reducing poverty (%)	25.1	26.5	29.0	34.5	36.4	34.5	32.0
Severe Material Deprivation (% of total population)	16.6	12.3	15.6	19.9	19.0	19.8	16.0
Share of people living in low work intensity households (% of people aged 0-59)	6.4	5.1	7.2	9.5	12.7	11.4	11.0
Gross Household Disposable income adjusted for consumer prices (growth %)	5.6	6.8	-11.5	-0.5	0.4	0.6	
Income quintile share ratio S80/S20	5.9	5.9	6.4	7.3	5.8	5.3	6.1
GINI coefficient	33.8	34.0	35.9	37.0	33.0	32.0	34.6
Early leavers from education and training (% of population aged 18-24)	7.8	7.5	8.7	7.9	7.4	6.5	6.3
NEET: Young people not in employment, education or training (% of total population aged 15-24)	7.1	8.8	12.1	13.2	11.8	11.2	11.1

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	26.3	25.3	27.5	33.7	33.0	31.4	28.3
At-risk-of-poverty (% of male population)	16.7	17.6	18.9	21.2	19.1	18.1	19.4
Poverty gap (%)	28.2	28.9	29.0	36.6	29.1	24.3	25.2
Persistent at-risk-of-poverty (% of male population)		10.2	9.2	6.8	8.4	12.5 b	
Severe Material Deprivation (% of male population)	15.8	11.7	15.0	19.9	18.7	19.0	14.2
Share of people living in low work intensity households (% of males aged 0-59)	6.5	5.1	7.7	10.0	12.9	11.8	10.9
Life expectancy at birth (years)	64.8	66.3	67.5	68.0	68.1	68.4	
Healthy life years at birth (years)	53.6 d	54.8	57.2	57.8	57.0	56.6	
Early leavers from education and training (% of males aged 18-24)	10.1 u	10.2 u	11.6	9.8	10.0	8.1	7.8
NEET: Young people not in employment, education or training (% of males aged 15-24)	6.3 u	8.6 u	13.7	14.7	13.1	12.8	11.6

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	30.9	29.7	31.4	34.2	33.3	33.4	33.0
At-risk-of-poverty (% of female population)	21.2	22.0	21.6	20.0	19.3	19.0	21.6
Poverty gap (%)	23.5	25.0	20.3	28.6	29.0	22.0	23.5
Persistent at-risk-of-poverty (% of female population)		11.5	13.8	8.4	6.8	12.2 b	
Severe Material Deprivation (% of female population)	17.3	12.9	16.2	19.8	19.3	20.5	17.6
Share of people living in low work intensity households (% of females aged 0-59)	6.4	5.1	6.8	8.9	12.5	11.0	11.1
Life expectancy at birth (years)	77.2	77.6	78.7	78.9	79.3	79.6	
Healthy life years at birth (years)	58.2 d	59.9	61.2	62.4	62.0	61.6	
Early leavers from education and training (% of females aged 18-24)	5.5 u	4.7 u	5.8	6.0	4.6 u	4.6 u	4.7 u
NEET: Young people not in employment, education or training (% of females aged 15-24)	7.9 u	9.1 u	10.5	11.6	10.4	9.5	10.6

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	29.9	29.4	30.8	35.8	34.6	31.9	35.4
At-risk-of-poverty (% of Children population)	22.1	22.8	23.3	24.8	25.2	20.8	26.9
Severe Material Deprivation (% of Children population)	15.9	12.3	15.8	20.0	16.7	16.9	18.5
Share of children living in low work intensity households (% of Children population)	6.4	3.6	5.4	5.7	11.7	9.3	9.8
Risk of poverty of children in households at work (Working Intensity > 0.2)	17.3	20.9	20.1	21.9	18.5	15.5	21.2
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	24.3	29.9	36.3	43.1	37.3	41.1	33.9

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	25.8	24.5	27.7	34.6	33.3	31.7	29.3
At-risk-of-poverty (% of Working age population)	15.6	16.8	18.4	22.2	20.2	17.9	19.0
Severe Material Deprivation (% of Working age population)	161	111	151	191	181	201	151
Very low work intensity (18-59)	6.4	5.6	7.8	10.6	13.1	12.0	11.4
In-work at-risk-of poverty rate (% of persons employed)	8.1	9.5	10.5	12.7	9.6	7.7	9.2
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	30.4	30.9	30.8	32.3	37.3	36.3	35.4

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	39.1	38.1	35.3	29.8	30.9	35.7	31.7
At-risk-of-poverty (% of Elderly population)	29.8	29.5	23.9	9.6	9.7	18.7	19.4
Severe Material Deprivation (% of Elderly population)	20.8	16.5	18.8	24.0	25.1	24.1	18.4
Relative median income of elderly (ratio with median income of people younger than 65)	0.69	0.71	0.73	0.93	0.90	0.78	0.81
Aggregate replacement ratio (ratio)	0.40	0.44	0.48	0.58	0.52	0.45	0.48

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	4.3	4.6	5.5	4.8	4.5	4.3 p	
Disability	1.4	1.6	2.1	1.8	1.6	1.5 p	
Old age and survivors	6.5	6.9	9.0	8.0	7.2	7.3 p	
Family/Children	1.2	1.8	2.8	2.2	1.7	1.4 p	
Unemployment	0.4	0.4	0.9	0.8	0.6	0.4 p	
Housing and Social exclusion n.e.c.	0.2	0.2	0.4	0.7	0.8	0.7 p	
Total (including Admin and Other expenditures)	14.4	16.1	21.2	19.1	17.0	16.5 p	
of which: Means tested benefits	0.2	0.3	0.5	1.0	1.0	0.9 p	

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Social Inclusion Indicators: Luxembourg

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	15.9	15.5	17.8	17.1	16.8	18.4	19.0
At-risk-of-poverty (% of total population)	13.5	13.4	14.9	14.5	13.6	15.1	15.9
At-risk-of-poverty threshold (PPS single person)	16 108	16 166	16 265	15 961	15 961	15 948	16 360
Poverty gap (%)	18.8	16.6	17.6	18.6	15.7	15.0	17.5
Persistent at-risk-of-poverty (% of total population)	8.9	8.4	8.8	6.0	6.5	7.1	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	23.4	23.6	27.0	29.1	27.2	29.0	29.4
Impact of social transfers (excl. pensions) in reducing poverty (%)	42.3	43.2	44.8	50.2	50.0	47.9	45.9
Severe Material Deprivation (% of total population)	0.8	0.7	1.1	0.5	1.2	1.3	1.8
Share of people living in low work intensity households (% of people aged 0-59)	5.0	4.7	6.3	5.5	5.8	6.1	6.6
Gross Household Disposable income adjusted for consumer prices (growth %)	4.4	5.2	1.3	3.6	1.2	2.6	
Income quintile share ratio S80/S20	4.0	4.1	4.3	4.1	4.0	4.1	4.6
GINI coefficient	27.4	27.7	29.2	27.9	27.2	28.0	30.4
Early leavers from education and training (% of population aged 18-24)	12.5	13.4	7.7 b	7.1	6.2	8.1	6.1
NEET: Young people not in employment, education or training (% of total population aged 15-24)	5.7	6.2	5.8 b	5.1	4.7	5.9	5.0

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	15.0	14.2	16.0	16.5	15.6	17.3	18.6
At-risk-of-poverty (% of male population)	12.9	12.5	13.8	14.6	12.7	14.7	15.7
Poverty gap (%)	19.1	15.4	16.9	18.6	15.7	14.9	18.0
Persistent at-risk-of-poverty (% of male population)	7.9	7.7	7.7	5.2	5.6	6.4	
Severe Material Deprivation (% of male population)	0.8	0.6	0.9	0.4	1.3	1.3	1.5
Share of people living in low work intensity households (% of males aged 0-59)	4.3	3.8	4.9	4.8	5.1	5.1	6.5
Life expectancy at birth (years)	76.7	78.1	78.1	77.9	78.5	79.1	
Healthy life years at birth (years)	62.3	64.8	65.1	64.4	65.8	65.8	
Early leavers from education and training (% of males aged 18-24)	16.6	15.8	8.9 b	8.0	7.6	10.7	8.4
NEET: Young people not in employment, education or training (% of males aged 15-24)	4.7	4.6	6.0 b	5.6	4.6	6.3	5.9

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	16.9	16.7	19.6	17.7	18.0	19.4	19.4
At-risk-of-poverty (% of female population)	14.1	14.3	16.0	14.4	14.5	15.6	16.0
Poverty gap (%)	18.7	17.6	19.2	18.8	15.9	15.5	17.4
Persistent at-risk-of-poverty (% of female population)	9.8	9.2	9.9	6.9	7.5	7.8	
Severe Material Deprivation (% of female population)	0.8	0.7	1.3	0.7	1.1	1.3	2.0
Share of people living in low work intensity households (% of females aged 0-59)	5.8	5.5	7.8	6.3	6.6	7.2	6.6
Life expectancy at birth (years)	82.2	83.1	83.3	83.5	83.6	83.8	
Healthy life years at birth (years)	64.6	64.4	65.9	66.4	67.1	66.4	
Early leavers from education and training (% of females aged 18-24)	8.4	10.9	6.6 b	6.0	4.8 u	5.5	3.7 u
NEET: Young people not in employment, education or training (% of females aged 15-24)	6.6	7.8	5.5 b	4.7	4.9	5.5	4.0

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	21.2	20.9	23.7	22.3	21.7	24.6	26.0
At-risk-of-poverty (% of Children population)	19.9	19.8	22.3	21.4	20.3	22.6	23.9
Severe Material Deprivation (% of Children population)	0.7	0.9	1.2	0.2	1.2	1.7	2.4
Share of children living in low work intensity households (% of Children population)	3.5	3.2	4.1	3.2	2.9	4.0	4.5
Risk of poverty of children in households at work (Working Intensity > 0.2)	18.1	18.2	20.3	19.7	19.0	20.8	21.6
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	40.1	41.3	43.7	50.4	50.0	50.7	46.3

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	16.0	15.8	18.2	17.5	17.6	18.8	19.0
At-risk-of-poverty (% of Working age population)	12.7	12.9	14.2	13.9	13.1	14.5	15.0
Severe Material Deprivation (% of Working age population)	11	11	11	11	11	11	21
Very low work intensity (18-59)	5.6	5.2	7.1	6.4	6.9	6.8	7.4
In-work at-risk-of poverty rate (% of persons employed)	9.3	9.4	10.1	10.6	9.8	10.3	11.2
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	44.8	44.9	46.2	50.5	50.8	47.3	46.8

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	7.2	5.4	6.2	6.1	4.7	6.1	7.0
At-risk-of-poverty (% of Elderly population)	7.2	5.4	6.0	5.9	4.7	6.1	6.2
Severe Material Deprivation (% of Elderly population)	0.6	0.0	0.2	0.1	0.0	0.0	0.9
Relative median income of elderly (ratio with median income of people younger than 65)	0.96	0.97	1.01	1.05	1.05	1.10	1.13
Aggregate replacement ratio (ratio)	0.61	0.58	0.62	0.68	0.74	0.79	0.78

