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# Life after Lisbon

Europe's Challenges to Promote Labour Force Participation and Reduce Income Inequality



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# Life after Lisbon

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Europe's Challenges to Promote  
Labour Force Participation and  
Reduce Income Inequality

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## Preface

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In June 2010, the Europe 2020 agenda replaced the European Lisbon Strategy, the overarching framework for European social and employment policy between 2000 and 2010. Europe 2020 continues the main themes of the Lisbon Agenda by focusing on economic inclusion and territorial cohesion, but is also a response to existing and new realities – including the biggest economic downturn since the 1930s and the need to develop a smart and green economy in an increasingly interdependent world.

This report assesses two key components of the Lisbon Strategy and the Europe 2020 agenda: promoting labour force participation and reducing income inequality. Labour force participation is a basic condition for social inclusion and also facilitates longer-term social stability. The reduction of income inequality between regions and social groups is closely related to ensuring that fewer Europeans lack equal opportunities and are at risk of poverty, social exclusion and discrimination.

The purpose of the report is to identify progress against these objectives, what has driven the outcomes, potential trade-offs among outcomes and future challenges, and policy implications for European policymakers going forward. While the study initially focused on what had been achieved in the Lisbon Strategy, the current economic crisis as indicated in the Europe 2020 agenda has changed the policy landscape in making long-standing policy objectives harder to achieve or in cases obsolete. As such, policymakers need to get a better sense of the evidence base for policy interventions and see what works in what context.

This report informs the policy debate on where European social and employment policy needs to go next on the basis of the available evidence and is likely to be of interest to policymakers and

those with a wider interest in European social and employment policy.

The report builds on project work that RAND Europe undertook for the Directorate-General of Employment, Social Policy and Equal Opportunities at the European Commission. The further development of the report was made possible by internal support provided by RAND Europe. This study used focused literature reviews and also data modelling to arrive at its findings. It has been peer-reviewed according to RAND's quality assurance standards. The authors would like to acknowledge the support of our sponsors and the editorial support provided by Janice Pedersen and Sam Drabble. Professor Dr. Anton Hemerijck, dean of the Faculty of Social Sciences of the VU University Amsterdam and vice-chancellor, provided invaluable senior advice during the research and was kind enough to write the foreword to this report. The views and findings presented in this document are those of the authors alone and do not represent any official position.

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## Foreword

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### **What the Lisbon Agenda should speak to Europe 2020 about**

The eminent policy scientist Hugh Heclo, once famously defined policy making as “a form of puzzlement on society’s behalf”; including both “deciding” and “knowing”. Fundamental to Heclo’s conception of the policy process is *uncertainty*: “men collectively wondering what do” (Heclo, 1974: 305). Finding a feasible course of action is as much a matter of “puzzling”, diagnosing the nature and magnitude of problem loads, setting priorities, and identifying potentially effective solutions of what to do in complex policy environments, as it is a matter of “powering”, skillfully rallying political and societal support for selected solutions. The aftermath of the first economic crisis of 21<sup>st</sup> century global capitalism is riddled with uncertainty. The adaptive challenges of intensified economic internationalization and post-industrial social change are nowhere more apparent than in Europe. How to reshape European welfare states into a new set of enabling institutions and policies that warrant high standards of social protection, while making citizens better equipped and capacitated to participate in the international knowledge economy? If social programs require reform in order to mitigate the “new social risks” of family breakdown, child poverty, lack of education and skills, what will happen to the “old risks” of poor health, disability, unemployment due to industrial restructuring, and old age poverty? Can the race against skill biased economic change be won by education and what if the answer is negative? Does employment lead to fuller participation in society, civic engagement and greater happiness?

These questions, and there are many more, require sincere diagnosis, but also swift resolution given the vulnerable state of European political economy in the aftermath of the crises. These

questions, moreover, are posed at a time when the EU is rethinking its broad political economy strategy. At the 2010 deadline of the Lisbon Agenda, it has become apparent that many of the lofty Lisbon objectives have not been fully met. Rash politicians and political ideologues today are quick to dismiss the Lisbon Strategy and to let Euroscepticism triumph over the imperative of a more effective European Union. After reading this admirable report that has managed so successfully to convey rich detail, identify portent policy trade-offs, and general observations on these issues, I am tempted to put forward the opposite conjecture. Policy makers have not taken the Lisbon strategy seriously enough over the past decade. Let me explain. First of all, during the Lisbon period, up to the crisis, employment rates increased, unemployment rates fell, while wage pressures abated – factors that speak to important accomplishments, as the authors rightly argue. On the other hand, the Lisbon Strategy failed to address structural inequalities. This can be explained by the fragmentary thinking that has been so characteristic of EU social and economic policy since the 1980s. Long-term issues of economic competitiveness and social cohesion have been neglected through the excessive focus on the integrity of the single market, low inflation and sound public finances. The Lisbon Agenda represents an important attempt to break through lopsided economic thinking, but it has failed to achieve hegemony over the past decade.

In its original 2000 conception, the Lisbon Strategy was a strategy of competitiveness. Beyond the objective of raising employment rates throughout Europe, the Lisbon Agenda placed human capital, research, innovation and development at the centre of Europe’s social and economic future. Social policy was understood as a “productive factor” beyond its traditional emphasis

on social protection, to include social promotion through participation and improving productivity through quality childcare, training and education. Social policy is never a productive factor *per se*. One cannot turn a blind eye to the negative, unintended and perverse side effects of excessively generous social security benefits of long duration, undermining work incentives, raising the tax burden and contributing to high gross wage costs. By the same token, rigid forms of dismissal protection making hiring and firing unnecessarily costly can result in high levels of inactivity. Beyond such institutional contingencies, the Lisbon Agenda brought social policy as a potentially positive contributor to growth, competitiveness, social progress and political resilience, back into the equation. Largely in agreement with the Keynesian welfare state, the Lisbon Agenda made a virtue of the argument that a strong economy requires a strong welfare state. Basic minimum income protection serves to reduce poverty. Dire poverty is bad for any economy, especially when it is passed down the generations, permanently excluding disadvantaged groups from economic progress, wasting human capital and undermining social cohesion. High unemployment benefits of short duration, coupled to strong activation incentives and obligations, supported by active labour market servicing policy are most successful in lowering unemployment and raising labour productivity.

Extensive comparative empirical research, surveyed in this report, reveals that there is no trade-off between macroeconomic performance and the size of the welfare state. To wit, some of the most generous welfare states, with large public sectors, allocated to human capital and family services, outperformed many of the most liberal political economies. The Nordic countries as exemplified in this report seem to match high levels of labour force participation in the economy with relatively low levels of income inequality. Especially the availability of capacitating social services, from comprehensive child care to active labor market policies, training opportunities and job placement possibilities, combined with adequate income support, allowed both genders to (re-) enter and stay in the labor market and change jobs throughout the life course more easily than elsewhere on the European continent. The same package of activating and compensating policies also served to reduce the risks of individuals and households

falling into poverty, while at the same time incentivizing family formation, as revealed by higher fertility rates of the Nordic countries in comparison to the rest of Europe. The link between poverty reduction and educational attainment is also particularly strong across Scandinavia. In other words, an ambitious, generous and active welfare state, with a strong social investment impetus, proved to be an asset rather than a liability in the emerging knowledge economy.

The Lisbon Agenda was based on strong focus on the supply-side in agreement with neoclassical economics. Central to the Lisbon Agenda was that the economic sustainability of the welfare state hinges on the number and productivity of future taxpayers. From this reading, social policy should contribute to actively mobilizing the productive potential of citizens in order to mitigate new social risks, such as atypical employment, long-term unemployment, working poverty, family instability and lacking opportunities for labour force participation, resulting from care obligations or obsolete skills. As the authors of this report highlight, there was also a deliberate orientation towards 'early identification' and 'early action' targeted on the more vulnerable new risk groups. The shift away from passive income compensation, through social insurance, to more active social policy support and servicing has meanwhile been critically informed by the mounting evidence, collected over the past decades, of the enormous social cost of early failure and (too) late policy intervention across the life course. A re-assuring finding for policymakers in this report is that targeting specific vulnerable groups through social policy support does not have to go at the expense of other groups in society.

This brings us to the more fundamental unifying tenet of the economics of the Lisbon Strategy, bearing on its theory of the state. Distancing themselves from the neoliberal 'negative' economic theory of the state, Lisbon policy pundits viewed public policy as a key provider for families and labour markets. Two economic rationales are at work here. The first relates to information asymmetries. Because citizens often lack the requisite information and capabilities to make enlightened choices, many post-industrial life course needs remain unmet because of the market failures of service provision at too high a cost. This is what Nicholas Barr has coined as the 'piggy-bank' func-

tion of the welfare state. But, the economics of the Lisbon Strategy and its re-affirmation of the role of the state do not stop with 'piggy-bank' rationality. The more fundamental reason why the welfare state today must be "active" and provide enabling social services is inherently bound up with the declining effectiveness of the logic of social insurance ever since the 1980s. When the risk of industrial unemployment was still largely cyclical, it made perfect sense to administer collective social insurance funds for consumption smoothing during spells of Keynesian demand deficient unemployment. However, when unemployment becomes structural and inequalities more sustained, caused by trends outlined in the report such as radical shifts in labour demand and supply, intensified international competition, skill-biased technological change, the feminization of the labour market, family transformation, and social and economic preferences for more flexible employment relations, traditional unemployment insurance no longer functions as an effective reserve income buffer between jobs in the same industry. Basic public income guarantees, therefore, have to be complemented with *capacitating* public services, tailored to particular social needs caused by life course contingencies. Because it is difficult to privately and/or collectively insure new social risks, and as capacitating social services are not self-evidently supplied by private markets, it becomes imperative for public policy to step in for effective protection against "new social risks". At the same time, however, as this report implies capacitating services must be customized to individual needs across the lifecycle in order to be effective.

The explicit re-appraisal of the role of the state as a necessary social investor is, in the aftermath of the global crisis, confronted with an overriding public finance limitation, anchored in the Maastricht criteria and the Stability and Growth Pact. As long as the neo-liberal doctrine of balanced budgets and price stability continue to be viewed as sufficient conditions for overall macro-economic stability, the shift towards true social investment remains heavily constrained. While all the available evidence suggests that investments in childcare and education will, in the long-run, pay for themselves, existing public finance practices consider any form of social policy spending only as pure consumption. This may be true for the *modus operandi* of the post-war welfare state,

which was indeed income-transfer biased. Today, as the welfare state is in process of becoming more service based, there is a clear need to distinguish social investments from consumption spending. A new regime of public finance that would allow finance ministers to (a) identify real public investments with estimated real return, and (b) examine the joint expenditure trends in markets and governments alike, has become imperative. This would be akin to distinguishing between current and capital accounts in welfare state spending, just as private companies do.

The current economic crisis will have profound repercussions for European welfare states, as the report shows that the Great Recession has undone much of the progress in improving employment and growth across Europe. But the key lesson of the Lisbon Strategy holds true even more so today than a decade ago. If it is the case that the European economy has lost a good five per cent of GDP in the crisis, the way to recoup growth is contingent on two key factors: participation and productivity. Moreover, these participation and productivity are mutually reinforcing. The higher productivity, the greater is employment participation.

The years ahead will differ markedly from the epoch when the Lisbon Agenda was first launched. Will the determined fiscal response in 2008 and 2009, based on an emergency reconversion to the economic teachings of John Maynard Keynes, be followed by a more general reappraisal of generous welfare states, in the wake of the first crisis of 21<sup>st</sup> century capitalism? As the Lisbon Strategy has expired in 2010, the European Commission put forward the 'Europe 2020' strategy, which sets out a vision of Europe's social market economy for the 21<sup>st</sup> century. This new strategy has the potential to give the social dimension greater prominence than in its predecessor for reasons of economic competitiveness. Will the social investment paradigm carry the day, or revert to marginality? Initially, the Member States of the EU have responded to the crisis by extending short-term working arrangements, training and activation, gender equality in labour markets, and later retirement, fairly consistent with the social investment perspective. It remains, however, to be seen to what extent the pro-active welfare consensus will be sustained once the calls for an 'exit strategy' of deficit and debt reduction, based on the mantra of balanced budgets and disinflation, grow louder. It seems

highly likely that the massive increase in fiscal deficits and public debt to levels not seen since the Second World War will force policymakers to restrain welfare commitments in order to sustain economic stability. After a two-decade loss of faith in public action, the final downfall of the neo-liberal efficient market and rational expectations hypotheses is no guarantee for the acceleration of welfare state renewal following the strictures of the original Lisbon Strategy's policy analysis. But although the crisis is likely to put a strain on many welfare institutions, this could also engender positive con-

sequences. For one, social policy has resurfaced at the centre of the political debate. People once again realize how important public institutions are to economic stability. Moreover, dire economic conditions will not make it politically opportune for policy makers to easily abandon welfare commitments. In this respect, the economic crisis may reinforce, rather than undermine, the portent of social investment welfare in the aftermath of the worst recession since the Great Depression!

Anton Hemerijck, Amsterdam

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## Executive summary

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In June 2010, the Europe 2020 agenda replaced the European Lisbon Strategy that had guided European social and employment policy over the decade ending that year. Europe 2020 continues the main themes of the Lisbon Agenda by focusing on economic inclusion and territorial cohesion, but is also a response to existing and new realities – including the biggest economic downturn since the 1930s and the need to develop a smart and green economy in an increasingly interdependent world.

This review assesses two key components of the Lisbon Strategy and the Europe 2020 agenda: promoting labour force participation and reducing income inequality. Labour force participation is a basic condition for social inclusion and also facilitates longer-term social stability. The reduction of income inequality between regions and social groups is closely related to ensuring that fewer Europeans are at a disadvantage (for instance, at risk of poverty and discrimination) and lack equal opportunities.

The purpose of the study is to identify progress against these objectives, what has driven the outcomes, potential trade-offs among outcomes and future challenges. Looking at trade-offs is helpful as it addresses the real dilemmas facing policy makers in practising the art of the possible. Examining future challenges tells us something about the certainties and uncertainties inherent in policy making. While the study initially focused on what had been achieved in the Lisbon Strategy, the current economic crisis as indicated in the Europe 2020 agenda makes a look at policy challenges affecting progress with those outcomes more pressing. For instance, policy objectives may be harder to attain than before the crisis and may become obsolete.

The findings of the review can broadly be summarised as follows. Both low labour force participation and high income inequality remain significant policy problems across the European Union.

The aftermath of the economic crisis of 2008 has undone much of the progress on improving employment and growth in Europe over the last 20 years. Vulnerable groups in particular remain at risk of poverty and not being in employment and education, especially in light of trends that have shaped the labour market including changes in educational requirements and the changes in work. Going forward, these trends will remain while other trends such as the move to a low-carbon economy will come into play. Progress on the Europe 2020 agenda requires targeting the problems of social inclusion of these vulnerable groups. Our analysis shows that what is done to support the labour force participation of specific vulnerable groups does not have to come at the expense of others. Moreover, a reduction in income inequality across society may not have to impact other macroeconomic outcomes such as employment.

However, it is less clear to see what should be done specifically. The review shows that evidence on specific policy solutions is limited. We do know something about the general policy principles that appear important such as good labour market policy in general (flexible labour markets), early childhood interventions, keeping young people and other vulnerable groups in education or work, setting minimum standards for employment (e.g. minimum wage), skills training over the lifecycle of employment (incorporating employers) among others.

The insights from our analysis and review form a useful input into developing European policy discussions. The general policy principles above speak to the increased use of enabling social policy that allows individuals to achieve their full productive potential and participate in the labour market to complement other welfare approaches such as social insurance. Europe could build on the policy response focused on job placement,

training, and flexible working that it put in place after the global economic crisis. European action is relevant. Improving labour force participation and addressing income inequality across Europe requires a concerted strategy to define the principles in employment and social policy and values and mechanisms that can facilitate effective policy coordination and exchange. It is obvious that Member States could learn from each other given the differences in income inequality and labour force participation rates in Europe. Further improvements also require better information on which particular policy responses are effective. Lack of movement on income inequality and low labour force participation of vulnerable groups would mean the objectives of the Europe 2020 agenda may be difficult to achieve. More widely, differential rates of inequality and labour force participation could start to undermine European cohesion affecting the process of European integration and indeed further European integration in the future. We expand on these findings below.