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	4.9	5.3	6.1	5.8	5.6	5.8	
Disability	2.3	2.4	2.7	2.6	2.6	2.6	
Old age and survivors	7.1	7.6	8.7	8.2	8.3	8.7	
Family/Children	3.1	4.2	4.3	4.0	3.6	3.7	
Unemployment	0.9	1.0	1.3	1.3	1.2	1.3	
Housing and Social exclusion n.e.c.	0.6	0.6	0.9	0.8	0.8	0.8	
Total (including Admin and Other expenditures)	19.3	21.4	24.3	23.1	22.5	23.3	
of which: Means tested benefits	0.6	0.6	0.9	0.8	0.8	0.8	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Hungary

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	29.4	28.2	29.6	29.9	31.0	32.4	33.5
At-risk-of-poverty (% of total population)	12.3	12.4	12.4	12.3	13.8	14.0	14.3
At-risk-of-poverty threshold (PPS single person)	3894	3958	4097	4025	4321	4635	4507
Poverty gap (%)	19.8	17.3	16.3	16.5	18.3	21.0	21.7
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)	29.3	30.4	28.9	28.4	28.9	27.1	26.3
Impact of social transfers (excl. pensions) in reducing poverty (%)	58.0	59.2	57.1	56.7	52.3	48.3	45.6
Severe Material Deprivation (% of total population)	19.9	17.9	20.3	21.6	23.1	25.7	26.8
Share of people living in low work intensity households (% of people aged 0-59)	11.3	12.0	11.3	11.9	12.2	12.8	12.6
Gross Household Disposable income adjusted for consumer prices (growth %)	-2.8	-1.6	-4.1	-2.1	2.5	-4.6	
Income quintile share ratio S80/S20	3.7	3.6	3.5	3.4	3.9	4.0	4.2
GINI coefficient	25.6	25.2	24.7	24.1	26.8	26.9	28.0
Early leavers from education and training (% of population aged 18-24)	11.4	11.7	11.2	10.5	11.2	11.5	11.8
NEET: Young people not in employment, education or training (% of total population aged 15-24)	11.3	11.5	13.4	12.4	13.3	14.7	15.4

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	28.6	27.3	29.1	29.4	30.5	31.8	33.1
At-risk-of-poverty (% of male population)	12.3	12.4	12.8	12.6	14.1	14.2	14.6
Poverty gap (%)	20.5	17.9	16.3	16.9	18.5	21.8	22.5
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)	19.6	17.3	20.2	21.5	22.7	25.2	26.6
Share of people living in low work intensity households (% of males aged 0-59)	10.8	11.1	10.6	11.3	11.9	12.4	12.5
Life expectancy at birth (years)	69.4	70.0	70.3	70.7	71.2	71.6	
Healthy life years at birth (years)	55.1 bd	54.8	55.9	56.3	57.6	59.2	
Early leavers from education and training (% of males aged 18-24)	12.6	12.5	12.0	11.5	12.1	12.2	12.5
NEET: Young people not in employment, education or training (% of males aged 15-24)	9.9	10.1	12.7	11.8	12.4	13.7	13.9

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	30.1	29.0	30.0	30.3	31.4	33.0	33.9
At-risk-of-poverty (% of female population)	12.3	12.4	12.1	12.0	13.6	13.9	14.0
Poverty gap (%)	18.9	17.0	16.3	15.6	18.0	20.1	20.7
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)	20.1	18.4	20.4	21.6	23.5	26.1	26.9
Share of people living in low work intensity households (% of females aged 0-59)	11.8	12.9	12.0	12.5	12.5	13.2	12.6
Life expectancy at birth (years)	77.8	78.3	78.4	78.6	78.7	78.7	
Healthy life years at birth (years)	57.8 bd	58.3	58.2	58.6	59.1	60.5	
Early leavers from education and training (% of females aged 18-24)	10.1	10.9	10.4	9.5	10.3	10.7	11.1
NEET: Young people not in employment, education or training (% of females aged 15-24)	12.6	13.0	14.2	13.0	14.1	15.7	17.1

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	34.1	33.4	37.2	38.7	39.6	40.9	43.0
At-risk-of-poverty (% of Children population)	18.8	19.7	20.6	20.3	23.0	22.6	23.2
Severe Material Deprivation (% of Children population)	24.4	21.5	25.5	28.8	29.8	33.4	35.0
Share of children living in low work intensity households (% of Children population)	10.0	11.1	11.9	13.9	14.1	15.7	14.4
Risk of poverty of children in households at work (Working Intensity > 0.2)	12.6	13.3	14.1	12.4	14.7	12.2	14.1
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	57.8	57.7	55.5	57.2	51.6	47.6	46.7

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	29.8	29.1	30.2	30.5	31.7	32.9	34.5
At-risk-of-poverty (% of Working age population)	11.6	12.0	11.9	11.9	13.6	13.6	14.3
Severe Material Deprivation (% of Working age population)	191	181	201	211	231	261	271
Very low work intensity (18-59)	11.8	12.3	11.1	11.3	11.6	11.9	12.0
In-work at-risk-of poverty rate (% of persons employed)	5.8	5.8	6.2	5.4	6.1	5.3	6.6
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	59.3	60.3	58.0	57.0	52.3	49.3	45.4

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	21.1	17.5	17.5	16.8	18.0	20.6	19.0
At-risk-of-poverty (% of Elderly population)	6.1	4.3	4.6	4.1	4.5	6.0	4.4
Severe Material Deprivation (% of Elderly population)	17.2	14.4	14.6	14.1	15.5	17.4	16.7
Relative median income of elderly (ratio with median income of people younger than 65)	0.97	1.0	1.02	1.01	1.0	0.97	1.05
Aggregate replacement ratio (ratio)	0.58	0.61	0.62	0.60	0.59	0.58	0.61

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	5.7	5.7	5.8	5.8	5.6	5.1	
Disability	2.1	2.1	2.1	1.9	1.7	1.6	
Old age and survivors	9.8	10.2	10.4	10.4	10.5	11.2	
Family/Children	2.8	2.8	3.0	2.9	2.8	2.7	
Unemployment	0.8	0.8	1.0	0.9	0.8	0.6	
Housing and Social exclusion n.e.c.	1.1	0.9	0.8	0.7	0.5	0.4	
Total (including Admin and Other expenditures)	22.7	22.9	23.4	23.1	22.1	21.8	
of which: Means tested benefits	1.4	1.2	1.2	1.1	1.0	0.9	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Malta

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	19.7	20.1	20.3	21.2	22.1	23.1	24.0
At-risk-of-poverty (% of total population)	15.1	15.3	14.9	15.5	15.6	15.1	15.7
At-risk-of-poverty threshold (PPS single person)	7465	7958	8146	8023	8417	8760	9321
Poverty gap (%)	18.1	20.3	16.2	17.3	17.7	16.1	19.1
Persistent at-risk-of-poverty (% of total population)		7.7	7.7	9.1	11.4	9.7	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	21.5	22.9	22.9	23.5	23.2	24.0	23.3
Impact of social transfers (excl. pensions) in reducing poverty (%)	29.8	33.2	34.9	34.0	32.8	37.1	32.6
Severe Material Deprivation (% of total population)	4.4	4.3	5.0	6.5	6.6	9.2	9.5
Share of people living in low work intensity households (% of people aged 0-59)	9.6	8.6	9.2	9.2	8.9	9.0	9.0
Gross Household Disposable income adjusted for consumer prices (growth %)							
Income quintile share ratio S80/S20	3.9	4.3	4.0	4.3	4.0	3.9	4.1
GINI coefficient	26.3	28.1	27.4	28.6	27.2	27.1	27.9
Early leavers from education and training (% of population aged 18-24)	30.2	27.2	27.1	23.8	22.7	21.1	20.8
NEET: Young people not in employment, education or training (% of total population aged 15-24)	11.5	8.3	9.9	9.5	10.2	10.6	10.0

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	18.6	18.7	19.1	20.1	20.9	21.9	23.1
At-risk-of-poverty (% of male population)	14.7	13.9	14.3	14.8	15.0	14.4	15.4
Poverty gap (%)	16.7	21.7	15.9	17.7	17.1	16.7	19.0
Persistent at-risk-of-poverty (% of male population)		7.7	6.3	8.4	10.2	10.0	
Severe Material Deprivation (% of male population)	4.0	4.1	4.8	6.3	6.4	8.6	9.4
Share of people living in low work intensity households (% of males aged 0-59)	8.2	6.9	7.3	7.4	7.0	7.6	7.6
Life expectancy at birth (years)	77.5	77.1	77.9	79.2	78.6	78.6	
Healthy life years at birth (years)	69.1	69.0	69.4	70.2	70.3	71.5	
Early leavers from education and training (% of males aged 18-24)	34.8	31.1	30.9	29.9	28.8	25.2	23.2
NEET: Young people not in employment, education or training (% of males aged 15-24)	11.9	6.8	9.4	8.2	9.7	10.0	9.8

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	20.9	21.5	21.6	22.4	23.2	24.3	24.9
At-risk-of-poverty (% of female population)	15.5	16.7	15.5	16.2	16.1	15.8	16.1
Poverty gap (%)	18.7	19.0	16.6	16.6	19.1	16.0	19.1
Persistent at-risk-of-poverty (% of female population)		7.8	9.0	9.7	12.6	9.5	
Severe Material Deprivation (% of female population)	4.8	4.6	5.2	6.6	6.9	9.7	9.6
Share of people living in low work intensity households (% of females aged 0-59)	11.1	10.4	11.3	11.0	10.9	10.5	10.4
Life expectancy at birth (years)	82.2	82.3	82.7	83.6	83.0	83.0	
Healthy life years at birth (years)	71.1	72.3	71.0	71.6	70.7	72.2	
Early leavers from education and training (% of females aged 18-24)	25.3	23.2	23.0	17.4	16.3	16.8	18.4
NEET: Young people not in employment, education or training (% of females aged 15-24)	11.2	9.8	10.4	10.9	10.7	11.3	10.1

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	23.9	25.0	26.5	26.7	27.8	31.0	32.0
At-risk-of-poverty (% of Children population)	19.8	20.4	21.2	22.1	23.0	23.1	24.0
Severe Material Deprivation (% of Children population)	6.4	6.3	7.2	7.7	7.7	12.3	11.8
Share of children living in low work intensity households (% of Children population)	10.0	9.8	10.4	9.7	10.0	10.4	11.2
Risk of poverty of children in households at work (Working Intensity > 0.2)	13.6	14.1	15.9	16.0	16.9	17.0	17.8
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	31.0	33.6	35.0	31.4	29.9	36.0	28.8

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	17.8	17.5	18.1	19.6	20.7	21.1	22.5
At-risk-of-poverty (% of Working age population)	12.6	12.0	12.1	13.1	13.1	12.4	13.6
Severe Material Deprivation (% of Working age population)	41	41	51	61	71	91	101
Very low work intensity (18-59)	9.4	8.2	8.9	9.0	8.6	8.6	8.3
In-work at-risk-of poverty rate (% of persons employed)	4.6	5.1	5.4	5.8	6.1	5.2	5.9
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	33.0	37.8	38.3	36.7	35.8	40.1	32.0

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	22.8	26.0	22.2	21.7	21.0	22.3	20.8
At-risk-of-poverty (% of Elderly population)	20.3	24.3	19.7	18.2	17.6	17.3	14.9
Severe Material Deprivation (% of Elderly population)	3.1	3.1	4.1	5.0	4.7	6.4	7.1
Relative median income of elderly (ratio with median income of people younger than 65)	0.78	0.73	0.77	0.81	0.79	0.80	0.79
Aggregate replacement ratio (ratio)	0.47	0.41	0.45	0.44	0.48	0.46	0.56

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	5.1	5.3	5.9	5.5	5.4	5.7	
Disability	1.1	1.0	0.9	0.8	0.8	0.7	
Old age and survivors	9.1	9.3	10.1	10.4	10.1	10.6	
Family/Children	1.0	1.2	1.2	1.2	1.2	1.2	
Unemployment	0.5	0.5	0.6	0.5	0.5	0.6	
Housing and Social exclusion n.e.c.	0.6	0.6	0.5	0.5	0.5	0.4	
Total (including Admin and Other expenditures)	17.7	18.1	19.6	19.1	18.7	19.4	
of which: Means tested benefits	3.1	2.5	2.6	2.5	2.5	2.5	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Netherlands

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	15.7	14.9	15.1	15.1	15.7	15.0	15.9
At-risk-of-poverty (% of total population)	10.2	10.5	11.1	10.3	11.0	10.1	10.4
At-risk-of-poverty threshold (PPS single person)	10 522	11 485	11 618	11 288	11 300	11 387	11 616
Poverty gap (%)	17.0	14.9	16.5	16.2	15.5	17.3	16.5
Persistent at-risk-of-poverty (% of total population)		6.4	4.7	8.2	7.7	5.8	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	20.6	19.9	20.5	21.1	20.9	20.6	20.8
Impact of social transfers (excl. pensions) in reducing poverty (%)	50.5	47.2	45.9	51.2	47.4	51.0	50.0
Severe Material Deprivation (% of total population)	1.7	1.5	1.4	2.2	2.5	2.3	2.5
Share of people living in low work intensity households (% of people aged 0-59)	9.7	8.2	8.5	8.4	8.9	8.9	9.4
Gross Household Disposable income adjusted for consumer prices (growth %)	2.7	-0.2	-0.6	0.0	-0.7	-2.4	
Income quintile share ratio S80/S20	4.0	4.0	4.0	3.7	3.8	3.6	3.6
GINI coefficient	27.6	27.6	27.2	25.5	25.8	25.4	25.1
Early leavers from education and training (% of population aged 18-24)	11.7	11.4	10.9	10.0 b	9.1	8.8	9.2
NEET: Young people not in employment, education or training (% of total population aged 15-24)	3.5	3.4	4.1	4.3 b	3.8	4.3	5.1

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	14.6	14.3	14.3	14.1	14.9	13.6	14.9
At-risk-of-poverty (% of male population)	9.6	10.5	10.8	9.7	10.8	9.5	10.2
Poverty gap (%)	17.5	14.6	16.9	15.1	15.3	17.3	15.1
Persistent at-risk-of-poverty (% of male population)		6.9	5.4	6.8	8.1	4.8	
Severe Material Deprivation (% of male population)	1.7	1.5	1.4	2.3	2.4	2.3	2.4
Share of people living in low work intensity households (% of males aged 0-59)	8.6	7.0	7.6	7.4	8.0	7.8	8.3
Life expectancy at birth (years)	78.1	78.4	78.7	78.9	79.4	79.3	
Healthy life years at birth (years)	66.1	62.4 bd	61.7	61.3	64.0	63.5	
Early leavers from education and training (% of males aged 18-24)	14.0	14.0	13.1	12.1 b	10.8	10.2	10.9
NEET: Young people not in employment, education or training (% of males aged 15-24)	3.1	3.1	4.1	4.4 b	3.7	3.9	4.9

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	16.9	15.5	15.9	16.0	16.6	16.3	16.9
At-risk-of-poverty (% of female population)	10.7	10.4	11.3	10.8	11.1	10.6	10.6
Poverty gap (%)	16.9	17.0	16.3	16.4	16.5	17.1	17.2
Persistent at-risk-of-poverty (% of female population)		5.8	4.1	9.5	7.3	6.8	
Severe Material Deprivation (% of female population)	1.7	1.6	1.5	2.2	2.6	2.4	2.6
Share of people living in low work intensity households (% of females aged 0-59)	10.8	9.4	9.3	9.3	9.7	10.0	10.4
Life expectancy at birth (years)	82.5	82.5	82.9	83.0	83.1	83.0	
Healthy life years at birth (years)	64.3	59.9 bd	60.1	60.2	59.0	58.9	
Early leavers from education and training (% of females aged 18-24)	9.3	8.8	8.6	7.8 b	7.2	7.3	7.4
NEET: Young people not in employment, education or training (% of females aged 15-24)	4.0	3.8	4.1	4.2 b	3.8	4.7	5.3

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	17.2	15.5	17.5	16.9	18.0	16.9	17.0
At-risk-of-poverty (% of Children population)	14.0	12.9	15.4	13.7	15.5	13.2	12.6
Severe Material Deprivation (% of Children population)	1.9	2.2	1.5	2.0	2.9	3.3	2.3
Share of children living in low work intensity households (% of Children population)	6.2	5.1	5.4	5.8	6.3	6.4	6.4
Risk of poverty of children in households at work (Working Intensity > 0.2)	11.3	10.1	12.2	11.2	11.8	10.1	10.1
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	43.6	43.9	38.9	45.6	36.2	44.5	47.3

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	16.5	15.8	15.9	16.5	17.0	16.5	18.1
At-risk-of-poverty (% of Working age population)	8.9	9.9	10.3	10.1	10.5	10.1	10.9
Severe Material Deprivation (% of Working age population)	21	21	21	31	31	21	31
Very low work intensity (18-59)	11.0	9.5	9.7	9.4	9.8	9.9	10.5
In-work at-risk-of poverty rate (% of persons employed)	4.5	4.7	5.0	5.1	5.4	4.6	4.2
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	55.3	50.0	49.3	53.5	51.6	53.7	51.3

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	9.8	9.7	8.1	6.2	6.9	6.2	6.1
At-risk-of-poverty (% of Elderly population)	9.5	9.4	7.7	5.9	6.5	5.5	5.5
Severe Material Deprivation (% of Elderly population)	0.7	0.4	0.4	0.3	0.4	0.7	0.8
Relative median income of elderly (ratio with median income of people younger than 65)	0.83	0.84	0.86	0.87	0.87	0.90	0.90
Aggregate replacement ratio (ratio)	0.43	0.43	0.44	0.47	0.46	0.47	0.49

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	8.6	9.4	10.4	10.7	10.9	11.3 p	
Disability	2.4	2.4	2.5	2.5	2.4	2.3 p	
Old age and survivors	10.9	10.9	11.6	11.9	12.0	12.5 p	
Family/Children	1.6	1.2	1.3	1.2	1.2	1.1 p	
Unemployment	1.1	1.0	1.4	1.6	1.5	1.8 p	
Housing and Social exclusion n.e.c.	2.1	2.1	2.4	2.4	2.6	2.5 p	
Total (including Admin and Other expenditures)	28.3	28.5	31.6	32.1	32.3	33.3 p	
of which: Means tested benefits	3.7	3.9	4.5	4.6	4.7	4.8 p	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Austria

All	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of total population)	16.7	20.6 b	19.1	18.9	19.2	18.5	18.8
At-risk-of-poverty (% of total population)	12.0	15.2 b	14.5	14.7	14.5	14.4	14.4
At-risk-of-poverty threshold (PPS single person)	10 686	11 359 b	11 683	11 710	12 255	12 380	12 555
Poverty gap (%)	17.0	19.9 b	19.2	21.8	19.1	20.1	21.3
Persistent at-risk-of-poverty (% of total population)	5.5	5.6	6.2	6.5	5.8	5.8 b	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	24.7	25.9 b	25.3	26.0	27.1	25.8	25.9
Impact of social transfers (excl. pensions) in reducing poverty (%)	51.4	41.3	42.7	43.5	46.5	44.2	44.4
Severe Material Deprivation (% of total population)	3.3	5.9 b	4.6	4.3	4.0	4.0	4.2
Share of people living in low work intensity households (% of people aged 0-59)	8.2	7.4 b	7.1	7.8	8.6	7.7	7.8
Gross Household Disposable income adjusted for consumer prices (growth %)	2.5	0.8	0.2	-0.4	-1.2	1.2	
Income quintile share ratio S80/S20	3.8	4.2 b	4.2	4.3	4.1	4.2	4.1
GINI coefficient	26.2	27.7 b	27.5	28.3	27.4	27.6	27.0
Early leavers from education and training (% of population aged 18-24)	10.7	10.1	8.7	8.3	8.3	7.6	7.3
NEET: Young people not in employment, education or training (% of total population aged 15-24)	7.0	7.1	7.8	7.1	6.9	6.5	7.1

By gender

Male	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of male population)	14.5	18.9 b	17.6	17.3	17.9	17.3	17.4
At-risk-of-poverty (% of male population)	10.6	14.2 b	13.8	13.4	14.0	13.5	13.5
Poverty gap (%)	18.7	21.0 b	19.1	22.2	19.1	20.4	22.7
Persistent at-risk-of-poverty (% of male population)	3.5	4.9	4.4	5.8	4.6	4.5 b	
Severe Material Deprivation (% of male population)	3.1	5.5 b	4.2	3.9	3.6	3.8	4.3
Share of people living in low work intensity households (% of males aged 0-59)	6.6	6.1 b	5.5	6.7	7.5	6.7	7.0
Life expectancy at birth (years)	77.4	77.8	77.6	77.9	78.3	78.4	
Healthy life years at birth (years)	58.7	58.3 bd	59.5	59.5	59.8	60.2	
Early leavers from education and training (% of males aged 18-24)	11.4	10.4	8.5	8.4	8.8	7.9	7.7
NEET: Young people not in employment, education or training (% of males aged 15-24)	6.4	6.4	7.4	6.9	6.8	6.3	6.9