### Looking at labour market outcomes

The review shows that European policy makers over the last 30 years have had to respond to important trends that have shaped labour markets: an increase in educational requirements and attainment, a shift towards service sector employment (changes in the industry mix), a move towards white-collar jobs (occupational upgrading), female participation in the labour market, and demographic change (population ageing). The study concludes that during the Lisbon Strategy period wages have remained in line with productivity, employment rates increased and unemployment rates fell – factors that speak to important accomplishments. The improvements in overall employment and growth over the decade up to 2007 meant an increased attention towards specific vulnerable groups – such as younger and older people and migrants – who are not well integrated in the labour market but whose engagement is closely connected to Europe’s overarching societal objectives and to the sustainability of its economic objectives.

The economic crisis of 2008 that continued in 2009 undid much of the progress in improving employment and growth across Europe. Not surprisingly, vulnerable groups appear to be at particular risk of not being in employment or education at times of economic crisis, and find it difficult to

re-enter the labour market when economic conditions improve. Continued policies supporting the employment of such groups remain important because their employment may lead to higher rates of social inclusion and reduced welfare expenditure. The labour force participation of vulnerable groups will also contribute significantly to Europe achieving the objectives set in the Europe 2020 agenda.

To target such vulnerable groups, policy makers must understand what keeps them out of the labour market now and whether supporting one group will negatively affect another. We focused on how the key trends mentioned above affected the participation in the labour force of the young (16–24) and old (55–64). These two groups are receiving particular attention from policy makers. Old-age employment is seen as an answer to many of the policy challenges associated with population ageing. The old have low labour force participation rates (LFPRs), and increased participation relieves pressure on social security systems. Getting the young into employment is critical for society. Young people not in education or work are at great risk of long-term unemployment.

The study finds that while increased educational attainment and the shift to service sector employment are associated with an increase in the probability of young people working compared to the baseline of young people being in full-time education, the same trends increase the chances of young people ending up ‘not in school and not working’ compared to the baseline. Therefore some young people are at risk of exclusion from the labour market and full-time education. There also seems to be an issue around managing the consequences of the move towards white-collar jobs for the old: an increased probability that they will retire and stop working, stemming from the increase in skill requirements. Our modelling also showed that there were no significant trade-offs in the trends between the participation of the old and the young. The participation of both groups in our study does not seem to be adversely affected by increased female participation. Thus, we see clear possibilities of mutual increases and decreases in labour force participation of certain groups.<sup>1</sup>

<sup>1</sup> The fact that increased participation of young and old appear to move together does not mean that there is no substitutability between groups.

## Examining income inequality

Over the last decade, overall income inequality at the European level has changed little, but there are large variations across countries with some experiencing large reductions and others large increases in income inequality. The 2008 economic crisis has significantly increased income inequality in some countries. Also, groups in specific European Member States are still at a significant risk of poverty; these include women, the elderly, single-parent families and jobless households. Sustained inequality associated with societal stratification is a concern of the policy community.

Reducing sustained income inequalities in Europe may be associated with other outcomes, such as improved social capital and perceptions of happiness. In terms of health outcomes, the enlargement countries – which had striking changes in inequality – showed no consistent change in health outcomes. To some extent lower income equality is not associated with lower employment, which means addressing income inequality may not lead to labour market distortions.

With group inequality is a further concern for the policy community. ICT-led economic development has reinforced skill-based inequality and inequality within skill level groups. The review shows that compared with the United States, Europe has a particular issue with inequality *within* groups, which means that groups with the same education, age, gender and sector profiles are showing higher degrees of wage inequality in Europe. The main reason seems to be the prevalence of flexible working arrangements in Europe – which allow part-time working and career interruptions, among other things.

## Anticipating future trends and uncertainties

Since the future is both uncertain and unpredictable, there are limitations to using historical evidence for taking decisions about the future. It is particularly important to anticipate plausible future trends and events. Policy challenges may involve taking decisions that are robust under different future conditions rather than those that are optimal under specific scenarios. This report highlights a number of future trends characterised by varying degrees of uncertainty. Responses to these trends require robust but resilient strategies that allow for adaptation when trend-breaks or sur-

prises occur. We have raised a number of policy challenges for a future European Union (EU) employment and labour market strategy.

## Policy challenges after Lisbon

Our review acknowledges the continued importance of tackling labour force participation of vulnerable groups and managing income inequality across Europe in achieving a more fair and inclusive society. It is important for Europe to achieve the stated objectives of the Europe 2020 Agenda. In the aftermath of the economic crisis, achieving the European objectives on labour force participation and reduction of income inequality requires a concerted and renewed effort on labour force participation and income inequality from policy makers faced with cuts in public expenditure and variable demand from employers across Europe that affect unemployment rates.

The review states that tackling these policy objectives effectively requires understanding the drivers of low labour force participation and income inequality in formulating policy responses. In addition, policy makers need to understand trade-offs to ensure that what they do to address one policy problem does not have externalities. Finally, going forward many of these trends will remain and in cases such as population ageing and occupational upgrading (a move towards white collar employment) become more pressing, while other trends such as the move to a low-carbon economy will come into play.

The question remains what specific policy responses are available to European policy makers. Here the comparative evidence is more limited. On the one hand, there is an absence of systematic evaluations that outline what aspects of policy or combinations of policy are effective in specific environments. On the other hand, contextual factors make it often difficult to collect good comparable and meaningful data on policy outcomes across Europe to inform policy makers.

Our review can say something about which general policy principles appear important. For instance, for the younger and older populations, it is important – given current trends – to intervene early in childhood, keep the young in employment or school, to upgrade or learn to exploit the skills of older workers across the lifecycle of employment, to keep older workers in employment, and to promote employment in general. The latter is because

Future trend	Level of uncertainty	Policy challenges
Knowledge-based economy	Low/medium	<ul style="list-style-type: none"> <li>Raising the stock of workers with scarce skills in the EU labour force to fill increasing supply of knowledge-intensive jobs</li> <li>Managing the increasing mismatch between demand and supply at both ends of the skill distribution to minimise the duration and negative impacts of subsequent structural unemployment</li> </ul>
Population ageing	Low	<ul style="list-style-type: none"> <li>Investing in education and training to prepare young people for the labour market</li> <li>Bringing more people into the labour market, including migrants, women, and the disabled, in an economically challenging climate and against increasingly anti-immigrant sentiments</li> <li>Encouraging substantial and comprehensive investments in the compatibility of career and parenthood during a time of high public deficits to promote employment</li> <li>Minimising the adverse consequences of conflicting interests between the young and the old</li> <li>Reforming Europe's welfare systems while guaranteeing adequate social protection and equity between the generations</li> <li>Creating public support for the introduction of structural reform in Europe's pension, healthcare and labour market systems</li> </ul>
Low carbon economy	Medium	<ul style="list-style-type: none"> <li>Managing the employment effects of climate change mitigation policies by preparing labour markets and education systems</li> <li>Dealing with the potential trade-off between shifting to a low-carbon economy and keeping unemployment low elsewhere</li> <li>Addressing the impacts of climate change on migration, risk of poverty, social cohesion, and vice versa</li> <li>Furthering human capital and skills as a means of raising labour productivity, and as a vehicle for social mobility, through the education system and the workplace</li> </ul>
Aftermath of the financial crisis	Medium/High	<ul style="list-style-type: none"> <li>Mitigating the disproportionate impact of the crisis on vulnerable groups, including young people, elderly people, working poor, disabled people, etc., and avoiding further income inequalities, and persistently high poverty rates</li> <li>Strengthening cooperation with external partners, particularly the emerging economies, so as to take better advantage of worldwide economic and social networks</li> <li>Fostering creative destruction and a new social deal: introducing structural reform while guaranteeing adequate social protection and investing in human capital while under economic pressure (e.g. stimulus packages for a low-carbon economy)</li> <li>Maintain public and private investment in research, education and innovation in a climate of economic downturn and budget pressures</li> <li>Avoiding a race to the bottom in labour costs and conditions and not pursuing competitiveness strategies based either on low costs or on monopolisation</li> </ul>
Future of the Union	High	<ul style="list-style-type: none"> <li>Identifying the role for EU employment and social strategy and the mandate of EU institutions</li> <li>Developing a contingency strategy for hard regulation: in a Europe where common goals and interests are sparse, should the Commission become an honest broker, and establish a basis for mutual learning, identifying mutual interests and supporting Member States to act on them?</li> <li>Identifying the common denominator with regard to employment policy issues in a highly fragmented Europe, such as working conditions, income inequality, anti-discrimination, adequate social protection, and active employment policy</li> </ul>
Future of work	Medium/High	<ul style="list-style-type: none"> <li>Signalling, identifying and addressing new employment risks that merge with new ways of working.</li> <li>Monitoring systems of rewarding labour and addressing potentially new trends in income inequalities and poverty</li> <li>Encouraging Member States to facilitate the combination of higher education and a career with family life, as both labour participation and family formation are important determinants of economic growth and social inclusion.</li> <li>Developing a contingency plan for the social inclusion strategy. Social inclusion through employment is relatively ineffective in case structural unemployment is soaring and the incentives to join the work force are low,</li> </ul>
Future of EU social model	Medium/High	<ul style="list-style-type: none"> <li>Reconsidering social partners in Member States since the influence of unions is changing</li> <li>Developing alternatives to employment as the only solution to social inclusion, given the need to cope with increasing structural unemployment</li> <li>Supporting convergence of national social policies and common learning as all Member States are struggling to reform their policies to deal with similar challenges</li> </ul>

labour force participation rates in these groups will also benefit from general improvements in the aggregate rate of employment. The review importantly highlights that what is done to improve the labour force participation of one group does not have to go at the expense of other vulnerable groups. In income inequality, we know that labour force participation is a key element in addressing sustained income inequality. Finally, the review highlights that within-group (same age and education levels) inequality is a significant policy concern in Europe, compared with for instance the United States. To combat income inequality, policy makers could provide basic income support and a higher guaranteed minimum income. On trade-offs between reducing income inequality and other policy objectives, the review states that what is done to reduce income inequality does not have to go at the expense of labour markets outcomes.

These policy principles emphasise the importance of enabling social policy or social investment targeted to specific groups at risk of exclusion from the labour markets or of poverty; or in other words delivering those policies such as for instance job placement and training, skills upgrading across the productive lifecycle of an individual, and early childhood interventions that enable individuals to achieve their full productive potential and participate in the labour market. As Anton Hemerijck points out in his foreword to this report, the trends shaping labour markets require different approaches to welfare provision and in particular complementing basic social insurance such as income guarantees and defined benefit schemes with ‘capacitating’ social policy mitigating new social risks. This is important. The social cost of long-term unemployment, poverty, and lacking opportunities to participate seems too substantial for policy makers to ignore. In addition, social investments do not have to come at the expense of macroeconomic performance. In fact, Nordic countries shows that generous provision of social services ranging from for instance childcare to active labour market policies and training aimed at getting individuals to participate in the labour market over the course of a lifetime can result in high labour force participation with low income inequality. The review also implies that targeting interventions at specific groups at risk of structural unemployment makes sense when considering

wider trade-offs, for instance with other groups in society.

Europe has responded to the global economic crisis by emphasising later retirement, promoting training and job placement, and extending flexible working arrangements among others. For Europe to achieve its Europe 2020 obligations, it needs to continue to make social investments in a climate of fiscal austerity. This requires political will as the return on investment of for instance early childhood interventions or training likely falls in the longer run. The economic crisis is therefore an opportunity to re-emphasise the importance of social policy and enabling social services in particular in setting policy priorities as well as a challenge given a climate of fiscal austerity could imply significant cuts to welfare provision.

Action at European level at this time seems intuitively important. Great divergence of labour force participation and income inequality rates across groups between Member States may undermine European cohesion and the current and future process of European integration. What should European action aim to address? Firstly, there is a clear need for better information among policy makers to understand which aspects of policy work in specific national and regional contexts. For instance, what do we know about the effectiveness of specific active labour market programmes across Europe? Collecting such information becomes more pressing given the challenges of future and current trends that we know about and are outlined above. Secondly, improving labour force participation and addressing income inequality across Europe requires a concerted strategy to define common principles in social and employment policy and values and mechanisms that can facilitate effective policy coordination and exchange. Clearly, differences in labour force and income inequality rates across Europe suggest that countries can learn from each other in how policy challenges have been addressed and social models have evolved. European institutions could more effectively facilitate this process.

The Europe 2020 agenda is important in framing strategies and monitoring progress. However, the key challenge for European institutions such as the European Commission will be facilitating the exchange of best practice and information on what works across Member States, with the aim at times to bring Member States closer together and seek

some convergence in how welfare systems evolve while at the same time acknowledging a degree of strategic flexibility to reflect national and regional contexts. This balancing act will be difficult given the limited European mandate in this area, but seems imperative in ensuring a competitive and inclusive Europe and supporting the current process of European integration going forward.



# Chapter 1 Introduction

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## From Lisbon to Europe 2020

The Lisbon Strategy guided European social and employment policy over the decade to 2010. It aimed to make Europe ‘the most dynamic and competitive knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion by 2010’ (European Council, 2000). This objective, articulated as full employment by 2010, was based on three pillars: economic, social and environmental. The Lisbon Strategy identified a number of objectives at the outset, including investing in human capital, modernising labour markets, unlocking business potential, investing in knowledge and innovation, investing in energy and infrastructure, promoting social integration by encouraging work, guaranteeing viable pension schemes, and ensuring social stability. A period of vigorous interrogation was marked in 2004 (European Commission, 2004) by the birth of the new Lisbon Strategy, which refocused efforts towards promoting jobs and growth against a background of sustainable development that would require not only more and better jobs, but also equal opportunities for all.

As the Lisbon Strategy expired in 2010, the European Commission put forward the Europe 2020 Strategy, which sets out a vision of Europe’s social market economy for the twenty-first century (European Commission, 2010b). This new strategy was largely a response to a number of existing and new realities. The drafting of the Europe 2020 Strategy took place at a time when the EU, and the rest of the world, was faced with the biggest economic downturn since the 1930s, which has affected economic and social progress for years and exposed structural weaknesses in Europe’s economy. Important lessons have been learnt from previous economic downturns and applied. For

example, governments globally and across Europe intervened quickly to support the financial system, and consumer spending and deflation have been less of a problem in the current crisis. Also, the emergence of the modern welfare state since the Great Depression of the 1930s and values held under the *acquis* (the body of European law) in Europe ensure that workers’ rights are protected and that adequate social safety nets exist. However, the recent crisis distinguishes itself from the Great Depression in a number of ways. It is unique in its global reach and its interaction with other macro-trends, such as population ageing and climate change, which place unavoidable pressure on the social objectives of the EU.

At the same time, the recession provided an opportunity to engage in some fresh thinking about the future of European employment and social policy. Furthermore, the new strategy had to consider EU-wide changes that have occurred in the decade since the Lisbon Strategy was adopted. Membership has expanded by 12 countries, and demographic change, climate change and technological advances have all become factors shaping and driving policy. The last few decades have also seen shifts in income inequalities and increased labour market segmentation.

Europe 2020 acknowledges many of these trends. It focuses on three mutually reinforcing priorities (European Commission, 2010b):

- ‘Smart’ growth: developing an economy based on knowledge and innovation.
- Sustainable growth: promoting a more resource efficient, greener and more competitive economy.
- Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion.

## The purpose of this review

This document builds on analyses conducted as part of a study made possible by funding from the Directorate-General for Employment, Social Affairs and Equal Opportunities at the European Commission in the course of 2008–9. The views presented in this document are solely those of the authors and do not present a European Commission position or thinking by any Commission official. Any mistake or misrepresentation in the document is the responsibility of the authors alone.