Female	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of female population)	18.9	22.3 b	20.5	20.5	20.3	19.6	20.1
At-risk-of-poverty (% of female population)	13.3	16.1 b	15.3	15.8	15.0	15.3	15.2
Poverty gap (%)	15.9	18.7 b	19.2	21.6	19.1	20.0	20.7
Persistent at-risk-of-poverty (% of female population)	7.3	6.3	7.9	7.1	6.9	7.1 b	
Severe Material Deprivation (% of female population)	3.5	6.3 b	4.9	4.6	4.4	4.2	4.2
Share of people living in low work intensity households (% of females aged 0-59)	9.8	8.6 b	8.7	8.9	9.7	8.7	8.5
Life expectancy at birth (years)	83.1	83.3	83.2	83.5	83.8	83.6	
Healthy life years at birth (years)	61.5	59.7 bd	60.8	60.7	60.3	62.5	
Early leavers from education and training (% of females aged 18-24)	10.1	9.8	8.9	8.2	7.8	7.3	7.0
NEET: Young people not in employment, education or training (% of females aged 15-24)	7.6	7.8	8.3	7.4	7.1	6.7	7.3

By age

Children (0-17)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	18.5	22.9 b	20.8	22.4	22.1	20.9	22.9
At-risk-of-poverty (% of Children population)	14.8	18.1 b	17.1	19.0	17.8	17.5	18.6
Severe Material Deprivation (% of Children population)	3.7	6.7 b	5.0	5.6	5.8	5.8	6.4
Share of children living in low work intensity households (% of Children population)	6.3	5.5 b	5.7	5.9	7.0	6.1	7.2
Risk of poverty of children in households at work (Working Intensity > 0.2)	11.6	15.6 b	14.2	15.4	14.4	14.1	15.3
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	59.0	51.0	52.1	49.7	54.8	52.7	52.9

Working age (18-64)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of Working age population)	16.7	19.8 b	18.7	18.3	18.8	18.4	18.3
At-risk-of-poverty (% of Working age population)	10.6	13.3 b	13.0	12.9	13.1	13.3	12.9
Severe Material Deprivation (% of Working age population)	31	61 b	51	51	41	41	41
Very low work intensity (18-59)	8.8	8.0 b	7.5	8.4	9.1	8.2	7.9
In-work at-risk-of poverty rate (% of persons employed)	6.1	8.5 b	8.2	7.5	7.6	8.2	7.9
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	54.5	44.1	45.2	47.1	48.6	45.5	46.3

Elderly (65+)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	15.1	21.2 b	18.6	17.4	17.4	16.2	16.2
At-risk-of-poverty (% of Elderly population)	14.0	18.9 b	17.4	16.8	16.2	15.1	15.4
Severe Material Deprivation (% of Elderly population)	2.1	4.4 b	2.8	1.9	2.1	1.9	1.8
Relative median income of elderly (ratio with median income of people younger than 65)	0.93	0.88 b	0.89	0.90	0.92	0.93	0.95
Aggregate replacement ratio (ratio)	0.62	0.61 b	0.56	0.57	0.59	0.58	0.59

Expenditure in social protection indicators (% of GDP)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Sickness/Health care	7.0	7.3	7.7	7.6	7.4	7.5	
Disability	2.1	2.1	2.2	2.2	2.2	2.2	
Old age and survivors	13.3	13.6	14.7	14.8	14.5	14.9	
Family/Children	2.7	2.8	3.0	3.1	2.8	2.8	
Unemployment	1.4	1.4	1.7	1.7	1.5	1.5	
Housing and Social exclusion n.e.c.	0.4	0.5	0.5	0.5	0.5	0.5	
Total (including Admin and Other expenditures)	27.9	28.5	30.7	30.6	29.8	30.2	
of which: Means tested benefits	1.9	2.0	2.2	2.3	2.3	2.3	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Poland

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	34.4	30.5 b	27.8	27.8	27.2	26.7	25.8
At-risk-of-poverty (% of total population)	17.3	16.9	17.1	17.6	17.7	17.1	17.3
At-risk-of-poverty threshold (PPS single person)	3 365	4 039	4 417	4 547	4 993	5 181	5 463
Poverty gap (%)	24.0	20.6	22.7	22.2	21.4	22.2	22.6
Persistent at-risk-of-poverty (% of total population)		10.4	10.2	10.5	10.1	10.7	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	26.5	25.1	23.6	24.4	24.1	22.9	23.0
Impact of social transfers (excl. pensions) in reducing poverty (%)	34.7	32.7	27.5	27.9	26.6	25.3	24.8
Severe Material Deprivation (% of total population)	22.3	17.7	15.0	14.2	13.0	13.5	11.9
Share of people living in low work intensity households (% of people aged 0-59)	10.1	8.0	6.9	7.3	6.9	6.9	7.2
Gross Household Disposable income adjusted for consumer prices (growth %)	4.2	4.0	4.5	2.1	0.3	-0.1	
Income quintile share ratio S80/S20	5.3	5.1	5.0	5.0	5.0	4.9	4.9
GINI coefficient	32.2	32.0	31.4	31.1	31.1	30.9	30.7
Early leavers from education and training (% of population aged 18-24)	5.0	5.0	5.3	5.4	5.6	5.7	5.6
NEET: Young people not in employment, education or training (% of total population aged 15-24)	10.6	9.0	10.1	10.8	11.5	11.8	12.2

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	33.5	29.9 b	27.0	27.0	26.6	26.1	25.5
At-risk-of-poverty (% of male population)	17.6	17.0	16.9	17.4	17.8	17.1	17.3
Poverty gap (%)	25.4	21.5	23.7	23.3	22.8	23.3	23.4
Persistent at-risk-of-poverty (% of male population)		10.7	10.4	10.2	10.4	10.4	
Severe Material Deprivation (% of male population)	21.9	17.6	14.6	14.1	12.9	13.2	11.8
Share of people living in low work intensity households (% of males aged 0-59)	9.5	7.3	6.4	6.7	6.4	6.5	6.9
Life expectancy at birth (years)	71.0	71.3	71.5	72.1	72.6	72.7	
Healthy life years at birth (years)	57.6	58.5	58.3 bd	58.5	59.1	59.2	
Early leavers from education and training (% of males aged 18-24)	6.2	6.1	6.6	7.2	7.4	7.8	7.9
NEET: Young people not in employment, education or training (% of males aged 15-24)	9.3	7.3	9.4	10.5	11.2	11.5	12.1

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	35.1	31.2 b	28.6	28.5	27.7	27.3	26.2
At-risk-of-poverty (% of female population)	17.1	16.7	17.4	17.7	17.6	17.1	17.3
Poverty gap (%)	22.8	20.0	21.8	21.0	20.3	21.2	21.9
Persistent at-risk-of-poverty (% of female population)		10.2	10.1	10.7	9.9	11.0	
Severe Material Deprivation (% of female population)	22.7	17.9	15.3	14.4	13.2	13.8	12.0
Share of people living in low work intensity households (% of females aged 0-59)	10.7	8.6	7.4	8.0	7.4	7.2	7.4
Life expectancy at birth (years)	79.8	80.0	80.1	80.7	81.1	81.1	
Healthy life years at birth (years)	61.5	63.0	62.5 bd	62.3	63.3	62.9	
Early leavers from education and training (% of females aged 18-24)	3.8	3.9	3.9	3.5	3.7	3.5	3.2
NEET: Young people not in employment, education or training (% of females aged 15-24)	11.9	10.8	10.8	11.0	11.8	12.2	12.3

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	37.1	32.9 b	31.0	30.8	29.8	29.3	29.8
At-risk-of-poverty (% of Children population)	24.2	22.4	23.0	22.5	22.0	21.5	23.2
Severe Material Deprivation (% of Children population)	22.5	17.5	15.3	14.9	13.2	13.7	11.8
Share of children living in low work intensity households (% of Children population)	6.6	5.0	4.7	4.8	4.1	4.6	5.0
Risk of poverty of children in households at work (Working Intensity > 0.2)	20.8	19.8	20.3	19.4	19.7	18.8	20.3
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	29.9	31.1	23.6	26.7	26.9	25.6	22.4

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	34.9	30.6 b	27.3	27.6	27.0	26.7	26.1
At-risk-of-poverty (% of Working age population)	17.2	16.3	16.0	16.9	17.1	16.5	16.7
Severe Material Deprivation (% of Working age population)	221	171	141	141	131	131	121
Very low work intensity (18-59)	11.2	8.9	7.6	8.1	7.8	7.6	7.8
In-work at-risk-of poverty rate (% of persons employed)	11.7	11.5	11.0	11.5	11.2	10.4	10.8
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	36.5	34.5	30.4	29.9	28.2	27.0	26.8

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	27.3	26.9 b	25.8	24.4	24.7	23.4	19.7
At-risk-of-poverty (% of Elderly population)	7.8	11.7	14.4	14.2	14.7	14.0	12.3
Severe Material Deprivation (% of Elderly population)	23.7	20.8	17.3	16.5	15.4	14.8	11.5
Relative median income of elderly (ratio with median income of people younger than 65)	1.04	0.97	0.92	0.93	0.94	0.95	0.98
Aggregate replacement ratio (ratio)	0.58	0.56	0.56	0.57	0.55	0.58	0.60

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	3.9	4.5	4.7	4.5	4.3		
Disability	1.7	1.6	1.5	1.6	1.5		
Old age and survivors	10.8	11.0	11.9	11.4	10.9		
Family/Children	0.9	1.3	1.3	1.4	1.3		
Unemployment	0.4	0.4	0.4	0.4	0.3		
Housing and Social exclusion n.e.c.	0.3	0.2	0.2	0.3	0.2		
Total (including Admin and Other expenditures)	18.5	19.4	20.6	20.0	19.1		
of which: Means tested benefits	0.9	0.8	0.7	0.7	0.6		

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Portugal

All	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of total population)	25.0	26.0	24.9	25.3	24.4	25.3	27.4
At-risk-of-poverty (% of total population)	18.1	18.5	17.9	17.9	18.0	17.9	18.7
At-risk-of-poverty threshold (PPS single person)	5 349	5 702	5 655	5 837	5 773	5 690	5 705
Poverty gap (%)	24.3	23.2	23.6	22.7	23.2	24.1	27.3
Persistent at-risk-of-poverty (% of total population)	14.1	13.1	9.8	13.2	13.6	11.4	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	24.2	24.9	24.3	26.4	25.4	25.3	25.5
Impact of social transfers (excl. pensions) in reducing poverty (%)	25.2	25.7	26.3	32.2	29.1	29.3	26.7
Severe Material Deprivation (% of total population)	9.6	9.7	9.1	9.0	8.3	8.6	10.9
Share of people living in low work intensity households (% of people aged 0-59)	7.2	6.3	7.0	8.6	8.3	10.1	12.2
Gross Household Disposable income adjusted for consumer prices (growth %)	1.8	1.7	1.9	1.6	-3.8	-3.0	-1.0
Income quintile share ratio S80/S20	6.5	6.1	6.0	5.6	5.7	5.8	6.0
GINI coefficient	36.8	35.8	35.4	33.7	34.2	34.5	34.2
Early leavers from education and training (% of population aged 18-24)	36.5	34.9	30.9	28.3	23.0	20.5	18.9
NEET: Young people not in employment, education or training (% of total population aged 15-24)	11.2	10.2	11.2	11.4	12.6	13.9	14.1

By gender

Male	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of male population)	24.0	25.0	24.0	24.8	23.8	24.6	27.4
At-risk-of-poverty (% of male population)	17.2	17.9	17.3	17.3	17.6	17.5	18.8
Poverty gap (%)	24.3	22.5	24.9	23.1	23.4	25.3	28.4
Persistent at-risk-of-poverty (% of male population)	13.1	12.0	9.2	13.0	13.3	10.9	
Severe Material Deprivation (% of male population)	9.2	9.5	8.9	9.2	7.8	8.3	10.9
Share of people living in low work intensity households (% of males aged 0-59)	6.7	5.8	6.6	8.4	7.9	9.9	12.3
Life expectancy at birth (years)	75.9	76.2	76.5	76.7	77.3	77.3 b	
Healthy life years at birth (years)	58.5	59.1 bd	58.3	59.3 bd	60.7	64.5 b	
Early leavers from education and training (% of males aged 18-24)	42.8	41.4	35.8	32.4	28.1	26.9	23.4
NEET: Young people not in employment, education or training (% of males aged 15-24)	9.8	8.9	10.6	10.4	12.2	14.6	14.2

Female	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of female population)	26.0	26.8	25.8	25.8	25.1	25.9	27.4
At-risk-of-poverty (% of female population)	19.0	19.1	18.4	18.4	18.4	18.2	18.6
Poverty gap (%)	24.2	23.6	23.0	22.6	23.0	23.2	27.0
Persistent at-risk-of-poverty (% of female population)	15.0	14.1	10.4	13.5	13.8	11.9	
Severe Material Deprivation (% of female population)	9.9	9.9	9.2	8.8	8.7	8.9	11.0
Share of people living in low work intensity households (% of females aged 0-59)	7.8	6.8	7.3	8.9	8.6	10.3	12.1
Life expectancy at birth (years)	82.2	82.4	82.6	82.8	83.8	83.6 b	
Healthy life years at birth (years)	57.8	57.6 bd	56.4	56.6 bd	58.6	62.6 b	
Early leavers from education and training (% of females aged 18-24)	30.0	28.2	25.8	24.0	17.7	14.0	14.3
NEET: Young people not in employment, education or training (% of females aged 15-24)	12.6	11.6	11.8	12.5	12.9	13.2	13.9

By age

Children (0-17)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	26.9	29.5	28.7	28.7	28.6	27.8	31.6
At-risk-of-poverty (% of Children population)	20.9	22.8	22.9	22.4	22.4	21.8	24.4
Severe Material Deprivation (% of Children population)	11.8	11.8	10.5	10.8	11.3	10.3	13.9
Share of children living in low work intensity households (% of Children population)	5.1	5.9	6.2	8.0	7.2	8.5	9.7
Risk of poverty of children in households at work (Working Intensity > 0.2)	17.6	19.5	19.3	17.1	18.3	16.4	18.1
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	22.9	24.3	25.4	30.4	27.5	26.4	23.0

Working age (18-64)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of Working age population)	23.1	24.5	23.5	24.1	23.2	25.6	28.5
At-risk-of-poverty (% of Working age population)	15.2	16.3	15.8	15.7	16.2	16.9	18.4
Severe Material Deprivation (% of Working age population)	91	91	81	81	81	81	111
Very low work intensity (18-59)	7.9	6.5	7.2	8.8	8.6	10.6	13.0
In-work at-risk-of poverty rate (% of persons employed)	9.3	11.3	10.3	9.6	10.2	9.9	10.4
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	30.9	30.3	30.7	37.7	33.6	34.0	30.0

Elderly (65+)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	30.0	27.7	26.0	26.1	24.5	22.2	20.3
At-risk-of-poverty (% of Elderly population)	25.5	22.3	20.1	21.0	20.0	17.4	14.6
Severe Material Deprivation (% of Elderly population)	10.7	10.1	10.6	9.6	7.7	8.4	9.0
Relative median income of elderly (ratio with median income of people younger than 65)	0.80	0.83	0.85	0.82	0.87	0.92	0.94
Aggregate replacement ratio (ratio)	0.47	0.51	0.50	0.53	0.56	0.58	0.59

Expenditure in social protection indicators (% of GDP)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Sickness/Health care	6.4	6.5	7.3	7.0	6.3	6.4	
Disability	2.3	2.1	2.1	2.1	2.1	1.9	
Old age and survivors	11.3	11.9	12.9	13.1	13.8	13.9	
Family/Children	1.2	1.3	1.4	1.4	1.2	1.2	
Unemployment	1.1	1.0	1.4	1.4	1.4	1.7	
Housing and Social exclusion n.e.c.	0.3	0.3	0.4	0.4	0.3	0.3	
Total (including Admin and Other expenditures)	23.9	24.3	26.8	26.8	26.5	26.9	
of which: Means tested benefits	2.1	2.3	2.6	2.5	2.2	2.3	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Romania

All	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of total population)	45.9	44.2	43.1	41.4	40.3	41.7	40.4
At-risk-of-poverty (% of total population)	24.8	23.4	22.4	21.1	22.2	22.6	22.4
At-risk-of-poverty threshold (PPS single person)	1726	1838	2056	2124	2213	2157	2237
Poverty gap (%)	34.8	32.3	32.0	30.6	31.8	30.9	32.6
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
Impact of social transfers (excl. pensions) in reducing poverty (%)	19.7	23.8	23.0	23.3	23.7	19.3	19.4
Severe Material Deprivation (% of total population)	36.5	32.9	32.2	31.0	29.4	29.9	28.5
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
Gross Household Disposable income adjusted for consumer prices (growth %)	14.3	20.3	-10.2	-2.7	-1.8		
Income quintile share ratio S80/S20	7.8	7.0	6.7	6.0	6.2	6.3	6.6
GINI coefficient	37.8 b	36.0	34.9	33.3	33.2	33.2	34.0
Early leavers from education and training (% of population aged 18-24)	17.3	15.9	16.6	18.4	17.5	17.4	17.3
NEET: Young people not in employment, education or training (% of total population aged 15-24)	13.3	11.6	13.9	16.4	17.4	16.8	17.2

By gender

Male	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of male population)	45.1	43.0	41.9	40.8	39.5	40.7	39.4
At-risk-of-poverty (% of male population)	24.3	22.4	21.4	20.7	21.9	21.9	22.3
Poverty gap (%)	35.4	32.6	32.4	31.5	33.7	31.9	33.2
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
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
Life expectancy at birth (years)	69.7	69.7	69.8	70.1	71.1	71.0	
Healthy life years at birth (years)	60.6 d	60.2	59.8	57.5 bd	57.4	57.7	
Early leavers from education and training (% of males aged 18-24)	17.1	15.9	16.1	18.6	18.5	18.0	18.6
NEET: Young people not in employment, education or training (% of males aged 15-24)	11.6	8.8	11.2	14.0	15.9	15.1	15.5

Female	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of female population)	46.7	45.3	44.2	42.1	41.1	42.6	41.3
At-risk-of-poverty (% of female population)	25.3	24.3	23.4	21.4	22.5	23.2	22.5
Poverty gap (%)	34.8	31.7	31.3	30.3	29.3	30.3	32.0
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
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
Life expectancy at birth (years)	76.9	77.2	77.4	77.6	78.2	78.1	
Healthy life years at birth (years)	62.6 d	62.8	61.7	57.5 bd	57.0	57.7	
Early leavers from education and training (% of females aged 18-24)	17.4	16.0	17.2	18.2	16.6	16.7	16.0
NEET: Young people not in employment, education or training (% of females aged 15-24)	15.1	14.5	16.8	18.9	18.8	18.6	18.9

By age

Children (0-17)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
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
At-risk-of-poverty (% of Children population)	32.8	32.9	32.9	31.3	32.9	34.6	32.1
Severe Material Deprivation (% of Children population)	40.4	39.2	40.3	36.7	35.8	37.9	34.1
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
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
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

Working age (18-64)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of Working age population)	42.0	41.0	40.5	39.7	39.0	40.2	39.4
At-risk-of-poverty (% of Working age population)	21.1	20.0	19.8	19.2	21.0	21.0	21.5
Severe Material Deprivation (% of Working age population)	331	301	301	291	281	281	271
Very low work intensity (18-59)	9.0	8.9	8.4	7.6	7.3	8.1	6.9
In-work at-risk-of poverty rate (% of persons employed)	17.3	16.8	17.3	17.0	18.6	18.9	17.7
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

Elderly (65+)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
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
At-risk-of-poverty (% of Elderly population)	30.6	26.0	21.0	16.7	14.1	15.4	15.0
Severe Material Deprivation (% of Elderly population)	48.9	38.9	33.8	32.4	28.6	28.6	27.5
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
Aggregate replacement ratio (ratio)	0.43	0.49	0.55	0.65	0.64	0.67	0.65

Expenditure in social protection indicators (% of GDP)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Sickness/Health care	3.5	3.5	4.2	4.4	4.1	4.1	
Disability	1.3	1.4	1.6	1.6	1.5	1.3	
Old age and survivors	6.0	7.2	8.8	8.9	8.7	8.4	
Family/Children	1.7	1.5	1.7	1.7	1.5	1.3	
Unemployment	0.3	0.2	0.4	0.6	0.3	0.2	
Housing and Social exclusion n.e.c.	0.4	0.3	0.3	0.3	0.3	0.2	
Total (including Admin and Other expenditures)	13.6	14.4	17.2	17.6	16.4	15.6	
of which: Means tested benefits	0.8	0.7	1.0	1.3	0.8	0.6	

Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

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Social Inclusion Indicators: Slovenia

All	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of total population)	17.1	18.5	17.1	18.3	19.3	19.6	20.4
At-risk-of-poverty (% of total population)	11.5	12.3	11.3	12.7	13.6	13.5	14.5
At-risk-of-poverty threshold (PPS single person)	7 753	8 287	8 599	8 009	8 364	8 563	8 571
Poverty gap (%)	19.4	19.3	20.2	20.2	19.9	19.1	20.4
Persistent at-risk-of-poverty (% of total population)		7.7	7.0	6.9	7.5	6.1	7.5
At-risk-of-poverty before social transfers excl. pensions (% of total population)	23.1	23.0	22.0	24.2	24.2	25.2	25.3
Impact of social transfers (excl. pensions) in reducing poverty (%)	50.2	46.5	48.6	47.5	43.8	46.4	42.7
Severe Material Deprivation (% of total population)	5.1	6.7	6.1	5.9	6.1	6.6	6.7
Share of people living in low work intensity households (% of people aged 0-59)	7.3	6.7	5.6	7.0	7.6	7.5	8.0
Gross Household Disposable income adjusted for consumer prices (growth %)	4.2	1.7	0.1	-0.6	0.6	-4.3	
Income quintile share ratio S80/S20	3.3	3.4	3.2	3.4	3.5	3.4	3.6
GINI coefficient	23.2	23.4	22.7	23.8	23.8	23.7	24.4
Early leavers from education and training (% of population aged 18-24)	4.1	5.1	5.3	5.0	4.2	4.4	3.9
NEET: Young people not in employment, education or training (% of total population aged 15-24)	6.7	6.5	7.5	7.1	7.1	9.3	9.2