This document has four main purposes. Firstly, we want to take stock and see how Europe had progressed against some of the main objectives of the Lisbon Strategy over the last decade. In this document, we focus on two main aspects of the strategy: 1) labour force participation and 2) reduction of income inequality. In particular, we are interested in the situation of vulnerable groups in the European Union. Progress on the Lisbon strategy and the Europe 2020 agenda requires targeting the problems of social inclusion of these vulnerable groups.

These objectives go to the heart of the previous EU social and employment agenda, but also remain integral parts of the Europe 2020 Strategy. This makes these outcomes particularly relevant for further examination. Labour force participation is a basic condition for social inclusion and also facilitates longer-term social stability. The reduction in income inequality between regions and social groups is closely related to ensuring that fewer Europeans are at a disadvantage (for instance, at risk of poverty and discrimination) and lack equal opportunities. They speak to both territorial and social cohesion across Europe. The European Commission introduced a number of headline targets for the EU focused on labour force participation and income inequality to support the key policy priorities on smart, sustainable and inclusive growth (European Commission, 2010b). These are as follows:

- Working towards the employment of 75 per cent of the population aged 10–64 by 2020.
- Reducing the number of early school leavers to 10 per cent of that population and ensuring that 40 per cent of the population have a first degree.
- Lifting an additional 20 million people out of poverty.

Secondly, the document tries to highlight what is driving progress on the two main aspects. Drivers include globalisation, occupational upgrading, educational expansion, and so on. We discuss the drivers and outcomes for labour force participation and income inequality in Chapters 2 and 4 respectively. Understanding these is important in order to arrive at policy recommendations as effective policy should target the interplay between drivers and outcomes.

Thirdly, the document looks at trade-offs. This is helpful as it addresses the real dilemmas facing policy makers. Policy making is less a matter of pursuing preferred outcomes and more one of making choices between desired outcomes; studying policy is rightly considered to be about such choices. With regard to labour force participation, trade-offs exist between different groups in society. For instance, an increase in female participation could have consequences for youth and old-age employment. Chapter 2 looks in depth at the trade-offs in employment of two vulnerable groups of particular interest to policy makers, the young and the old. Old-age employment is seen as a way to address population ageing and soaring welfare bills. Getting young people in work is also critical. Young people who are not in education and work are at great risk of long-term unemployment. Chapter 2 also shows how the trade-offs are affected by the drivers of labour market developments, a discussion that is particularly relevant to informing policy responses to the headline employment targets of Europe 2020. In addition, labour force participation interacts with income inequality. We examine this relationship more closely in Chapter 5. Considering the trade-offs is key to targeting policy more effectively and also to understanding some of the unintended consequences for policies.

Fourthly, the documents look at which future trends may prove to be significant for the Europe 2020 Strategy. The success of any strategy will depend on how successfully it can anticipate certain developments. Examining future challenges tells us something about the certainties and uncertainties inherent in policy making.

Finally, in Chapter 7 we summarise the policy challenges that lie ahead for the EU on the basis of our review of past trends, outcomes and trade-offs. On the one hand, the past will be relevant to formulating new policy responses because it helps us to understand known certainties such as popu-



lation ageing and to find out about uncertainties such as climate change and how they interact with the Europe 2020 objectives. On the other hand, any review will have to acknowledge that part of the future is unknown and that a number of new and unexpected trends in the coming years may further shape the policy agenda. We offer some discussion on what is on the horizon.

The majority of the work for this review took place up to the summer of 2009. Much of the data analysis preceded the economic crisis of 2008–9. We have tried to update some of the key economic indicators, such as employment and unemployment rates and the main measure of inequality. The general picture logically indicates that unemployment and inequality rates have increased. At the same time, there exists heterogeneity in outcomes such as unemployment and inequality between

groups and countries. Countries such as the Baltic countries and Spain have seen dramatic increases in unemployment since the economic crisis. However, highlighting these outcomes is not the point of this review. Reports by the European Commission and Organisation for Economic Change and Development (OECD) offer more comprehensive and up-to-date stock-taking. The review is focused on explaining what has driven outcomes over time and on deriving policy implications from what is known. This seems to be particularly important at present. The initial purpose of the study was to highlight the challenges to EU policy in terms of promoting labour force participation and reducing income inequality in order to achieve the Lisbon targets. The current economic crisis, as indicated in the Europe 2020 agenda, makes focusing on these issues more pressing.



## Chapter 2 Looking at labour market developments in the EU

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### Introduction

Labour markets in the EU have undergone remarkable changes over the last 40 years. The increasing incidence of part-time and casual work, the greater importance of educational attainment as a precursor to employment, and the shift in employment from manufacturing to services are all trends that were evident during the 1970s and have, for the most part, continued into the 2000s. Furthermore, female labour force participation has been increasing considerably. In 1970 only 41 per cent of women participated in the labour market in the EU-19, whereas in 2006 labour force participation was around 64 per cent of females. The proportion of employed people in services in 1998 was 26 per cent; in 2008 it was 33 per cent.

Similarly, Europe has been subject to a number of profound demographic transitions: birth rates have dropped, Europe's population is ageing and women are increasingly participating in the labour force. In 1970, for example, 8.5 per cent of the total population was aged 0–4, and 2.5 per cent was aged 75–9. In 2006 the subgroups were 5 per cent aged 0–4 and 3.5 per cent aged 75–9. For 2026, Eurostat predicts portions of 4.5 per cent for both groups (Eurostat, 2008a).

In this chapter we review a number of the key developments in the European labour market over the past 30 years or so. In section 2.2 we consider some major developments in the supply and demand of labour markets. In addition we look at the development of outcome variables, reflecting the matching of supply and demand. Our review can take into account only a small number of developments and outcomes. We restrict ourselves to the following main developments, which are mentioned as relevant in the literature:

- demographic change
- changes in the female participation rate

- educational expansion
- migration
- changing industry mix
- moving to higher-skilled employment (occupational upgrading).

As for the outcomes of these trends for European citizens and governments, we review the following in relation to age group and educational background:

- wages
- employment rates
- unemployment rates.

### Overview of labour market developments

In this section we review some key developments in the supply and demand side of labour markets over the last few decades. Supply-side developments affect the availability of workers and their skills and experience, while demand-side developments affect the need for workers in the labour market to fill jobs. In addition, we look at outcome variables reflecting the matching of supply and demand.

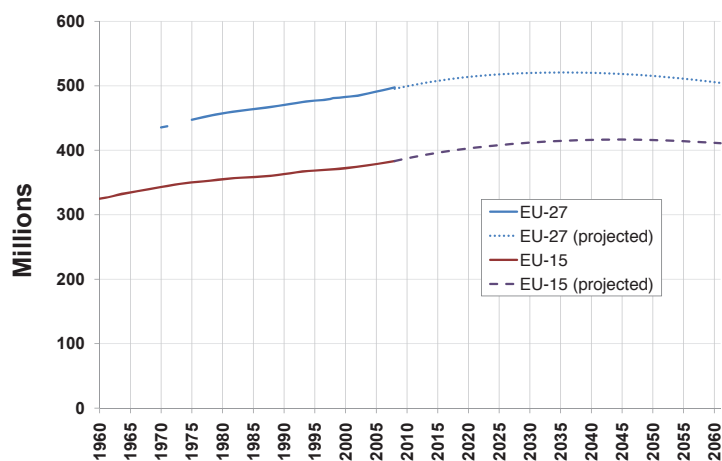
#### The supply of labour in the EU

##### Demographic change

The total population of the EU-27 in 2009 was 498 million. That is 62 million more than in 1970, when the population of what is today the EU-27 was 436 million. Figure 2.1 shows the historical and projected development of the EU population over time. It shows a steady increase since 1960, with population growth strongest between 1960 and 1970, and levelling out in the 1970s and 1980s. The 1990s saw a slight reversal of this trend.

The trends underpinning this development are lower birth rates and increased life expectancy. The

**Figure 2.1**  
**EU population, 1960–2060**



SOURCE: Eurostat, 2010.

total fertility rate is now less than the replacement level of 2.1 children per woman in every Member State in the EU, childlessness is becoming more common and the average age at which women have their first child is nearing 30 years. At the same time, Europe has witnessed significant declines in mortality risk in almost every age group. Western Europe's increase in life expectancy at birth has outpaced that in most other parts of the developed world, from 68.4 years for females and 74.7 years for males in 1970 to 75.4 years and 81.4 years respectively in 2000. By 2050, in rapidly ageing countries such as Italy life expectancy is projected to be as high as 89 years for females and 84 years for males (Eurostat, 2008b). As a result of these trends, European populations are either growing very slowly or even starting to shrink. Furthermore, the low fertility rates accelerate the ageing of populations. Consequently, by 2040 one in four Europeans will be aged 65 years or over, up from one in eight in 1990.

The combined effects of these trends will have a significant impact on the EU's age structure in the decades to come. The proportion of the EU-27's population aged 65 years or over is projected to increase from its current 17 per cent to 30 per cent in 2050. The major concern is the availability of a sufficient working-age population to support an increasingly older population. The increase in old-age dependency ratios is a reflection of the fact that the population structure is moving towards including an increasing proportion of older people in relation to the economically active population. While

immigration may have a substantial effect on preventing or delaying population decline in Europe, it may do much less to offset population ageing.

Eurostat (2008b) predicts that the EU-27's population will continue to rise under normal conditions until 2025 and fall thereafter. The exact development will, of course, depend to some extent on variable factors such as fertility and net migration, which it is difficult to forecast.

In addition, the effects are unlikely to be distributed equally across Member States. The populations of Cyprus, Ireland, Luxemburg and Sweden are all forecast to rise considerably; on the other hand the number of inhabitants in the Baltic States, the Czech Republic, Hungary, Poland and Slovakia is forecast to fall by more than 10 per cent overall between 2005 and 2050.

Eurostat (2008a) estimates suggest that the EU will see major changes in its population size over the next 40 years or so (going from positive to negative population growth). What the aggregate population data do not show is that the EU has undergone (and is undergoing) a significant change in its age profile. The older members of the population are gradually outnumbering the younger. According to Eurostat (2008b) estimates, by 2050 almost one-third of Europeans will be over 65 years old – compared with one-tenth in 1960.

The main drivers associated with this change are:

- increasing life expectancy
- relatively low fertility rates
- the effect of the post-war baby-boom on population dynamics (Grant *et al.*, 2004).

The historical and projected changes in the age structure of the EU population are illustrated in Figure 2.2. It shows the relative cohort size of the working-age population (the size of each age group relative to the total population) for three years: 1990, 2008 and 2050.

The increasing life expectancy in combination with the reduced fertility rates are reflected in the increasingly flat – eventually upward sloping – population age structure. The effect of the baby-boom generation is reflected in the bulge wandering from the left (young age) to the right (older age).

Barely discernible in 1970, the emergence of the younger baby-boomers into their working years is very apparent in the graph for 1990, when the youngest baby-boomers turned 22. The

hump moves to the right between 1990 and 2008, producing an unusual situation in which middle-aged workers outnumber those in both older and younger cohorts. In 2016 the working age population distribution is expected to approximate to an upward sloping distribution.

### Participation in the labour market

The labour force participation rate (LFPR) – defined as the ratio of economically active population (employed and unemployed) to working age population – was 241 million over 343 million in 2009, or 70.1 per cent. The non-active population was either:

- part of the ‘institutional’ population – comprising those who were under working age, in the armed forces or behind bars (150 million);
- or
- ‘out of the labour force’ – neither working in the market place nor looking for work (102 million).

There are considerable differences in the labour force participation of different groups in the EU population. Three groups are discussed briefly below: older people and youth, women, and migrants.

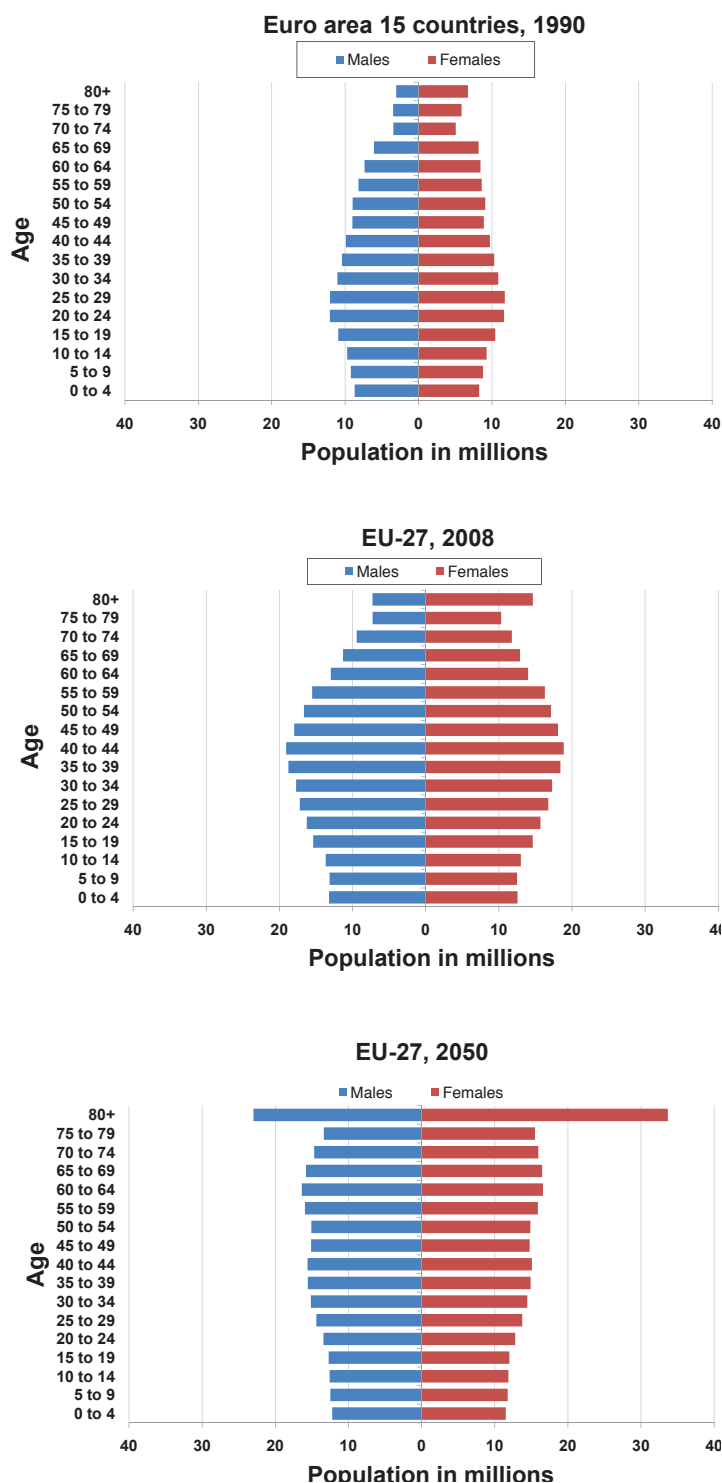
#### Older people and youth

Older members of the population and the young in general have lower labour force participation than the average population, with important variations across the EU-27. Newly acceded Member States tend to have lower participation rates for young workers – ranging in 2007 between 45 per cent of the labour force for Slovenia and 26 per cent for Hungary. They also may have lower participation rates for older workers (with the exception of Estonia, where older workers comprised 62 per cent of the labour force in 2007).

#### Women

Women have also been traditionally underrepresented in the labour force. However, the increase in Europe’s LFPR may largely be attributed to the increase in the participation rate of women. This is shown in Figure 2.3, which plots the LFPR for the EU-15 and EU-19 since 1970. Although women still face important challenges in terms of wage equality and the type of work performed, as Chapter 4 will show, over the last 40 years or so

**Figure 2.2**  
Changing general EU population age profile, 1990, 2008 and 2050



SOURCE: Eurostat.

NOTE: EU-27 data are not available for 1990. The countries included are: Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, Malta, The Netherlands, Portugal, Slovenia and Spain.