By gender

Male	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of male population)	15.0	16.6	15.1	16.5	17.4	18.3	19.4
At-risk-of-poverty (% of male population)	10.0	11.0	9.8	11.3	12.2	12.5	13.5
Poverty gap (%)	19.2	20.8	21.1	20.9	20.1	19.8	20.9
Persistent at-risk-of-poverty (% of male population)		6.3	5.8	5.6	5.9	4.9	5.7
Severe Material Deprivation (% of male population)	4.9	6.4	5.9	5.6	5.8	6.8	6.6
Share of people living in low work intensity households (% of males aged 0-59)	6.4	6.2	4.8	6.0	6.7	6.8	7.4
Life expectancy at birth (years)	74.6	75.5	75.9	76.4	76.8	77.1	
Healthy life years at birth (years)	58.7	59.5	60.6	53.4 bd	54.0	56.5	
Early leavers from education and training (% of males aged 18-24)	5.8	7.2	7.2	6.4	5.7	5.4	5.0
NEET: Young people not in employment, education or training (% of males aged 15-24)	6.8	6.7	7.9	8.1	7.8	9.7	9.8

Female	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of female population)	19.2	20.3	19.1	20.1	21.1	20.8	21.4
At-risk-of-poverty (% of female population)	12.9	13.6	12.8	14.1	15.0	14.6	15.4
Poverty gap (%)	19.7	18.7	20.2	19.1	19.5	18.4	20.1
Persistent at-risk-of-poverty (% of female population)		9.0	8.1	8.0	9.1	7.3	9.2
Severe Material Deprivation (% of female population)	5.3	6.9	6.3	6.3	6.4	6.5	6.7
Share of people living in low work intensity households (% of females aged 0-59)	8.2	7.3	6.5	8.0	8.6	8.3	8.5
Life expectancy at birth (years)	82.0	82.6	82.7	83.1	83.3	83.3	
Healthy life years at birth (years)	62.3	60.8	61.5	54.6 bd	53.8	55.6	
Early leavers from education and training (% of females aged 18-24)	2.2 u	2.6 u	3.2 u	3.3 u	2.5 u	3.2 u	2.6 u
NEET: Young people not in employment, education or training (% of females aged 15-24)	6.6	6.2	6.9	6.0	6.3	8.8	8.6

By age

Children (0-17)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	14.7	15.3	15.1	15.2	17.3	16.4	17.5
At-risk-of-poverty (% of Children population)	11.3	11.6	11.2	12.6	14.7	13.5	14.7
Severe Material Deprivation (% of Children population)	4.4	5.2	5.4	5.1	5.3	5.9	6.0
Share of children living in low work intensity households (% of Children population)	4.5	3.7	2.5	3.4	4.4	3.2	4.0
Risk of poverty of children in households at work (Working Intensity > 0.2)	8.4	9.0	9.5	9.9	11.3	11.1	11.4
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	54.8	50.4	53.7	51.4	45.4	47.7	45.2

Working age (18-64)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of Working age population)	16.6	18.0	16.2	18.1	18.7	19.7	20.6
At-risk-of-poverty (% of Working age population)	9.8	10.5	9.2	11.0	11.7	12.2	13.0
Severe Material Deprivation (% of Working age population)	51	71	61	61	61	71	71
Very low work intensity (18-59)	8.1	7.7	6.5	8.0	8.6	8.8	9.2
In-work at-risk-of poverty rate (% of persons employed)	4.7	5.1	4.8	5.3	6.0	6.5	7.1
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	53.3	49.0	52.1	49.8	45.8	49.0	44.9

Elderly (65+)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	22.4	24.4	23.3	22.8	24.2	22.8	23.0
At-risk-of-poverty (% of Elderly population)	19.4	21.3	20.0	20.2	20.9	19.6	20.5
Severe Material Deprivation (% of Elderly population)	6.6	7.4	6.5	6.3	6.8	6.6	6.7
Relative median income of elderly (ratio with median income of people younger than 65)	0.87	0.84	0.86	0.87	0.87	0.87	0.87
Aggregate replacement ratio (ratio)	0.44	0.44	0.45	0.45	0.47	0.47	0.46

Expenditure in social protection indicators (% of GDP)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Sickness/Health care	6.7	7.0	7.8	7.9	7.8	8.0 p	
Disability	1.7	1.6	1.8	1.8	1.7	1.6 p	
Old age and survivors	9.7	9.6	10.9	11.4	11.6	11.7 p	
Family/Children	1.7	1.8	2.1	2.2	2.2	2.1 p	
Unemployment	0.4	0.4	0.6	0.7	0.8	0.8 p	
Housing and Social exclusion n.e.c.	0.5	0.4	0.5	0.6	0.6	0.7 p	
Total (including Admin and Other expenditures)	21.3	21.4	24.2	25.0	25.0	25.4 p	
of which: Means tested benefits	1.8	1.8	2.0	2.0	2.0	1.9 p	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Slovakia

All	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of total population)	21.3	20.6	19.6	20.6	20.6	20.5	19.8
At-risk-of-poverty (% of total population)	10.6	10.9	11.0	12.0	13.0	13.2	12.8
At-risk-of-poverty threshold (PPS single person)	3365	4058	4694	5016	5385	5879	5741
Poverty gap (%)	19.2	18.1	23.2	25.7	22.8	20.5	24.1
Persistent at-risk-of-poverty (% of total population)		4.9	5.4	6.0	7.8	8.6	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	18.2	18.4	17.1	19.8	19.5	20.0	20.1
Impact of social transfers (excl. pensions) in reducing poverty (%)	41.8	40.8	35.7	39.4	33.3	34.0	36.3
Severe Material Deprivation (% of total population)	13.7	11.8	11.1	11.4	10.6	10.5	10.2
Share of people living in low work intensity households (% of people aged 0-59)	6.4	5.2	5.6	7.9	7.7	7.2	7.6
Gross Household Disposable income adjusted for consumer prices (growth %)	8.8	4.9	1.2	3.1	-1.4	-1.6	
Income quintile share ratio S80/S20	3.5	3.4	3.6	3.8	3.8	3.7	3.6
GINI coefficient	24.5	23.7	24.8	25.9	25.7	25.3	24.2
Early leavers from education and training (% of population aged 18-24)	6.5	6.0	4.9	4.7	5.1	5.3	6.4
NEET: Young people not in employment, education or training (% of total population aged 15-24)	12.5	11.1	12.5	14.1	13.8	13.8	13.7

By gender

Male	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of male population)	19.4	18.9	18.0	19.6	19.5	19.7	19.3
At-risk-of-poverty (% of male population)	10.2	10.1	10.1	11.7	12.8	13.2	12.8
Poverty gap (%)	22.4	21.0	24.7	28.0	24.5	20.5	25.5
Persistent at-risk-of-poverty (% of male population)		4.6	5.1	4.6	7.6	8.5	
Severe Material Deprivation (% of male population)	12.8	11.1	10.5	11.1	10.1	10.1	10.0
Share of people living in low work intensity households (% of males aged 0-59)	5.7	4.5	5.1	7.4	7.5	7.0	7.2
Life expectancy at birth (years)	70.6	70.8	71.4	71.7	72.3	72.5	
Healthy life years at birth (years)	55.6	52.1 bd	52.4	52.4	52.1	53.4	
Early leavers from education and training (% of males aged 18-24)	7.2	7.1	5.7	4.6	5.4	6.0	6.7
NEET: Young people not in employment, education or training (% of males aged 15-24)	11.0	9.6	12.2	13.8	13.9	14.5	14.2

Female	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of female population)	23.1	22.0	21.1	21.6	21.7	21.3	20.2
At-risk-of-poverty (% of female population)	11.0	11.5	11.8	12.2	13.1	13.3	12.9
Poverty gap (%)	17.2	16.5	21.8	24.3	21.0	20.6	23.0
Persistent at-risk-of-poverty (% of female population)		5.2	5.6	7.3	8.0	8.7	
Severe Material Deprivation (% of female population)	14.5	12.3	11.6	11.8	11.0	10.8	10.5
Share of people living in low work intensity households (% of females aged 0-59)	7.2	5.9	6.0	8.4	7.8	7.5	7.9
Life expectancy at birth (years)	78.4	79.0	79.1	79.3	79.8	79.9	
Healthy life years at birth (years)	56.1	52.6 bd	52.6	52.1	52.3	53.1	
Early leavers from education and training (% of females aged 18-24)	5.8	4.9	4.1	4.9	4.6	4.6	6.1
NEET: Young people not in employment, education or training (% of females aged 15-24)	14.1	12.5	12.9	14.4	13.7	13.1	13.1

By age

Children (0-17)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	25.8	24.3	23.7	25.3	26.0	26.6	25.5
At-risk-of-poverty (% of Children population)	17.0	16.7	16.8	18.8	21.2	21.9	20.3
Severe Material Deprivation (% of Children population)	16.3	12.6	12.7	13.5	12.4	11.9	13.0
Share of children living in low work intensity households (% of Children population)	5.5	4.4	5.4	8.1	7.3	7.2	8.4
Risk of poverty of children in households at work (Working Intensity > 0.2)	13.0	13.7	12.7	13.0	16.1	16.4	13.4
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	37.3	38.2	30.3	35.8	28.6	29.8	33.7

Working age (18-64)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of Working age population)	20.1	19.3	18.5	20.2	20.6	19.9	19.4
At-risk-of-poverty (% of Working age population)	9.2	9.5	9.6	11.2	12.4	12.3	12.1
Severe Material Deprivation (% of Working age population)	121	111	111	111	101	101	101
Very low work intensity (18-59)	6.7	5.4	5.6	7.9	7.8	7.2	7.3
In-work at-risk-of poverty rate (% of persons employed)	4.9	5.8	5.2	5.7	6.3	6.2	5.8
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	45.9	43.5	39.2	41.4	34.7	35.6	37.3

Elderly (65+)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	22.0	21.9	19.7	16.7	14.5	16.3	13.6
At-risk-of-poverty (% of Elderly population)	9.6	9.9	10.8	7.7	6.3	7.8	6.0
Severe Material Deprivation (% of Elderly population)	17.7	15.3	11.7	11.1	9.7	10.8	9.2
Relative median income of elderly (ratio with median income of people younger than 65)	0.81	0.79	0.81	0.83	0.86	0.81	0.90
Aggregate replacement ratio (ratio)	0.54	0.54	0.55	0.61	0.62	0.56	0.61

Expenditure in social protection indicators (% of GDP)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Sickness/Health care	4.7	5.1	5.8	5.5	5.4	5.5 p	
Disability	1.3	1.4	1.5	1.6	1.6	1.6 p	
Old age and survivors	6.8	6.6	7.8	7.8	7.7	7.9 p	
Family/Children	1.5	1.5	1.7	1.8	1.8	1.8 p	
Unemployment	0.6	0.6	1.0	1.0	0.8	0.7 p	
Housing and Social exclusion n.e.c.	0.5	0.4	0.5	0.5	0.5	0.5 p	
Total (including Admin and Other expenditures)	16.1	16.1	18.8	18.7	18.3	18.4 p	
of which: Means tested benefits	1.0	0.8	0.9	1.0	0.9	1.0 p	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Finland