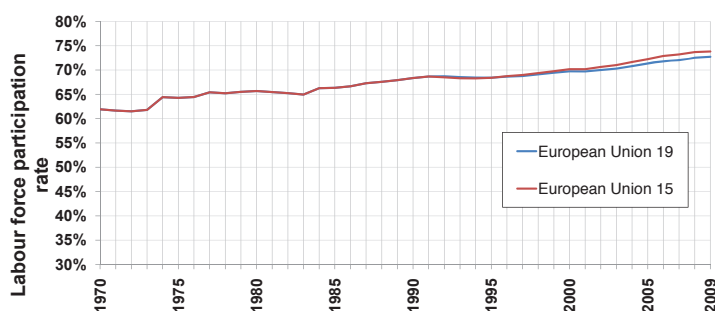
the participation rate of females in labour markets has been steadily increasing. In 1968 two women out of five were in the labour force; in 2010 the number is close to two out of three. The develop-

ment of female participation in the labour force is shown in Figure 2.4.

The main drivers of the increasing female participation are considered to be as follows (Goldin, 2004; Jaumotte, 2003; Heckman and Macurdy, 1980):

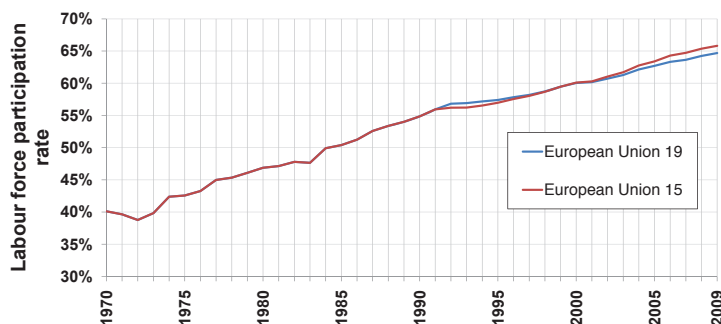
- changes in cultural attitudes regarding female participation
- higher-skill levels among women
- greater possibilities of reconciling work and family responsibilities.

**Figure 2.3**  
EU labour force participation rate, 1970–2009



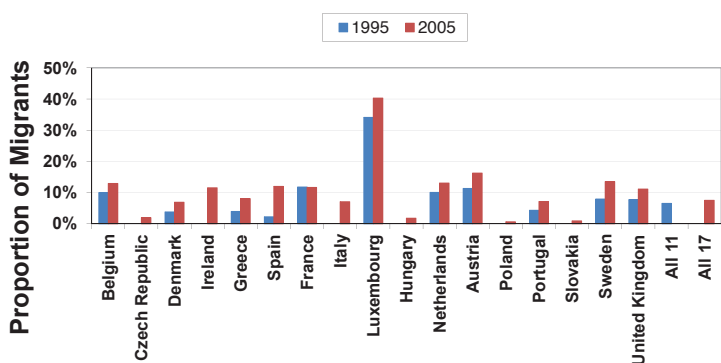
SOURCE: OECD.Stat.

**Figure 2.4**  
EU Female labour force participation rate, 1970–2009



SOURCE: OECD.Stat.

**Figure 2.5**  
Proportion of migrants in the working age population, 1995 and 2005



SOURCE: Eurostat Labour Force Survey.

*Migrants*

Finally, migrants, especially from third-world countries, have lower rates of labour force participation than that of natives in most countries for which we have data.<sup>3</sup> Over the last few decades the EU population has become increasingly diverse, primarily as a result of enlargement and immigration for employment, family reunification, and refugee and asylum seeking. This diversity occurs at many levels: linguistic, ethnic, racial, political and cultural among others. Figure 2.5 shows the change in the proportion of migrants in the working-age population in 17 EU Member States between 1995 and 2005 for which we have comparable data. Migration contributes to the supply.

Labour force participation of migrants and outcomes, however, tend to vary widely depending on the region of origin, ethnicity, educational level and other factors. For example, studies show that the education and labour market outcomes of Turkish immigrants and descendants of immigrants in many European countries are significantly lower than those of the wider population (Crul and Vermeulen, 2003), but that Latin American migrants tend to have high rates of economic activity and educational achievement, in some cases higher than those of the native population (Pellegrino, 2004). Even within particular groups there are differences in outcomes across Europe; for example between one-third and one-

<sup>3</sup> The EU Labour Force Survey has data for 2005 on EU versus non-EU migrants' labour force participation for 14 countries: Austria, Belgium, Czech Republic, Denmark, France, Greece, Hungary, Luxembourg, The Netherlands, Portugal, Slovakia, Spain, Sweden and the United Kingdom. Data also exist for Poland, but because the recent changes in borders may confound the analysis, we have decided to exclude it.

half of second-generation children of Turkish immigrant parents begin their secondary school careers in lower vocational schools in France, Belgium and The Netherlands; whereas in Germany and Austria the proportion is between two-thirds and three-quarters (Crul and Vermeulen, 2003). The transition into the labour market of second-generation Turkish groups also differs markedly across countries.

### Educational expansion

During the past century there has been a tremendous expansion of higher education around the world. In 1900 roughly 500,000 students were enrolled in higher-education institutions worldwide, representing a tiny fraction – 1 per cent – of college-age people (Banks, 2001). By 2000 the number of tertiary students had grown two-hundredfold to approximately 100 million people, which represents about 20 per cent of the cohort worldwide. Enrolment ratios are rapidly climbing past 50 per cent and even 80 per cent in some countries (Schofer and Hironaka, 2005).

The character and extent of educational expansion in the EU-27 for the years from 1998 to 2006 is shown in Figure 2.6. It shows a constant increase in higher-education enrolments per 10,000 capita over those years.

A review by Meyer *et al.* (1977) finds that ‘explanatory research on the rapid expansion of higher education is less extensive than might be expected’. Education levels vary considerably across countries. Despite the increase in the investment in human capital (in particular in tertiary education), there are some regions that still have very low levels of qualifications. The composition of skills was very similar for both men and women, accounted for by the increase in qualification levels for women (European Commission, 2006b).

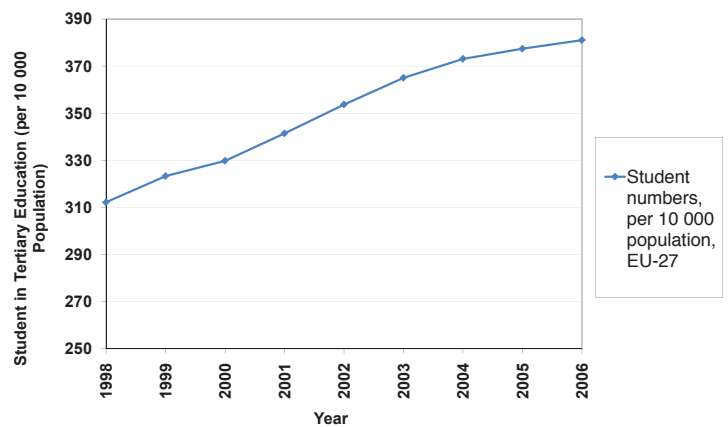
### The demand for labour

On the demand side we review two key developments: changes in the industry mix and occupational/skill upgrading.

#### Industry mix

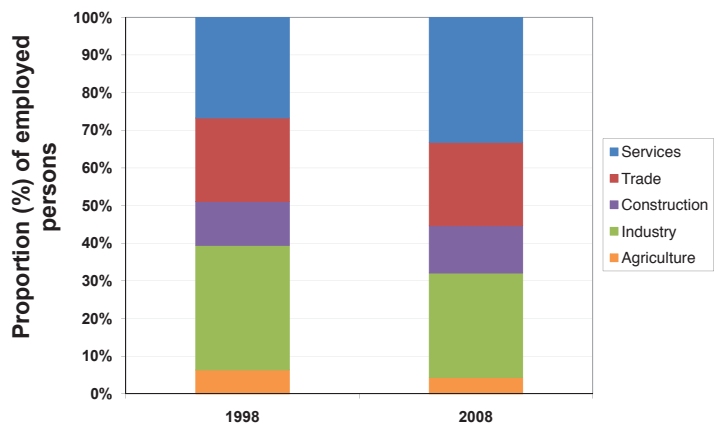
The most labour-intensive sectors in 2008 are services, industry and trade, which have an employment share of 33 per cent, 27 per cent and 22 per cent respectively. This compares with 26 per cent,

**Figure 2.6**  
Student numbers in tertiary education in EU-27 per 10,000 population, 1998–2006



SOURCE: Eurostat.

**Figure 2.7**  
Change in EU industry mix, 1998–2008



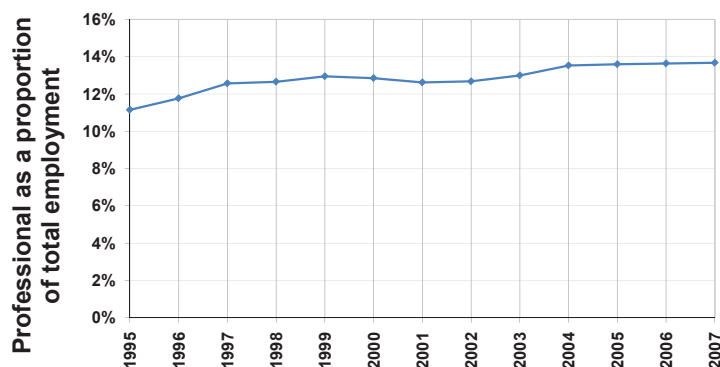
SOURCE: Eurostat Labour Force Survey.

33 per cent and 22 per cent employment shares for these sectors in 1998. As reflected in Figure 2.7, many traditional sectors such as agriculture declined in importance over the years from 1998 to 2008, while others such as the service sector expanded. This is consistent with the shift towards a knowledge-based and service economy, a phenomenon that is shared by all Member States to varying degrees. The decline of manufacturing and the growth of services in Member States over the last 25 years is evident not only in terms of share in total employment but also with respect to added value (European Commission, 2007b).

One implication of the change in industry mix is a major redistribution of jobs across the whole



**Figure 2.8**  
**Proportion of professionals in total employment, 1995–2007**



SOURCE: Eurostat Labour Force Survey.

population – associated, as the European Commission (2007b) points out, with ‘losses among some groups and new opportunities among others’. For example, the shift in employment from manufacturing and agriculture towards services may well have benefited older workers at the expense of younger workers (or vice versa).

Increased international trade and technological progress are prominent examples of possible drivers of the changing industry mix referred to in the literature (Baldwin, 1994; Christev *et al.*, 2005).

### Occupational upgrading

Trade and technological change are often associated not only with shifts from jobs in one sector to jobs in other sectors, but also with shifts in skill requirements within jobs – across sectors. Occupational upgrading refers to a shift to higher-skilled jobs in the labour market.

Industry sector shifts have led to changes in work organisation and the type of skills required of the labour force. Close to 40 per cent of employees were in high-skilled employment by 2005, with a quarter in low-skilled and skilled manual occupations and the remainder in elementary occupations defined as ‘jobs that consist of simple and routine tasks that require basic education to carry them out’<sup>4</sup> (European Commission, 2007b, p. 63). Changes reflect the growing role of technology and knowledge-intensive activities, the decline in low-

skilled jobs and the shift of employment towards services. The European Commission (2007b) pointed out that there was ample room for growth in sectors that are highly intensive in information and communications technology (ICT) and therefore require highly skilled workers.

In the literature a number of measures have been suggested to capture ‘occupational upgrading’. Maegher and Healy (2006) use the proportion of professional employment positions (teaching and scientific professionals, managers, architects, health professionals and technicians) among total employment. Figure 2.8 shows the increase in the share for the EU-27 between 1995 and 2007.

Autor *et al.* (2003) suggest another way to capture the change in the levels of skills required by workers in a particular job. They conceptualise work as a series of skill categories and look at how the composition of the categories has changed over time for certain occupations. The four skill categories they suggest are:

- non-routine analytical tasks, such as research, planning or evaluation activities
- non-routine interactive tasks, such as double-entry bookkeeping
- routine manual tasks, such as machine feeding or running a machine
- non-routine manual tasks such as domestic work or restoring houses.

Using data for West Germany between 1979 and 1998, Spitz (2004) also finds that there has been a shift towards more non-routine tasks – illustrating ‘occupational upgrading’ as these tasks appear to be more closely linked to higher-skill professions.

## Labour market outcomes: matching labour supply and demand

In this section we review the development of two types of outcome from matching supply and demand: price (i.e. wages) and volume (e.g. employment and unemployment rates) of employment.

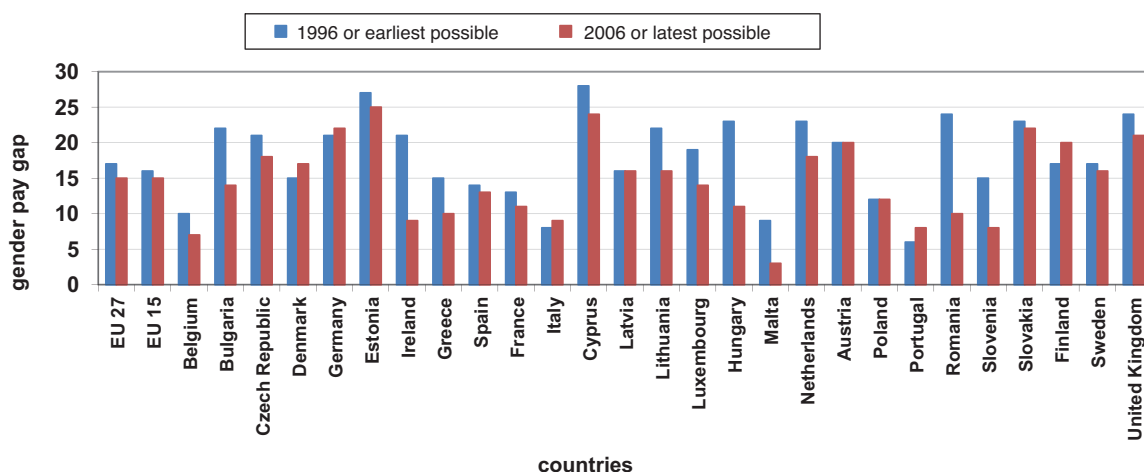
### Wages

Labour market theory suggests that when the market is in equilibrium of supply and demand firms set wages equal to the marginal product of labour. Thus, workers’ wages vary with their pro-

<sup>4</sup> The category includes street vendors, cleaners and domestic helpers, among others.



**Figure 2.9**  
Gender pay gap as a percentage difference between mean pay of gender groups, 1996–2006



SOURCE: Eurostat.

[HTTP://EPP.EUROSTAT.EC.EUROPA.EU/TGM/TABLE.DO?TAB=TABLE&INIT=1&PLUGIN=0&LANGUAGE=EN&PCODE=TSIEM040](http://EPP.EUROSTAT.EC.EUROPA.EU/TGM/TABLE.DO?TAB=TABLE&INIT=1&PLUGIN=0&LANGUAGE=EN&PCODE=TSIEM040).

NOTE: Data for 1996 were not available for Bulgaria, Latvia, Malta, Poland and Slovakia. In order to fill the data gap, data for 2001, the earliest data available, have been used.

DATA for 2006 were not available for EU-15, Estonia, Italy and The Netherlands; 2005 data have been used.

FOR Belgium, Cyprus, France, Portugal and Slovenia there are provisional values for 2006 data.

EU-27 and EU-15 data: Eurostat estimate.

ductivity. If wages increase faster than productivity, unemployment occurs.<sup>5</sup>

Drawing on the work by Blanchard (1998), the European Commission (2005) calculated the development of the 'real wage gap / pressure indicator' for the past 35 years. An increase in its value means that real wages are growing faster than productivity. A significant positive cumulative deviation in relation to the base year (1970) may be interpreted as excessive wage pressure in the labour market.

This research shows a large increase in the real wage gap / pressure indicator during the 1970s, with a peak of more than 25 per cent in 1981–2. Thereafter, wage pressure gradually decreases – suggesting a decrease in pressure on employment during that period.