All	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of total population)	17.4	17.4	16.9	16.9	17.9	17.2	16.0
At-risk-of-poverty (% of total population)	13.0	13.6	13.8	13.1	13.7	13.2	11.8
At-risk-of-poverty threshold (PPS single person)	9 145	9 933	10 421	10 327	10 760	11 146	11 470
Poverty gap (%)	14.1	15.7	15.1	13.8	13.5	15.0	15.0
Persistent at-risk-of-poverty (% of total population)	7.6	6.8	6.5	7.7	7.5	7.4	7.0
At-risk-of-poverty before social transfers excl. pensions (% of total population)	28.9	27.3	26.2	27.0	27.4	26.9	26.4
Impact of social transfers (excl. pensions) in reducing poverty (%)	55.0	50.2	47.3	51.5	50.0	50.9	55.3
Severe Material Deprivation (% of total population)	3.6	3.5	2.8	2.8	3.2	2.9	2.5
Share of people living in low work intensity households (% of people aged 0-59)	8.8	7.5	8.4	9.3	10.0	9.3	9.0
Gross Household Disposable income adjusted for consumer prices (growth %)	3.9	2.5	1.5	2.3	0.5	0.2	
Income quintile share ratio S80/S20	3.7	3.8	3.7	3.6	3.7	3.7	3.6
GINI coefficient	26.2	26.3	25.9	25.4	25.8	25.9	25.4
Early leavers from education and training (% of population aged 18-24)	9.1	9.8	9.9	10.3 d	9.8	8.9	9.3
NEET: Young people not in employment, education or training (% of total population aged 15-24)	7.0	7.8	9.9	9.0 d	8.4	8.6	9.3

By gender

Male	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of male population)	15.8	15.9	15.8	16.0	17.3	17.0	15.7
At-risk-of-poverty (% of male population)	12.1	12.7	12.9	12.4	13.2	12.9	11.3
Poverty gap (%)	14.7	17.1	16.6	14.7	15.2	16.4	17.2
Persistent at-risk-of-poverty (% of male population)	6.5	6.2	5.1	7.4	6.8	6.6	6.5
Severe Material Deprivation (% of male population)	3.0	3.2	2.9	2.6	3.2	3.0	2.5
Share of people living in low work intensity households (% of males aged 0-59)	8.6	7.3	8.7	9.6	10.4	10.2	10.0
Life expectancy at birth (years)	76.0	76.5	76.6	76.9	77.3	77.7	
Healthy life years at birth (years)	56.8 bd	58.6	58.2	58.5	57.7	57.3	
Early leavers from education and training (% of males aged 18-24)	11.2	12.1	10.7	11.6 d	11.2	9.8	10.4
NEET: Young people not in employment, education or training (% of males aged 15-24)	6.4	7.7	10.5	9.4 d	8.7	8.6	10.6

Female	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of female population)	19.0	18.9	17.9	17.7	18.5	17.4	16.2
At-risk-of-poverty (% of female population)	13.8	14.5	14.7	13.8	14.2	13.6	12.3
Poverty gap (%)	13.5	14.1	14.6	12.9	12.4	13.9	13.2
Persistent at-risk-of-poverty (% of female population)	8.5	7.4	7.7	8.1	8.1	8.1	7.4
Severe Material Deprivation (% of female population)	4.1	3.8	2.7	3.1	3.2	2.9	2.5
Share of people living in low work intensity households (% of females aged 0-59)	9.0	7.6	8.0	9.0	9.5	8.3	8.0
Life expectancy at birth (years)	83.1	83.3	83.5	83.5	83.8	83.7	
Healthy life years at birth (years)	58.0 bd	59.5	58.6	58.2	58.3	56.2	
Early leavers from education and training (% of females aged 18-24)	7.2	7.7	9.0	9.0 d	8.4	8.1	8.3
NEET: Young people not in employment, education or training (% of females aged 15-24)	7.7	7.9	9.2	8.6 d	8.2	8.6	8.1

By age

Children (0-17)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	15.1	15.1	14.0	14.2	16.1	14.9	13.0
At-risk-of-poverty (% of Children population)	10.9	12.0	12.1	11.4	11.8	11.1	9.3
Severe Material Deprivation (% of Children population)	3.4	3.1	2.5	2.3	3.2	2.8	1.8
Share of children living in low work intensity households (% of Children population)	6.0	4.9	5.8	5.9	7.6	5.9	6.1
Risk of poverty of children in households at work (Working Intensity > 0.2)	8.2	9.1	7.9	7.6	7.5	7.7	6.3
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	65.3	59.6	56.5	61.6	60.9	63.0	68.2

Working age (18-64)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-risk-of-poverty or exclusion (% of Working age population)	16.8	16.5	16.2	17.1	18.0	17.3	16.7
At-risk-of-poverty (% of Working age population)	11.5	11.8	12.2	12.3	12.8	12.4	11.3
Severe Material Deprivation (% of Working age population)	41	41	31	31	41	31	31
Very low work intensity (18-59)	9.8	8.4	9.3	10.6	10.9	10.6	10.1
In-work at-risk-of poverty rate (% of persons employed)	5.0	5.1	3.7	3.7	3.9	3.8	3.8
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	58.2	54.1	50.8	53.8	52.9	53.4	57.8

Elderly (65+)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	23.1	23.9	23.1	19.5	19.8	19.5	16.8
At-risk-of-poverty (% of Elderly population)	21.6	22.5	22.1	18.3	18.9	18.4	16.1
Severe Material Deprivation (% of Elderly population)	2.6	3.2	2.2	1.7	2.1	1.5	1.1
Relative median income of elderly (ratio with median income of people younger than 65)	0.74	0.72	0.73	0.78	0.78	0.78	0.78
Aggregate replacement ratio (ratio)	0.47	0.49	0.48	0.50	0.50	0.49	0.49

Expenditure in social protection indicators (% of GDP)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Sickness/Health care	6.5	6.8	7.6	7.5	7.5	7.7	
Disability	3.1	3.2	3.6	3.6	3.5	3.5	
Old age and survivors	9.5	9.6	11.4	11.7	11.7	12.4	
Family/Children	2.9	2.9	3.3	3.3	3.3	3.4	
Unemployment	1.9	1.8	2.4	2.4	2.1	2.1	
Housing and Social exclusion n.e.c.	0.8	1.0	1.2	1.2	1.3	1.4	
Total (including Admin and Other expenditures)	25.4	26.2	30.4	30.6	30.0	31.2	
of which: Means tested benefits	1.1	1.1	1.3	1.3	1.4	1.5	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: Sweden

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	13.9	14.9	15.9	15.0	16.1	15.6	16.4
At-risk-of-poverty (% of total population)	10.5	12.2	13.3	12.9	14.0	14.1	14.8
At-risk-of-poverty threshold (PPS single person)	9545	10680	11295	10991	11284	11799	12316
Poverty gap (%)	20.3	18.0	20.3	19.7	18.5	18.9	19.8
Persistent at-risk-of-poverty (% of total population)	2.1	2.6	3.7	4.9	4.1		
At-risk-of-poverty before social transfers excl. pensions (% of total population)	27.5	28.5	26.6	26.7	27.9	27.4	27.1
Impact of social transfers (excl. pensions) in reducing poverty (%)	61.8	57.2	50.0	51.7	49.8	48.5	45.4
Severe Material Deprivation (% of total population)	2.2	1.4	1.6	1.3	1.2	1.3	1.4
Share of people living in low work intensity households (% of people aged 0-59)	6.0	5.5	6.4	6.0	6.9	5.7	7.1
Gross Household Disposable income adjusted for consumer prices (growth %)	5.5	2.3	1.9	1.6	3.2	3.4	2.6
Income quintile share ratio S80/S20	3.3	3.5	3.7	3.5	3.6	3.7	3.7
GINI coefficient	23.4	24.0	24.8	24.1	24.4	24.8	24.9
Early leavers from education and training (% of population aged 18-24)	8.0	7.9	7.0	6.5	6.6	7.5	7.1
NEET: Young people not in employment, education or training (% of total population aged 15-24)	7.5	7.8	9.6	7.7	7.5	7.8	7.5

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	13.6	13.7	14.4	13.4	14.2	14.1	14.9
At-risk-of-poverty (% of male population)	10.5	11.3	12.0	11.4	12.2	12.6	13.4
Poverty gap (%)	22.7	20.1	22.1	22.9	19.3	23.4	21.4
Persistent at-risk-of-poverty (% of male population)	1.9	2.5	3.1	4.4	2.9		
Severe Material Deprivation (% of male population)	2.2	1.3	1.5	1.2	1.1	1.3	1.4
Share of people living in low work intensity households (% of males aged 0-59)	5.6	5.1	6.0	5.8	6.7	5.7	7.1
Life expectancy at birth (years)	79.0	79.2	79.4	79.6	79.9	79.9	
Healthy life years at birth (years)	67.7	69.4 bd	70.7	71.7	71.1	70.8	
Early leavers from education and training (% of males aged 18-24)	9.5	9.0	8.0	7.5	7.8	8.5	7.9
NEET: Young people not in employment, education or training (% of males aged 15-24)	7.5	7.5	9.8	7.8	7.6	7.9	7.7

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	14.2	16.1	17.5	16.6	18.0	17.2	17.9
At-risk-of-poverty (% of female population)	10.6	13.0	14.5	14.3	15.7	15.6	16.1
Poverty gap (%)	18.3	17.0	17.8	16.8	17.9	16.7	18.2
Persistent at-risk-of-poverty (% of female population)	2.2	2.7	4.3	5.2	5.2		
Severe Material Deprivation (% of female population)	2.1	1.6	1.6	1.4	1.2	1.2	1.5
Share of people living in low work intensity households (% of females aged 0-59)	6.4	6.0	6.8	6.3	7.1	5.6	7.1
Life expectancy at birth (years)	83.1	83.3	83.5	83.6	83.8	83.6	
Healthy life years at birth (years)	66.8	69.0 bd	69.6	71.1	70.2	70.6	
Early leavers from education and training (% of females aged 18-24)	6.5	6.8	6.0	5.5	5.4	6.3	6.2
NEET: Young people not in employment, education or training (% of females aged 15-24)	7.4	8.2	9.5	7.6	7.5	7.8	7.2

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	14.9	14.6	15.1	14.5	15.9	15.4	16.2
At-risk-of-poverty (% of Children population)	12.0	12.9	13.1	13.1	14.5	14.6	15.4
Severe Material Deprivation (% of Children population)	3.2	1.7	1.7	1.3	1.3	1.4	1.9
Share of children living in low work intensity households (% of Children population)	5.5	4.1	4.3	4.8	5.5	4.9	6.2
Risk of poverty of children in households at work (Working Intensity > 0.2)	8.4	9.6	9.9	9.0	10.1	10.2	9.6
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	64.7	62.2	56.9	58.4	54.7	54.7	50.6