The decrease from the mid-1990s mainly reflects a period of wage moderation. Wage mod-

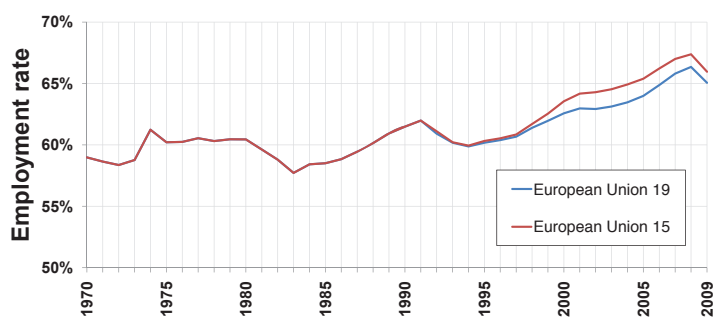
eration is the main driving force given the low growth in productivity since the 1990s. The European Commission (2005) finds that:

In the Euro area – in line with a strong price disinflation trend – wage growth decelerated significantly from 7.7 per cent in 1992 to close to 2.5 per cent per year from the second half of the 1990s. In the 'old' EU-15 Member States not participating in the monetary union wage growth also declined markedly during the 1990s from 9.5 per cent in 1990 to below 4.5 per cent per year from 1995. In the Member States that joined the EU after 2004 – in line with the ongoing progress of nominal convergence – average wage inflation decreased from above 20 per cent in the mid 1990s to about 5.5 per cent in the 2003–2004 period.

However, developments vary by different groups of workers. Much attention is paid to the wage gap between men and women. As Figure 2.9 shows, women earn consistently less than men in all Member States. In 1996 the overall gender pay gap was 17 percentage points for the EU-27 (16 percentage points for the EU-15). The smallest gaps in pay were recorded in Portugal, Italy and Malta (6 per cent, 8 per cent and 9 per cent respec-

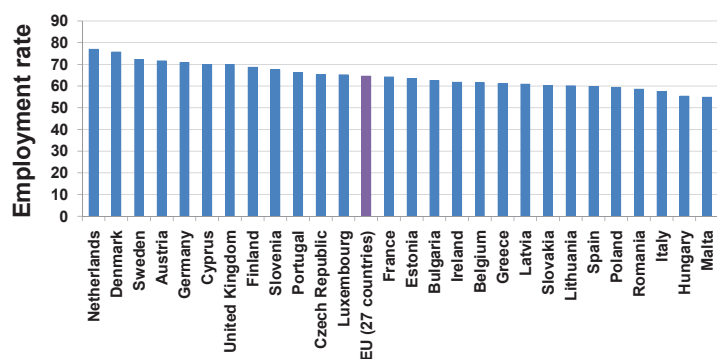
<sup>5</sup> There are other factors affecting wages; for example, workforce composition (educational level), job characteristics (e.g. working conditions) and differences in institutional setting (e.g. employment protection).

**Figure 2.10**  
**EU employment rate (as a proportion of total working age population), 1970–2009**



SOURCE: OECD.Stat.

**Figure 2.11**  
**Employment rates among Member States, 2009**



SOURCE: Eurostat.

tively). There were, however, many countries where the pay gap was 20 per cent or more. The highest levels of gender pay gap were mostly observed in the new accession countries, and in four of the pre-2004 Member States: Germany, Ireland, The Netherlands and the United Kingdom.

## Employment

The other outcome of the matching of supply and demand involves the volume of employment. While labour force participation, as explained above, refers to the sum of those employed and those looking for employment, the employment rate refers to volume when the supply of workers meets the demand for jobs.

Figure 2.10 shows the evolution of the employment rate for the EU-27 as a whole since 1970. In line with the initial increase in wage pressure, it shows a fall in the employment rate from 63 per cent in the 1960s to around 59 per cent in the 1980s.

But thereafter, with the exception of the period 1990–3, employment rates have steadily increased in the EU until the crisis of 2008/9. Figure 2.11 shows the average EU employment rates for 2009. In 2009 the employment rate dropped to 64.6 per cent, down from 65.9 per cent in 2008. This marked a decrease of 1.3 percentage points and is an indication of the effect of the economic crisis.

There are, however, considerable differences between Member States (see Figure 2.11). In 2009 Denmark, The Netherlands, Sweden, Austria and Germany recorded employment rates above 70 per cent, the target set in the Lisbon Strategy in 2000. In contrast, employment rates below 60 per cent were recorded in Malta, Hungary, Italy, Romania, Poland and Spain.

Employment rates also show differences by different groups in the population of the EU. Since educational attainment is positively correlated with employment rates, highly educated populations tend to have the highest employment rates. As shown in Figure 2.12, the employment rate among the population that has higher education is significantly better than those of people with lower educational attainment. The difference seems to be getting less, however. In 2005 the population with completed tertiary education constituted 20 per cent of the EU population of working age, while the population without completed secondary education accounted for about 33 per cent. The share of the population with lower education has reduced compared to several years ago. In 2000, for example, these proportions were 17 per cent and 36 per cent respectively.

Differences in employment rates according to educational level are more pronounced for the East European countries (Czech Republic, Slovak Republic, Estonia and Slovenia). Variations in employment rates are greater for lower-skilled workers than for higher-skilled ones, with very low rates of employment for unskilled workers in some countries, such as the Slovak Republic (25 per cent).

Furthermore, employment rates are generally lower among women, younger, older workers and migrants. In 2009 the employment rate for men reached 70.7 per cent in the EU-27, compared with 58.6 per cent for women (Eurostat, 2010b). But the difference between men and women has reduced in the decade to 2010. In fact, the increase in the aggregate employment rate since the 1990s

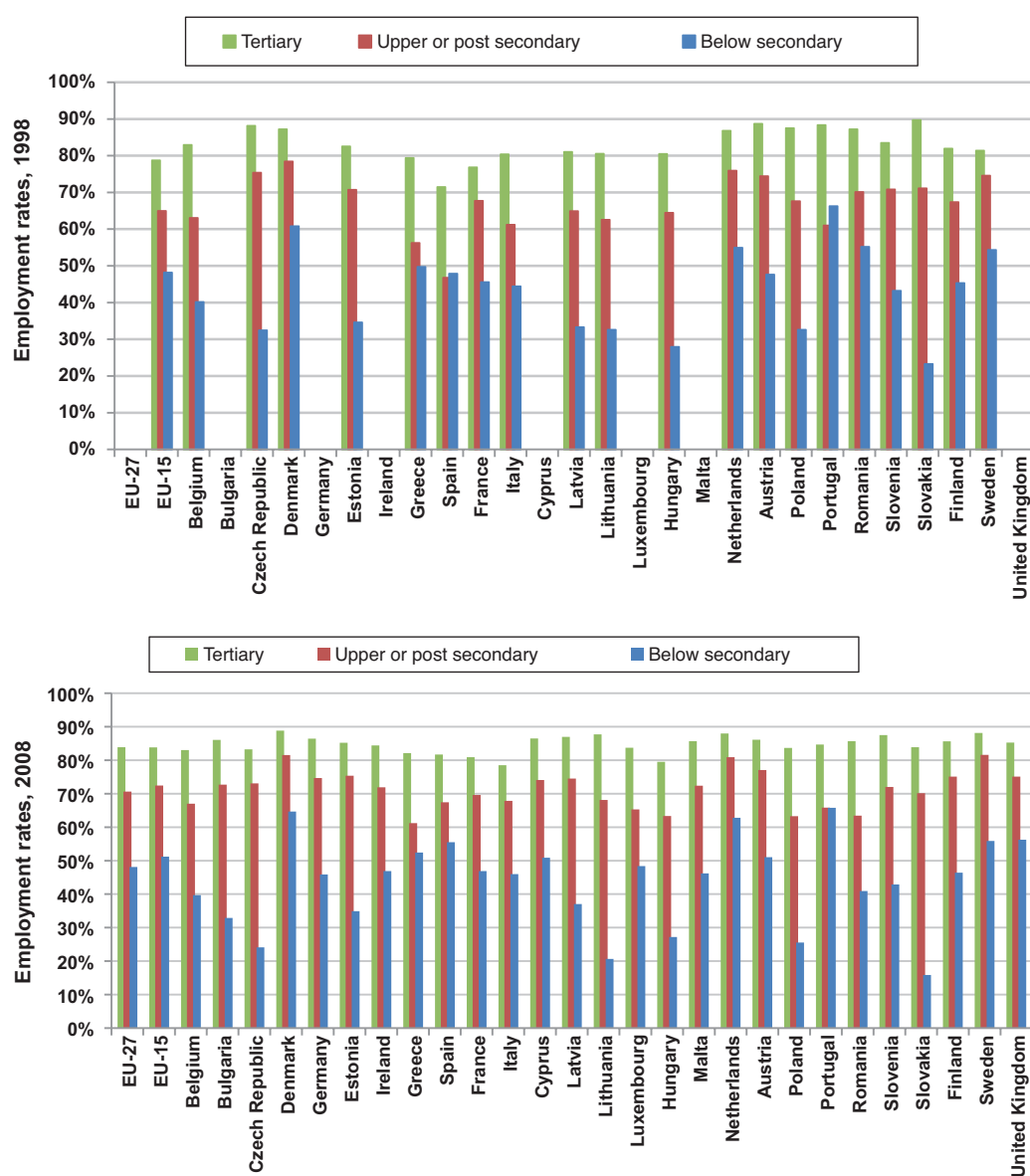
is largely attributable to female employment; the EU female employment rate was just over 50 per cent (52 per cent in 1998).

That said, the female employment rate in Europe as a whole falls short of the target of 60 per cent set in the Lisbon Strategy in 2000. Nonetheless, 14 Member States exceeded the Lisbon threshold in 2009, Denmark, Sweden and The Netherlands (Eurostat, 2010a).

### Unemployment

Recent developments in unemployment in the EU and its Member States are heavily distorted by the 2008–9 economic downturn. In the EU labour force 23 million were unemployed in August 2010. This figure is considerably higher than before the crisis. There are now 6 million more Europeans without a job than there were in 2006. The seasonally adjusted EU-27 unemployment rate was

**Figure 2.12**  
Trends in employment rates by educational attainment (1998–2008)



SOURCE: Eurostat.

9.6 per cent in August 2010; it was 10.1 per cent in the euro area (Eurostat, 2010b).

These rates are relatively high from a historical perspective. Figure 2.13 presents the evolution of the unemployment rate for the EU-15 and EU-19 from the 1970s. These rates show a steady increase from 2 per cent to 10 per cent, a rough plateau – with cyclical declines – at the end of the 1980s and 1990s, and a slight decrease between 2005 and 2007. The financial crisis has brought the overall EU unemployment rate close to its level before the start of the Lisbon Strategy.

There are considerable differences between Member States. Among the Member States, the lowest unemployment rates were recorded in Austria (4.3%) and in The Netherlands (4.5%), and the highest were recorded in Spain (20.5%), Latvia (19.5%), Estonia (18.6%) and Lithuania (18.2%) (Eurostat, 2010b). The Baltic states in particular have seen stark rises in unemployment since the crisis. Figure 2.14 shows that considerable hetero-

geneity exists. Blanchard (2004) commented that this heterogeneity has always been present, but it is more marked in recent years than it was before. Chapter 3 investigates some potential causes of these differences.

When disaggregating between different groups in the population, differences similar to those for the employment rate exist. Youth unemployment rates are generally much higher than unemployment rates for the general population. Throughout the 2000s youth unemployment in the EU-27 was around double the rate for the total population (Eurostat, 2010b). Furthermore, women historically have been more affected by unemployment than men. This gap has reduced from 2 percentage points to around 1.3 between 2002 and early 2007. In recent years, male and female unemployment rates in the EU-27 have converged and by the second quarter of 2009 the male unemployment rate was the higher (Eurostat 2010b).

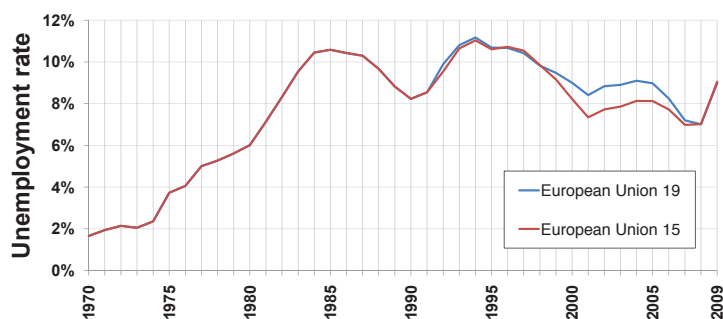
### Conclusion

In this chapter we have considered a number of the key developments in the European labour markets over the past 30 years. We reviewed the developments that affect the demand for and supply of labour, such as occupational upskilling, educational expansion, changes in industry mix, demographic change and migration. This complex system of interacting factors leads to a number of outcomes. We arrive at the following conclusions:

- Wage pressure (the relationship between wages and productivity) has steadily decreased over the last few decades.
- Employment rates increased steadily until the 2008–9 economic recession.
- Following the financial crisis, employment rates have dropped and unemployment has returned to pre-Lisbon levels.
- There are important differences in outcomes by different groups in the population.

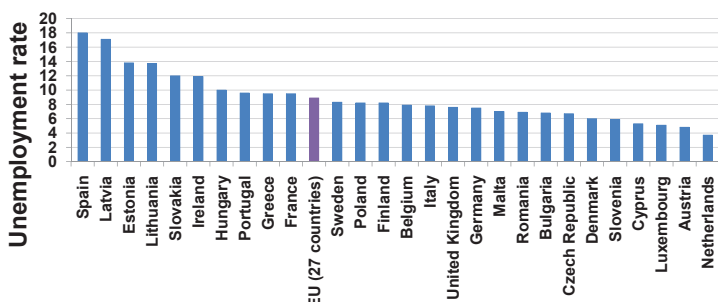
The first two of these conclusions attest to some important accomplishments under the Lisbon Strategy that need to be acknowledged. Improvements in overall employment and growth over the decade up to 2007 partially shifted attention towards specific vulnerable groups who are not well integrated in the labour market. This policy challenge has remained after the recent recession.

**Figure 2.13**  
EU unemployment rate, 1970–2009



SOURCE: OECD.Stat.

**Figure 2.14**  
Unemployment rates of Member States, 2009



SOURCE: Eurostat.

Education, employment and income outcomes vary between different groups in the populations of the EU. Underlying the emphasis on employment by policy makers is the belief that employment is a desirable outcome for the individual and for governments. For governments, increased employment reduces welfare expenditure and increases tax contributions. Employment also significantly contributes to personal fulfillment.

The integration of vulnerable groups in the labour market remains a key component of the strategy for tackling social exclusion. This integration resents a number of challenges, however. For instance, there are signs that vulnerable groups remain relatively poorly integrated in the labour market in good economic times and may

be at particular risk of not being in employment or education at times of economic downturn. These groups are also generally at higher risk of unemployment and have lower wages than those of other population groups. This suggests that efforts to promote employment in general and to encourage the employment and participation of vulnerable groups should remain a strong and overriding priority in a difficult economic climate.

In Chapter 3 we reflect on the situation of the young and old in the labour market, as well as at trade-offs between the participation in the labour market of different groups. Chapter 4 looks in more detail at inequality both between Member States as well as between groups within these Member States.



## Chapter 3 Understanding trade-offs in labour force participation

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### Introduction

In this chapter we explore the labour force participation of particular vulnerable groups further. As we stated in the introduction, progress on the Europe 2020 agenda requires targeting the problems of social inclusion of vulnerable groups. Here, we look particularly at the dimension of age. Age is of particular interest to European policy makers because of the background of its ageing population and the associated increasing pressure on welfare and pension systems. The interest in age arises from three main policy concerns: a desire to increase the participation of older people in the labour force in order to relieve pressure on social security systems, a wish to mitigate discrimination against older workers and to use their human capital effectively, and a need to reverse worrying trends in youth unemployment. The last is important as younger workers who are not integrated into the labour force after they finish full-time education are at high risk of long-term unemployment.

The focus on the employment of young and old should not be a diversion from consideration of other vulnerable groups. Arguably the increase in female participation has been one of the defining characteristics in labour market developments over the last two decades.