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	14.5	14.8	15.6	15.0	15.4	15.1	16.5
At-risk-of-poverty (% of Working age population)	10.2	11.2	12.1	11.9	12.5	12.9	14.0
Severe Material Deprivation (% of Working age population)	21	21	21	21	11	21	21
Very low work intensity (18-59)	6.2	6.2	7.2	6.5	7.5	6.0	7.5
In-work at-risk-of poverty rate (% of persons employed)	6.5	6.8	7.0	6.6	6.9	6.7	7.1
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	61.8	59.1	52.2	54.1	52.8	50.2	47.8

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	10.4	15.5	18.0	15.9	18.6	17.9	16.5
At-risk-of-poverty (% of Elderly population)	9.9	15.0	17.7	15.5	18.2	17.7	16.4
Severe Material Deprivation (% of Elderly population)	0.6	0.8	0.5	0.7	0.6	0.4	0.2
Relative median income of elderly (ratio with median income of people younger than 65)	0.81	0.78	0.77	0.79	0.77	0.78	0.81
Aggregate replacement ratio (ratio)	0.63	0.62	0.60	0.60	0.58	0.56	0.58

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	7.5	7.5	7.9	7.4	7.5	7.6 p	
Disability	4.4	4.4	4.6	4.1	3.9	3.9 p	
Old age and survivors	11.6	12.0	13.2	12.7	12.4	12.8 p	
Family/Children	2.9	3.0	3.2	3.1	3.1	3.2 p	
Unemployment	1.1	0.9	1.3	1.4	1.2	1.2 p	
Housing and Social exclusion n.e.c.	1.1	1.1	1.2	1.2	1.1	1.2 p	
Total (including Admin and Other expenditures)	29.2	29.5	32.0	30.4	29.7	30.5 p	
of which: Means tested benefits	0.8	0.8	0.9	0.8	0.8	0.8 p	

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Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

Social Inclusion Indicators: United Kingdom

All	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of total population)	22.6	23.2	22.0	23.2	22.7	24.1 b	24.8
At-risk-of-poverty (% of total population)	18.6	18.7	17.3	17.1	16.2	16.0 b	15.9
At-risk-of-poverty threshold (PPS single person)	11 267	11 126	10 091	9 521	9 466	9 868 b	9 882
Poverty gap (%)	22.4	21.0	20.6	21.4	21.3	20.9 b	19.6
Persistent at-risk-of-poverty (% of total population)			8.0	7.4	6.9	8.6	
At-risk-of-poverty before social transfers excl. pensions (% of total population)	29.7	28.9	30.4	31.0	30.5	29.7 b	30.1
Impact of social transfers (excl. pensions) in reducing poverty (%)	37.4	35.3	43.1	44.8	46.9	46.1	47.2
Severe Material Deprivation (% of total population)	4.2	4.5	3.3 u	4.8	5.1	7.8 b	8.3
Share of people living in low work intensity households (% of people aged 0-59)	10.4	10.4	12.7	13.2	11.5	13.0 b	13.2
Gross Household Disposable income adjusted for consumer prices (growth %)	0.5	0.3	1.6	0.8	-1.1	2.5	
Income quintile share ratio S80/S20	5.3	5.6	5.3	5.4	5.3	5.0 b	4.6
GINI coefficient	32.6	33.9	32.4	32.9	33.0	31.3 b	30.2
Early leavers from education and training (% of population aged 18-24)	16.6 b	17.0	15.7	14.9	15.0	13.6	12.4
NEET: Young people not in employment, education or training (% of total population aged 15-24)	11.9 b	12.1	13.3	13.7	14.3	14.0	13.3

By gender

Male	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of male population)	21.1	21.7	21.1	22.1	21.4	23.4 b	23.6
At-risk-of-poverty (% of male population)	17.6	17.4	16.7	16.4	14.8	15.8 b	15.4
Poverty gap (%)	22.9	21.1	20.9	23.0	22.2	21.9 b	19.9
Persistent at-risk-of-poverty (% of male population)			7.6	7.0	6.1	8.1	
Severe Material Deprivation (% of male population)	3.9	4.3	3.4 u	4.8	5.0	7.5 b	8.0
Share of people living in low work intensity households (% of males aged 0-59)	9.6	9.7	12.0	12.5	10.8	12.5 b	12.5
Life expectancy at birth (years)	77.6	77.8	78.3	78.7	79.0	79.1	
Healthy life years at birth (years)	64.6	65.0	65.0	65.0	65.2	64.6	
Early leavers from education and training (% of males aged 18-24)	17.6 b	18.3	16.9	15.8	16.2	14.7	13.7
NEET: Young people not in employment, education or training (% of males aged 15-24)	10.1 b	10.2	12.1	12.2	13.2	12.9	12.2

Female	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of female population)	24.1	24.7	22.8	24.2	24.1	24.9 b	25.8
At-risk-of-poverty (% of female population)	19.6	20.0	17.8	17.8	17.6	16.3 b	16.4
Poverty gap (%)	21.9	20.9	20.5	19.3	20.5	19.5 b	19.2
Persistent at-risk-of-poverty (% of female population)			8.3	7.7	7.8	9.1	
Severe Material Deprivation (% of female population)	4.4	4.8	3.2 u	4.9	5.1	8.1 b	8.6
Share of people living in low work intensity households (% of females aged 0-59)	11.1	11.2	13.4	13.9	12.3	13.6 b	14.0
Life expectancy at birth (years)	81.8	81.9	82.5	82.6	83.0	82.8	
Healthy life years at birth (years)	66.0	66.3	66.1	65.6	65.2	64.5	
Early leavers from education and training (% of females aged 18-24)	15.6 b	15.6	14.5	14.0	13.8	12.4	11.2
NEET: Young people not in employment, education or training (% of females aged 15-24)	13.7 b	14.1	14.6	15.2	15.5	15.1	14.5

By age

Children (0-17)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of children (% of people aged 0-17)	27.6	29.6	27.4	29.7	26.9	31.2 b	32.6
At-risk-of-poverty (% of Children population)	23.0	24.0	20.7	20.4	18.0	18.0 b	18.9
Severe Material Deprivation (% of Children population)	6.3	6.5	4.4 u	7.3	7.1	12.5 b	12.3
Share of children living in low work intensity households (% of Children population)	13.8	13.9	16.1	17.1	14.1	16.3 b	16.7
Risk of poverty of children in households at work (Working Intensity > 0.2)	14.7	16.2	12.2	12.7	12.1	13.2 b	14.8
Impact of social transfers (excl. pensions) in reducing poverty (0-17) (%)	43.6	39.6	51.6	54.2	57.6	57.0	57.2

Working age (18-64)	2007	2008	2009	2010	2011	2012	2013
At-risk-of-poverty or exclusion (% of Working age population)	19.6	19.7	19.8	21.2	21.4	23.7 b	24.1
At-risk-of-poverty (% of Working age population)	15.1	14.7	14.8	14.9	14.1	15.3 b	14.7
Severe Material Deprivation (% of Working age population)	41	51	41 u	51	61	81 b	91
Very low work intensity (18-59)	9.1	9.2	11.4	11.7	10.6	11.9 b	12.0
In-work at-risk-of poverty rate (% of persons employed)	7.9	8.0	6.3	6.7	7.8	8.7 b	8.2
Impact of social transfers (excl. pensions) in reducing poverty (18-64) (%)	38.9	38.0	44.4	45.2	48.0	44.0	46.6

Elderly (65+)	2007	2008	2009	2010	2011	2012	2013
At-Risk-of-poverty or exclusion of elderly (% of people aged 65+)	27.9	28.5	23.1	22.3	22.7	17.3 b	18.1
At-risk-of-poverty (% of Elderly population)	26.5	27.3	22.3	21.3	21.8	16.4 b	16.6
Severe Material Deprivation (% of Elderly population)	1.9	1.4	1.2 u	1.3	1.3	1.4 b	2.1
Relative median income of elderly (ratio with median income of people younger than 65)	0.74	0.74	0.80	0.81	0.81	0.88 b	0.87
Aggregate replacement ratio (ratio)	0.44	0.43	0.44	0.48	0.48	0.50 b	0.53

Expenditure in social protection indicators (% of GDP)	2007	2008	2009	2010	2011	2012	2013
Sickness/Health care	7.7	7.8	8.7	8.4	9.0 p	9.3 p	
Disability	1.9	2.0	2.1	2.1	2.0 p	1.9 p	
Old age and survivors	10.6	11.0	12.3	12.2	12.3 p	12.8 p	
Family/Children	1.7	1.7	1.9	2.0	1.9 p	1.9 p	
Unemployment	0.5	0.6	0.8	0.7	0.7 p	0.7 p	
Housing and Social exclusion n.e.c.	1.3	1.4	1.7	1.7	1.7 p	1.8 p	
Total (including Admin and Other expenditures)	24.7	25.6	28.3	27.9	28.0 p	28.8 p	
of which: Means tested benefits	3.5	3.7	4.2	4.2	4.1 p	4.1 p	

Notes: b = break in time series; d = definition differs, see metadata; e = estimated; f = forecast; p = provisional; s = Eurostat estimate; u = low reliability.

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Data sources and definitions

Main data sources

Most of the data used in this report originates from Eurostat, the Statistical Office of the European Union. 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”.

Definitions and data sources of key social indicators

Indicator	Definition	Data by Gender	Data by Age	Source
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.	X	X	Eurostat, 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.	X	X	Eurostat, SILC
At-risk-of-poverty threshold	60 % of the national median equivalised disposable income after social transfers.	X		Eurostat, 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).	X		Eurostat, 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.	X		Eurostat, 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, SILC
Impact of social transfers	Computed indicator, formula: 100*(B-A)/B, where B: At-risk-of-poverty before social transfers excl. pensions. A: At-risk-of-poverty.		X	Eurostat, SILC
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.	X	X	Eurostat, 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. 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.	X		Eurostat, SILC
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 (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, 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, 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.	X		Eurostat
Healthy life years at birth (*)	Number of years that a person is expected to continue to live in a healthy condition.	X		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.	X		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.	X		Eurostat, 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, 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, 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, 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, SILC
Social indicator expenditure	Percentage of expenditure in different social protection areas in relation with the GDP.			Eurostat

(*) The shortlist of European Core Health Indicators (ECHI) also include these indicators: http://ec.europa.eu/health/indicators/echi/list/index_en.htm

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This year's Employment and Social Development Review provides a broad overview of the challenges facing the European Union over the coming years as it slowly emerges from the worst recession in its history. It highlights the scale of the challenges, but also the benefits of continuing to invest in education, training and a wider labour market and social policies alongside the actions being taken to restore economic growth in the light of the Union's 2020 employment and social goals.

The review will be 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/esde2014

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