There is much recent literature about the situation of the young and the old in the labour market. Most of it focuses on either the young or the old. Few studies look at the two groups in parallel. Considering trade-offs between the two is critical to policy makers who are looking at the inclusion of vulnerable groups; there is a need to explore whether developments (and/or policy responses) are beneficial or detrimental for one of these two groups but not the other.

This chapter revisits the outcomes for the young and the old. We then explore the relationship between the key labour market developments discussed in Chapter 2 and the situation of the

young and the old. Rather than constituting a comprehensive overview, the chapter aims to provide hypotheses for further testing. Finally, we build two multi-nominal logit models in order to study the relationships and hypotheses identified more systematically and in more detail.

### The situation of the young and old

In this section we revisit the labour market outcome variables. Rather than looking at aggregate developments, we focus on the situation of the young (age 15–24) and the old (age 55–64).<sup>6</sup>

In order to keep the discussion tractable we focus on one key variable for each of the young and the old. For the young we focus on unemployment rates, and for the old on employment rates. It is youth unemployment (rather than low youth employment rates – reflecting to a large part schooling) and low employment rates for the old (rather than unemployment rates – affected by retirement decisions) that are problematic.

### Wages of the young and the old

Figure 3.1 shows the development of real wage gap/pressure indicators for young and older workers between 1995 and 2006.<sup>7</sup> The two indicators move in parallel, showing a significant drop in

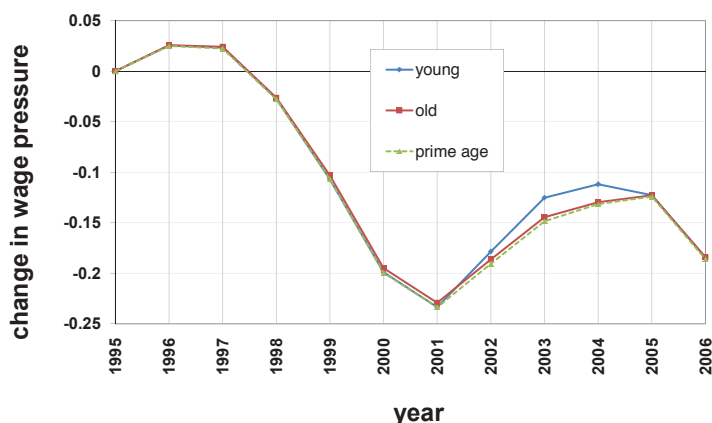
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<sup>6</sup> There is some debate about whom to include in the 'old' group. Early retirement may affect individuals from the age of 55 and a number of Member States are considering raising the official retirement age to above 65. The report settles on 55–64 as this is an age range used in a number of studies.

<sup>7</sup> Formally, this wage indicator is derived from a simple wage-setting equation, linking the real product wage in efficiency units ( $w/e$ ) to the unemployment rate ( $u$ ) and a shift parameter ( $Z$ ) that stands for other/omitted labour market conditions/variables affecting wage setting. This relationship may be written as:  $\log(w/e) = Z - b^*u$ , where  $b$  is the elasticity of real efficiency wages with respect to the unemployment rate. A real wage gap indicator can then be built from  $Z = \log(w/e) + b^*u$  setting  $b = 1$  and after normalisation of the series to zero in 1995.

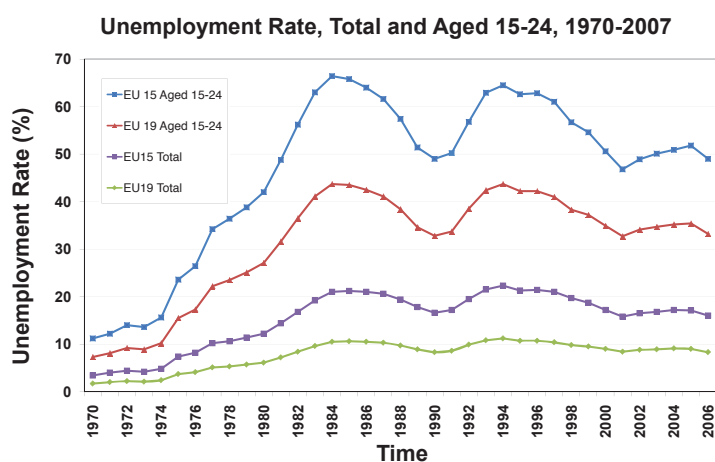


**Figure 3.1**  
Real wage gap / pressure index, young and old,  
1995–2006



SOURCE: Authors' calculations.

**Figure 3.2**  
EU youth unemployment rates, 1970–2006



SOURCE: OECD.Stat.

wage pressure between the late 1990s and early 2000s, a slight increase between 2001 and 2004 and a drop thereafter.

The development of the real wage gap / pressure indicators for young and old workers is in line with the general decline in wage pressure since the mid-1990s (with a slight peak in the early 2000s), as reviewed earlier.

### Unemployment of the young

A characteristic of European unemployment is the high level of the unemployment rate among young people. Figure 3.2 shows the generally higher youth unemployment rate compared to the total unemployment rate. It also reflects the fact that

youth unemployment has shown little response to the favourable development in real wage pressure for the young.

In 2007 the difference between youth unemployment and total unemployment is particularly marked in the following countries in absolute terms: Greece (14.6%), Italy (14.2%) and Romania (13.7%). The lowest youth unemployment rates that year are in The Netherlands (5.9%), Lithuania (8.2%) and Austria (8.7%).

The high youth unemployment rate is problematic, and calls for policy attention. If a young person is unemployed early in their career, it is likely to impair that person's future prospects for employment and permanently reduce the likelihood of their achieving a high-earning job. In addition, research suggests there is a (strong) correlation between youth unemployment and serious social factors such as drug abuse, crime, vandalism and coming from a single-parent family (Stevens *et al.*, 2003 and 2005). Therefore a policy to address the root causes of youth unemployment also has to take these significant social problems into account.

### Employment of the old

One striking feature of the labour market situation of the old is their relatively low employment rate. Figure 3.3 plots the employment rate for older workers (55–64) against total employment rates for the EU-15 and EU-27 over time. It shows the generally lower employment rates for older people relative to total employment rates. In addition, it shows the relatively low response of older age employment rates to the positive developments in real wage pressure. In 2008 the average EU employment rate for the 55–64 year age group stood at 45.6 per cent (Eurofound, 2009).

The difference is particularly significant in some countries – including Austria (30.4%), Belgium (30%) and the Czech Republic (26.2%). There is no country with an employment rate for older workers that is higher than the total employment rate over the time horizon studied. However, there are countries that have high rates. In 2008, Sweden had a employment rate of 70.7 per cent in the 55–64 age group (Eurofound, 2009).

The low employment rate of the old is also problematic for policy makers. In the light of population ageing, low employment rates mean high pressure on social security systems. The OECD



estimates that, in the absence of an increase in the employment rate of the old, public spending will need to increase across the OECD from 17 per cent of gross domestic product (GDP) in 2000 to 22 per cent in 2050 to account for the demographic change (Dang *et al.*, 2001).

## Potential drivers and inhibitors of youth and old-age employment

In this section we explore a number of developments with regard to their potential influence on youth unemployment rates and old age employment rates. Although potentially important and topical, migration is not included in this discussion. Rather than being comprehensive, the section is intended to provide hypotheses for further testing.

### Demographic change

#### Demographic change and youth unemployment

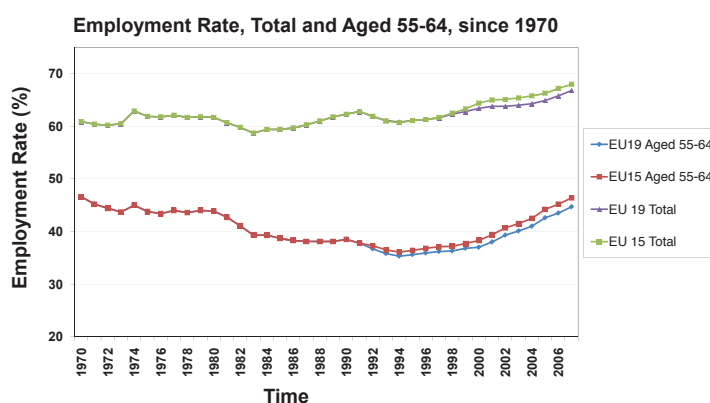
One implication of the demographic change with regard to population ageing is the decline in the proportion of young people in the population that is of working age (shown in Figure 3.4). From a theoretical perspective, as Blanchflower and Freeman (2000) point out, a decline in the youth proportion – all else being equal – should lead to both improved employment prospects and reduced unemployment for youth.

The underlying assumption of the argument is that prime-aged workers as well as older workers are imperfect substitutes for young workers,<sup>8</sup> suggesting that a reduction in the supply of youth labour cannot be entirely compensated for by prime age or older workers (Shimer, 2001).

Interestingly, however, despite the decline in the youth portion of the working population, no significant improvement in the youth unemployment situation has taken place over the past 30 years. In fact, as discussed above, between the 1980s and 2000s the economic position of young people worsened rather than improved.

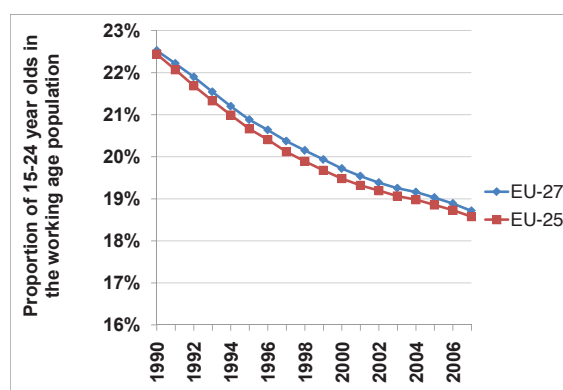
The fact that demographic changes failed to improve the position of youths significantly does not mean that the change in demography has not

**Figure 3.3**  
EU employment rates for older people,  
1970–2007



SOURCE: OECD.Stat.

**Figure 3.4**  
15–24 age group as proportion of working-age  
population, 1990–2007



SOURCE: Eurostat.

had an effect on the youth labour market situation – the elasticity of youth unemployment rates with respect to relative youth cohort size may be moderately large (Korenman and Neumark, 2000; Blanchflower and Freeman, 2000). What it means is that other factors, such as educational attainment, have probably had a stronger impact on youth unemployment.

#### Demographic change and old employment

In Figure 3.3, we plot employment rate of older people. The figure shows the increasing employment rate of older people over the 20 years to 2006. The step increase in 2000 in the proportion of older people in the total population reflects the first cohort of baby-boomers arriving at the age bracket 55–64.

<sup>8</sup> The economic argument is that a decrease in labour supply increases capital labour ratios, decreases interest rates, increases wages and (given labour market frictions) lowers unemployment.

One implication of the baby-boomers' arrival in this age bracket is that the distribution of people in the bracket changes. Firstly, the number of the young begins to increase relative to the old. As the boomers wander through the age bracket the shift towards younger people in the bracket is likely to flatten out. Once all baby-boomers have reached halfway through the age bracket, in 2025, the shift in the age distribution may even revert – with more older people in the bracket than younger ones.

One likely implication of the initial shift in the age distribution towards the younger old is that the employment situation for the old group as a whole improves. Since people at lower ages tend to have higher employment rates, a shift in the composition of the age distribution towards younger ages is likely to have a positive effect on the employment rate for the overall 55–64 age group.

In fact, the European Commission (2007b) provides some (preliminary) evidence for this. Using a simple shift share analysis on the employment rate change between 2000 and 2006, they find that, of the overall increase of about 7 per cent, around one-fifth (1.3%) was likely to have been due to the change in the older workers' population age distribution.<sup>9</sup>

## Female participation

### Female participation and youth unemployment

A possible explanation for the relationship between the increase in female labour force participation and the labour market outcomes of the young is that the influx of women into the job market worsens the economic position of young workers. Many women workers (new entrants or re-entrants) may fill jobs that younger workers would otherwise hold. These jobs are often characterised by lower salaries and more difficult working conditions.

However, this presupposes that women and young workers are substitutes for one another. This is questioned in much recent labour market literature (Kremer and Thomson, 1998; Shimer, 2001; and Blanchflower and Freeman, 2000).

Blanchflower and Freeman (2000), for example, argue that if a negative effect were to occur from increased female participation, we would expect this effect to be stronger for women in general – and much less strong for the young.

As they cannot find a significant negative effect of increased female labour force participation on women in general, Blanchflower and Freeman (2000) conclude that an effect on the young seems rather unlikely – and the 'story [from above] difficult to sustain'.

### Female participation and older employment

For the older age group the increase in female participation is more likely to have an effect. Younger female cohorts tend to be better integrated into the labour market than their predecessors. As the better integrated young outperform their predecessors in terms of employment rates also when they reach the age of 55, it is suggested that the overall employment performance of the older group improves as the younger ones 'trickle through'.

One way to illustrate this effect is by comparing activity rates for the age group 55–64 with those for the age group 25–54 across Member States. If a cohort effect exists, we would expect to find a positive correlation between the activity rates for the two groups (reflecting the trickling through).

In its 'Employment Report', the European Commission (2007b) finds that for women high-activity rates at a younger age are indeed positively correlated with higher participation at older ages – suggesting that differences across Member States activity rates for older women reflect to a significant degree differences in the participation of women as a whole.

## Educational expansion

### Educational expansion and youth unemployment

The increasing participation of Europe's population in higher education has implications for the labour market situation of the young. This educational expansion may lead to changes:

- in the *pattern* of occupational allocation
- in unemployment risk for young workers.

Regarding the first effect, as educational expansion takes place, the relative availability of qualifications increases. The increased availability of

<sup>9</sup> It is important to note, however, that the positive relationship between changes in demography and older age employment rates is likely to be transitory and to disappear once the baby-boom generation shifts towards the upper end of the age group.

qualifications, in turn, implies decreasing average levels of occupational attainment at each level of qualification. As highly qualified school leavers start to meet job-rationing restrictions, better qualified leavers increasingly have to begin to enter lower-level occupational fields than before in order to secure employment for themselves.

The effect of educational expansion on the unemployment risk for young workers is less clear. One possibility is that, as a consequence of the downward competition described, educational expansion may lead to a crowding-out of young workers with low qualifications by highly school qualified leavers (Hannan and Werquin, 1999).

Gangl (2002), using data for 12 European countries between 1988 and 1997, finds some evidence for changes in the pattern of occupational allocation as a consequence of educational expansion. In addition, he finds a small negative effect on youth unemployment risk arising from increasing educational attainment.

### Educational expansion and older worker employment

For the old, educational expansion is likely to have a positive effect on employment outcome. Educational expansion comes with work that places a stronger emphasis on technical skills and knowledge rather than physical ability.

As human capital accumulated in education depreciates at a lower rate than physical capital (Boucekkine, 2002; Kunze, 2002; Skirbekk, 2003), well-educated old workers remain valuable in the labour market – and able to stay – for a longer time (that is, beyond the point determined by their physical strength).

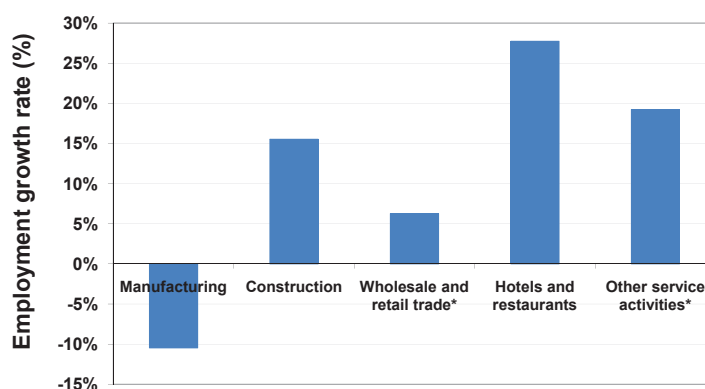
Bloendal *et al.* (2002), using data on OECD countries, provide evidence for the improving employment prospects of older workers as a consequence of educational expansion. They find that human capital investment is associated ‘with significant labour market gains for individuals [at all age groups], including higher post-tax earnings and better employment prospects ... by a significant margin’.

### Industry mix

#### Industry mix and youth unemployment

Changes in the total working population seem unlikely to have a positive effect on youth unemployment. Youth workers are over-represented in

**Figure 3.5**  
EU employment growth, youth intensive sectors last ten years



SOURCE: Eurostat Labour Force Survey.

a few industries<sup>10</sup> (such as hotel and restaurants, wholesale and retail trade, construction and ‘other community, social and personal service activities’ in 1998).

All of these industries (with the exception of manufacturing) showed positive employment developments over the last ten years (Figure 3.5), which suggests a positive employment effect for the young.

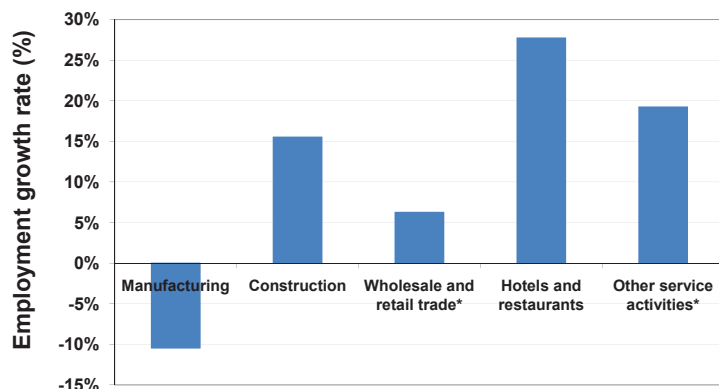
Following Blanchflower and Freeman (2000), we also look at all two-digit NACE industries.<sup>11</sup> We calculate the expected change in the share of youth employment in these owing to changes in the industry mix for the EU-15.<sup>12</sup> We find that the effect of the changes in share is positive (+0.6%), implying that the proportion of youth in employment in these industries should have risen as a result of the changing industry mix.

<sup>10</sup> Following Blanchflower and Freeman (2000), we calculated the ratio of young workers to older workers in an industry and divided them by the economy wide ratio of 15–24-year-old employees to 25–54-year-old employees. If the ratio exceeds 1, an industry employs disproportionately more young workers than it does older workers, making it a youth intensive industry. If the ratio is smaller than 1, the industry employs relatively few younger workers.

<sup>11</sup> NACE is the classification scheme used for economic activity devised by the European Commission in 1970.

<sup>12</sup> Calculation: specifically, let  $a_{ij}$  be the 15–24-year-old share of employment in industry  $i$  in 1998,  $b_j$  be the share of industry  $j$  in total employment, and  $r$  be the ratio of 15–24-year-old share of the population in 1998 to its share in 2008. The industry shift measure is then the sum  $\sum r a_{ij} \text{ change } b_j$  where the change is from 1998 to 2008.

**Figure 3.6**  
**EU employment growth, old age intensive**  
**sectors, 1998–2008**



SOURCE: Eurostat Labour Force Survey.

### Industry mix and old employment

As far as the old are concerned, the European Commission (2007b) reports that:

The ongoing shift in employment towards the service sector and away from manufacturing and agriculture may all benefit older workers ... Firstly, in general, it would be expected that services sector jobs would require less in the way of physical effort compared to those in manufacturing and agriculture ... Second, service sector jobs may require interpersonal skills that are accumulated with experience. Indeed, in some cases it may be preferable to employ older workers than younger employees. This is particularly true in those sectors with an ageing customer base or that supply products or service more specific to the older generation.

As we did for the young, we identify also the industries in which the old are over-represented (including agriculture, public administration and defence, education and domestic work in 1998).<sup>13</sup> Figure 3.6 shows that all of them (with the exception of agriculture) showed a positive employment growth between 1998 and 2008.

Again, calculating the expected change in the share of employment of the old in all two-digit

NACE industries<sup>14</sup> owing to changes in the industry mix for the EU-15,<sup>15</sup> we find that the effect of the changes in industry share is positive (+1.1 per cent), implying that the proportion of the old in employment should have risen as a result of the changing industry mix.

### Occupational upgrading

#### Occupational upgrading and youth unemployment

The move towards high-skilled or white-collar jobs (occupational upgrading) is likely to have a negative effect on the employment situation for the young. Just as in the case of educational expansion, from a theoretical perspective occupational upgrading is likely to have two effects on the young. It is likely to change the pattern of:

- occupational allocation
- unemployment risk.

The idea behind the first effect is that the increasing availability of high-skill positions leads to rising levels of occupational attainment through improved direct access to these positions for highly skilled individuals and, more indirectly, through reduced competitive pressures at lower occupational level.

At the same time, occupational upgrading is likely to lead to increased unemployment risk – in particular for the least qualified. If the skill levels of the least qualified increasingly fall short of the skill levels required in the market they become ever more likely to lose their job or not to find a job in the first instance (Berman *et al.*, 1998).

Gangl (2002) provides some empirical evidence for this reasoning. In a study of 12 European countries between 1988 and 1997 he finds that ‘leavers of tertiary level education have in general been able to benefit from the increasing availability of highly skilled professional positions’ whereas occupational upgrading has had ‘a sharp negative effect with regard to unemployment risk for the least qualified young’.

<sup>13</sup> Following Blanchflower and Freeman (2000) we calculated the ratio of young workers to older workers in an industry and divided them by the economy wide ratio of 55–64-year-old to 25–54-year-old employees. If the ratio exceeds 1, an industry employs disproportionately more young workers than it does older workers – making it a youth intensive industry. If the ratio is smaller than 1, the industry employs relatively few younger workers.

<sup>14</sup> NACE is the classification scheme used for economic activity devised by the European Commission in 1970.

<sup>15</sup> Calculation: specifically, let  $a_{ij}$  be the 55–64-year-old share of employment in industry  $i$  in 1998,  $b_j$  be the share of industry  $j$  in total employment, and  $r$  be the ratio of 55–64-year-old share of the population in 1998 to its share in 2008. The industry shift measure is then the sum  $r a_{ij}$  change  $b_j$  where the change is from 1998 to 2008.

### Occupational upgrading and employment of the old

As for the relationship between occupational upgrading and the labour market situation of the old, an extensive literature suggests that older workers are negatively affected by the increasing skill requirements in the markets (Juhn *et al.*, 1993; Abraham and Faber, 1987; Friedberg, 1999).

Rather than the idea of older workers being more unskilled or having skills of an older vintage (and so being more vulnerable to changes in skill requirements). Friedberg (1999) finds, using US data, that the negative effect often associated with ‘occupational upgrading’ is primarily due to the fact that older workers, when deciding whether or not to invest in new skills ... face a shorter time horizon to recoup their investment [due to approaching retirement]. Borghans and ter Weel (2002) and Spitz (2005) come to the same result, using data for Belgium and Germany respectively.

#### Summary

In this section we explored the relationship between labour market trends and youth unemployment and old age employment rates. This was not intended to be a comprehensive study but rather to provide hypotheses for further testing.

Table 3.1 summarises our (preliminary) findings. The ‘+’ signs show the likely positive impact in terms of lower unemployment and higher

employment rates of demographic change, and the changing industry mix for the young and demographic change and changes in female participation for the old.

The ‘-’ sign shows the likely negative impact flowing from educational expansion and skills upgrading for the young and educational expansion, the changing industry mix and skills upgrading for the old. At this stage, only changes in industry mix seem to work in different directions for the young and the old.

### A closer look by revisiting the data

In the previous section we explored the relationship between some key developments in the supply and demand side and the developments in youth unemployment and older worker employment rates (discussed in section 3.2).

In this section we build a series of multi-nomial logit models to ‘test’ these hypotheses against data from the EU Labour Force Survey and from Nickell (2006) between 1983 and 2005 (see Annex). More specifically, we build two models – one for the young and one for the old. In these models, following Blanchflower and Freeman (2000), we allow for four discrete outcomes for the young:

- being in school and not working
- being in school and working
- not being in school and not working
- not being in school and working.

And for the old we allow for these four outcomes:

- being retired and not working
- being retired and working
- being not retired and not working
- being not retired and working.

Dividing labour market outcomes into these discrete categories allows us to understand the situation of the young and old in more detail. For example, it allows us to study not only what discourages young people from working, but also what keeps them in school. Similarly, for the old, rather than looking at why some older workers do not work in general, we can also explore why they choose to retire in particular.

**Table 3.1**  
Summary table showing preliminary findings for the relationship between youth and older population employment rates

	Expected employment effect	
	Youth employment rates	Employment rates of older people
Demographic change	-	+
Changes in female participation	0	+
Educational expansion	+	+
Changing industry mix	-	-
Occupational upgrading	+	-



## Findings

The findings are presented for the young and the old. In particular, we focus on the specific categories of young and old who are not participating in the labour market – that is, young not in education and not working and older workers retired and not working. These groups are the most problematic ones for policy makers. The number in each state changed differentially over time and across Member States (Labour Force Survey data 1981–2006). We used the most populous groups, the young in education and older workers, as the baseline for analysis.

### The young

The findings for the young are presented in Table 3.2. The cells denote the probability of a change in the state of labour force participation or education for a given change in the trend. For instance, for the top left cell if there is a 1 per cent increase in youngsters in the total working-age population (demographic change), there is a 18 per cent decrease in the probability of being in the education and working state compared to the baseline. The baseline is the majority group, young people in full-time education.

The most important findings from the model are that the change in the industry mix and the move towards white-collar occupations (occupational upgrading) are associated over time with an increased probability of youngsters not being in education and not working (grey cells in Table 3.2). These trends are also positively associated with youngsters being in education or working full-time. However, the indications are that under these trends a number of the young are excluded from participation. Another interesting finding is that, as expected, an increase in the unemployment rate is associated with an increase in the probability of youngsters not participating in the labour market. Female participation and educational expansion are not associated with a decrease in the probability of young working.

### The old

The findings for the old are presented in Table 3.3. The findings may be read in the same way as before. We look at the changes of probability in the older labour market states compared to the baseline, which is the majority group of older workers (in work and not retired) for a given change in one

of the trends – that is, educational expansion and so on.

We look in particular at policy consequences for the group that is retired and not working. The most important findings for the older groups is that a change in educational expansion, industry mix and white-collar employment are associated with an increase of the probability of the 55–64 group being retired and not working (grey cells in Table 3.3). A change in the industry mix is also associated with a greater proportion of workers not being retired and not working compared to the baseline. An increase in the unemployment rate is associated with increases in the probability of being in one of the three states (retired and working, not working and retired, and not retired and not working) compared to the baseline. Again female participation shows little association with an increased probability of not participating in the labour market. Demographic change as may be expected is associated with an increased probability of those retired working.

### Trade-offs between the young and the old

Our findings suggest that some developments are good for both the young and the old; the change in industry mix, for example, may be associated with an increase in the probability that young people will work, and a decrease in the probability that older people will retire (even though part of the latter effect may be associated with an increase in the probability of being not working and not retired).

Similarly, if we take prolonged schooling as a good development, changes in demography and educational expansion also have a positive effect for the young and the old. Demographic changes and educational expansion are both associated with a decrease in the probability that young people will leave school and a lower probability that older people will retire.

None of the developments we reviewed has a negative association for both the young and the old. At the same time, some of the developments have a differential effect. For example, for the young occupational upgrading comes with an increase in the probability that they will work and a decrease in the probability that they will leave school – for the old there is an increase in the probability that they will retire and that they will stop working.

**Table 3.2**  
Associations between main drivers and labour market states of young

	In education and working	Not in education and not working	Not in education and working
Demographic change	–	–	–
Change in female participation	+	–	+
Educational expansion	–	–	–
Change in industry mix	+	+	+
Occupational upgrading	+	+	+
Unemployment rate	–	+	–

**Table 3.3**  
Associations between main drivers and labour market states of the old

	Retired and working	Retired and not working	Not retired and not working
Demographic change	+	–	–
Change in female participation	+	–	–
Educational expansion	–	+	–
Change in industry mix	+	+	+
Occupational upgrading	–	+	–
Unemployment rate	+	+	+

This trade-off suggests there is an issue around the management of occupational upgrading with regard to the old.

## Conclusion and policy implications

We analysed what drivers of labour market developments mean for specific groups such as the young and the old. In this way we understand how specific drivers interact with specific employment outcomes. This is important as not all drivers have negative consequences for vulnerable groups. An interesting finding is that vulnerable groups such as the young and the old are not necessarily replaced as participation in labour increases. However, they are particularly vulnerable when unemployment increases and they suffer from occupational upgrading. This last finding shows the importance of ensuring that these groups can meet the demands of the labour market. It also confirms the evidence regarding effective policy to help vulnerable groups, such as reviews stressing the importance of upskill-

ing older workers and continued schooling for young people. It is clear that the policy options for the European Commission and the Member States reside mostly on the supply side. That said, we have to acknowledge the important differences between Member States. For instance, the heterogeneity of unemployment has often been associated with the different social models or models of capitalism in existence across the EU, which have resulted in different approaches to regulating the labour market and organising the welfare state.

In this review, the findings reflect average effects that may be compounding quite disparate individual effects in Member States. Nonetheless, we identified a number of interesting relationships. In particular, we found the following:

- The increase in female participation, occupational upgrading and the change in industry mix may all be associated with an increase in the probability of the young working – relative to the probability that they are in school and not working.

- Occupational upgrading and the change in industry mix both lead to an increase in the probability that the young will leave school (relative to the base case of the young being in full-time education).
- Our model results suggested that educational expansion and changes in industry mix may be associated with a decrease in the probability that the old will retire.
- Occupational upgrading, on the other hand, may be associated with an increase in the probability that older people will retire (relative to the base case of older people working full-time).
- Analogously, the probability of older people stopping working increases as the skill requirements in the labour market increase.
- Our model results suggest that demographic change, in contrast, may be associated with a decrease in the probability that the old will stop working. This is important as future ageing may in and by itself solve the problem of old-age underemployment.

We also looked at possible trade-offs between the situation of the young and the old (with regard to the main developments on the supply and demand side discussed). We found the following:

- The change in industry mix favours both the young and the old. It may be associated with an increase in the probability that young people will work, and a decrease in the probability that older people will retire (even though part of the latter effect may be associated with an increase in the probability that they will ‘not work and not retire’).
- Similarly, if we take prolonged schooling as a good development, changes in demography and educational expansion have a positive effect for the young and the old. They may be

associated with a decrease in the probability that young people will leave school and a lower probability that older people will retire.

- None of the developments we reviewed had a negative impact on both the young and the old, but some of the developments had a differential effect. For the young, for example, occupational upgrading comes with an increase in the probability that they will work and a decrease in the probability that they will leave school; while for the old it comes with an increase in the probability that they will retire and stop working.

There are a number of immediate policy challenges and consequences following on from our review:

- We find that, while occupational upgrading and changes in the industry mix may be associated with an increase in the probability of young people working, not all seem to benefit from these developments. The probability of ending up ‘not in school and not working’ increases too as occupational upgrading and changes in the industry mix occur. There seems, therefore, to be an issue around inclusion of all ‘young’ people.
- There also seems to be an issue around managing the consequences of occupational upgrading for the old. While our models suggest that there is a positive association between occupational upgrading and working for the young, for the old we find an increased probability that they will retire and stop work, flowing from the increase in skill requirements in the labour markets.
- A good labour market policy aimed at reducing unemployment will have positive effects for the young and the old. These groups are quite sensitive to changes in the aggregate unemployment rate.



## Chapter 4 Examining income inequality in the EU

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### Introduction

In this chapter, we focus on the second of the objectives of interest in this report, reducing income inequality. Income inequality can be seen as providing an incentive to work. However, sustained inequality is seen as limiting social mobility in society and leading to social stratification. Combating income inequality, poverty and social exclusion in the EU have been long-standing objectives for the EU. In 1975 the EU Council of Ministers defined poverty as ‘individuals or families whose resources are so small as to exclude them from the minimum acceptable way of life of the Member State in which they live’ (European Council, 1975). Over time, while the issue of poverty remained an important concern, the concept has been broadened to ‘poverty and social exclusion’ in order to capture the ‘multi-dimensional nature of the mechanisms whereby individuals and groups are excluded from taking part in the social exchanges, from the component practices and rights of social integration’ (European Commission, 1992).

This chapter gives an overview of the main outcome indicators used in relation to income inequality (Gini coefficients, income share quintile ratios, and at-risk-of-poverty rate) and looks in particular at a number of vulnerable groups including women, single-parent families, older people, children, youth population, migrants and jobless households. In addition, the chapter identifies a number of drivers for income inequality on the basis of the literature, both on the labour market demand side and the supply side. These are:

- change in female participation
- educational expansion
- occupational upgrading
- increase in flexible working
- increase in government transfers

- change in labour market institutions
- progressive taxation
- trade liberalisation.

In recent years, improvement in the data available has provided the opportunity to operationalise concepts of poverty and social exclusion. In December 2001 the Laeken European Council established a set of 18 common statistical indicators for monitoring social inclusion (Table 4.1). The aim was to support the Open Method of Coordination (OMC),<sup>16</sup> which monitors the performance of Member States and improves mutual learning of good practices. These indicators are known as the Laeken indicators. They cover four dimensions of social inclusion: poverty, work, education and health (Table 4.1). The following section explains how some of these indicators have developed over recent years.

### The past and the present

A widely used measure of income inequality is the Gini coefficient.<sup>17</sup> It establishes a value between 0 and 1. A Gini coefficient of 0 means perfect equality (each person receives the same income). At the other extreme, a Gini coefficient of 1 means perfect inequality (one person in the country receives the entire national income). Figure 4.1 shows the Gini coefficients in 2008, in descending order, for 27 EU countries. The coefficient ranges from 0.23 in Slovenia to 0.38 in Latvia. The Gini coefficient for the EU-27 was 0.31 in 2008. Comparative

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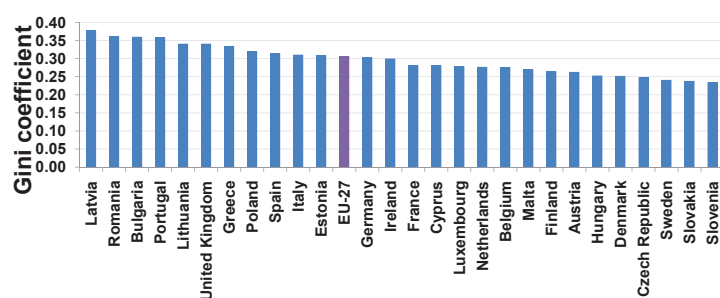
<sup>16</sup> The OMC rests on soft law mechanisms such as guidelines and indicators, benchmarking and sharing of best practice.

<sup>17</sup> The Gini coefficient is calculated as the area between the Lorenz curve (which plots cumulative shares of the population, from the poorest to the richest, against the cumulative share of income that they received) and the 45-degree line, taken as a ratio of the whole triangle.

**Table 4.1**  
Laeken indicators

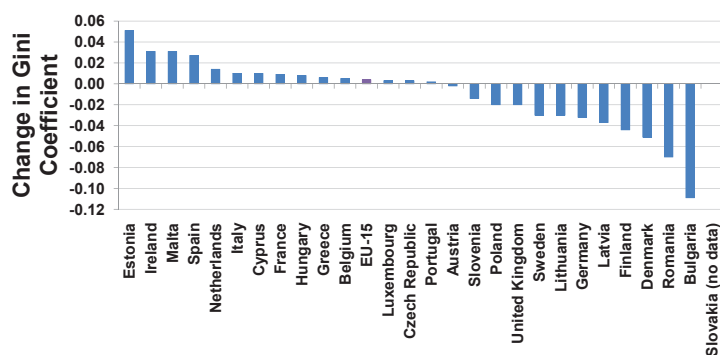
	Primary indicators	Secondary indicators
Poverty	At-risk-of-poverty rate after social transfer S80/S20 income quintile share ratio Persistent at-risk-of-poverty rate Relative median at-risk-of-poverty gap	At-risk-of-poverty rate anchored at one moment in time Dispersion around the at-risk-of-poverty threshold Gini coefficient Persistent at-risk-of-poverty rate (alternative threshold) At-risk-of-poverty rate before cash social transfers
Work	Regional cohesion (dispersion of regional employment rates) Long-term unemployment rate Persons living in jobless households	Long-term unemployment share Very long-term unemployment rate
Education	Early school leavers not in education or training	Person with low education attainment
Health	Life expectancy at birth Self-defined health status	

**Figure 4.1**  
Gini coefficients for EU-27 countries, 2008



SOURCE: Eurostat, 2008.

**Figure 4.2**  
Change in Gini coefficient between 1996  
(or earliest possible) and 2008



SOURCE: Eurostat, 2008.

NOTE: Earliest year possible was 1997 for Denmark, Sweden and Cyprus; 2000 for Bulgaria, Estonia, Latvia, Lithuania, Hungary, Malta, Poland, Romania and Slovenia; 2001 for Czech Republic; and 2005 (not shown) for Slovakia.

international research shows there has been a widespread increase in income inequality in the decade from the mid-1980s to the mid-1990s (OECD, 2008a); however, the situation was more varied across countries in the decade from the mid-1990s to late 2000s. This period is the focus of our analysis (Figure 4.2). There were positive changes (i.e. reduction in income inequality) in four countries: Estonia, Ireland, Malta and Spain. On the other hand, there were large negative changes (growing income inequality) in four other countries: Bulgaria, Romania, Denmark, and Finland. In terms of magnitude of change, negative changes are generally larger compared to positive developments, up to -0.11 point for Bulgaria. The Gini coefficient remains constant for most EU countries and the Gini coefficient for the EU as a whole has changed relatively little in the last decade. The Gini coefficient was 0.300 for the EU-15 in 1996 compared to 0.304 for the EU-15 in 2008.

Another measure of income inequality is the income quintile share ratio (S80/S20). This is a different measure from the Gini – it focuses on the gap between the richest and the poorest, while the Gini coefficient describes the full distribution of income. The income quintile share ratio (S80/S20) ratio compares the total equivalised income<sup>18</sup> received by the most affluent 20 per

<sup>18</sup> Equivalised income is the household's total disposable income divided by its equivalent size.

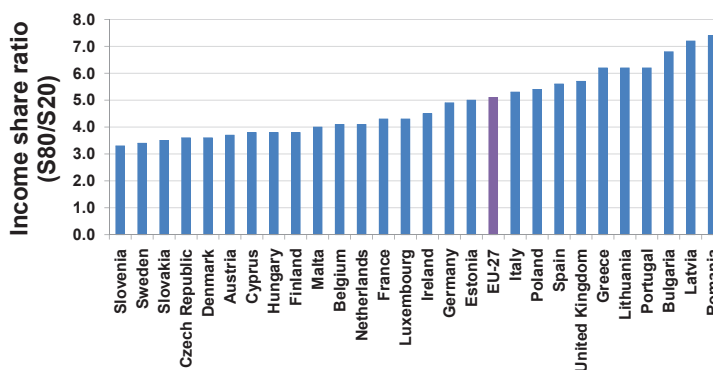
cent of households (top quintile) to that income received by the bottom income quintile (20 per cent with the lowest incomes). The EU-27 average is 5.1 in 2008, meaning that the most affluent quintile received 5.1 times more income than the poorest (Eurostat, 2008a). The ratio ranges from 3.3 in Slovenia to 7.4 in Romania (Figure 4.3).

Like the Gini coefficient, the income quintile share ratio for the EU as a whole has changed relatively little in the decade ending in 2010. The most affluent quintile received 4.9 times more income than the poorest in 1996 (compared to 5.0 in 2008). However, there are some substantial changes at country level (Figure 4.4). There were relatively large positive changes (reduction in income inequality by more than 0.5 point in  $S80/S20$ ) in Spain and Ireland. On the other hand, there were large negative changes (growing income inequality by more than 0.5 points in  $S80/S20$ ) in the United Kingdom and Finland.

The Gini coefficient and the income quintile ratios are summary measures of the income distribution and dispersion. To gain further insights, we examine a third measure of poverty, the at-risk-of-poverty rate. This is a relative concept defined as 60 per cent of the national median equivalised income. Different countries have different at-risk-of-poverty thresholds in real terms. In 2008, 16.5 per cent of the EU population were at risk of poverty (Figure 4.5). Extrapolating from 498 million people in the EU-27, the number of people in poverty was 82 million. This means that their income after social transfers was below the poverty threshold. The highest at-risk-of-poverty rates in 2008 were found in Latvia (26%), Romania (23%), Bulgaria (21%), Greece, Spain and Lithuania (20%), and the lowest in the Netherlands and Slovakia (11%), Denmark, Hungary, Austria, Slovenia, Sweden (12%), and the Czech Republic (9%) (Figure 4.5). The poverty rate in 1996 for the EU-15 was 16 percent, very similar to the rate in 2008. There are substantial differences among countries, with Finland experiencing the highest increase (5.6%) in at-risk-of-poverty rate (Figure 4.6).

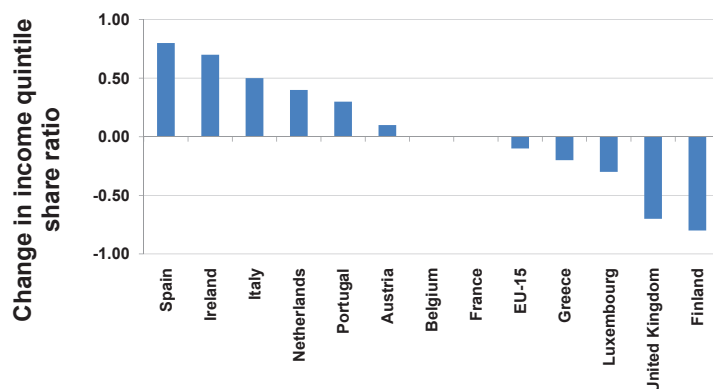
Looking across all three income inequality indicators, we observe a consistent pattern. Latvia ranks bottom among all EU countries. Excluding Latvia, EU enlargement has not led to a greater range of outcomes. Despite the large variation across countries, the EU-25 average is very close to

**Figure 4.3**  
Income share ratio, 2008



SOURCE: Eurostat.

**Figure 4.4**  
Change in income quintile share ratio between 1996 and 2008



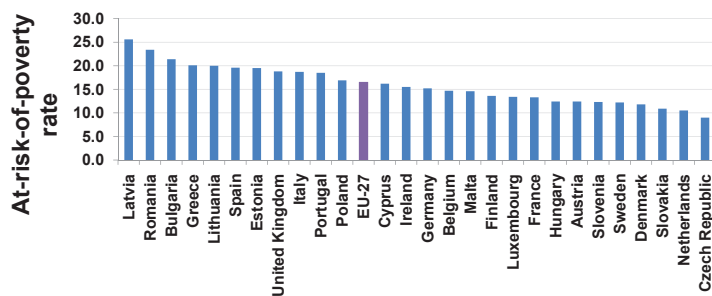
SOURCE: Eurostat, 2008.

NOTE 1: The income quintile share ratio is calculated for those who are less than 65 years old.

NOTE 2: 1996 data are not available for Bulgaria, Czech Republic, Denmark, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia, Slovakia and Sweden.

the EU-15 average for all three indicators. This is predominantly because the EU-25 figure, which is weighted by population size, is dominated by large countries such as Germany, Spain, France, Italy and the United Kingdom, which are all part of the EU-15. Thus EU enlargement has little impact on the EU-wide outcome. As noted in Atkinson *et al.* (2005), 'if one contemplates the risk of poverty in the EU, one tends to think of the Iberian Member States and Greece, or of the new Member States, but over half (some 40 million) live in France, Germany, U.K. and Italy'.

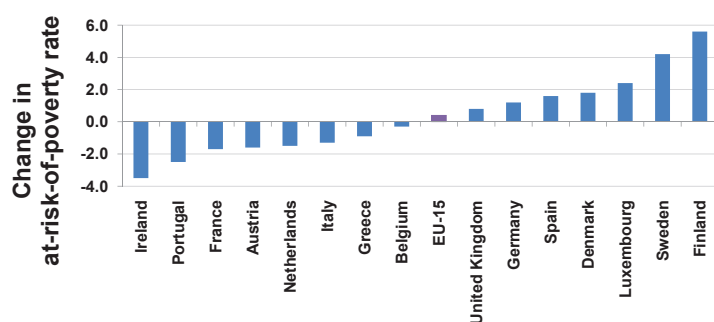
**Figure 4.5**  
At-risk-of-poverty rate, 2008



SOURCE: Eurostat.

NOTE: Cut-off point is 60% of mean equivalised income, after social transfers.

**Figure 4.6**  
Change in at-risk-of-poverty rate, 1996/7 and 2008



SOURCE: Eurostat, 2008.

NOTE 1: Reference year is 1996, except for Denmark and Sweden where 1997 is used. No data are available for Bulgaria, Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia and Slovakia.

NOTE 2: Cut-off point for at-risk-of-poverty rate is 60% of mean equivalised income, after social transfers.

### Vulnerable groups

Research has found that some groups face higher poverty risk than others. We offer a brief synthesis below. These include

- the old, the young and the children (e.g. Atkinson *et al.*, 2005)
- women (e.g. Arulampalam *et al.*, 2007)
- single-parent households and households with dependent children (e.g. Guigère, 2008)

- migrants (Lelkes, 2006)
- jobless households, the low paid, asylum seekers, minority ethnic groups, unaccompanied minors, disabled people, homeless people.

These groups are discussed in more detail below.

### The old, the young and children

In the EU-15, the retired (65+) and the young (16–25) and children (<16) face a high risk of falling into poverty. Between 2001 and 2006 the poverty risk of children has improved slightly, whereas the situation of the young and the old has worsened. There were marked differences between the situation in the EU-15 and in the new Member States.<sup>19</sup> In the new Member States, poverty risk decreases with age, meaning that children and the young face the highest risk, while the old face the lowest risk. Additionally, there is evidence that the living standards of older people are higher than is indicated by these income-based measures, as they are likely to hold assets (OECD, 2008b). Therefore some researchers have argued that the situation of the old is better than income-based statistics suggest, and that children and young people are more in need of social protection (Atkinson *et al.*, 2005). A focus on ending poverty for children and the young is to combat the ‘intergenerational inheritance of poverty’, through early education and early intervention initiatives.

### Women

All EU Member States face a gender wage gap. However, there are cross-country variations in discrimination within the gender groups (Arulampalam *et al.*, 2007). 4.2 shows the mean wage gap between men and women and the wage gaps across the conditional wage distribution, or the ‘ability’ distribution. The table indicates the difference between men’s and women’s pay in EU Member States, even when controlling for tenure, part-time status, age, education and various other typical factors. The average difference is in the range of 12 to 23 (logarithm) percentage points. From the regression analysis (percentiles of the wage distri-

<sup>19</sup> There is a question of comparability of statistics to be borne in mind.

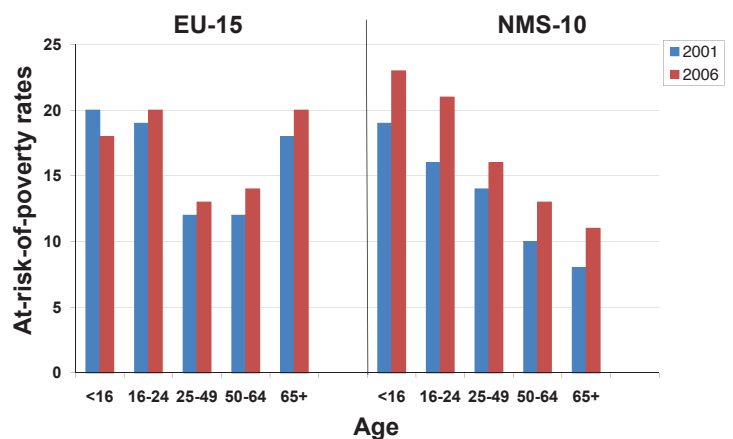
bution controlling for other factors), the greatest differences between men and women appear to be at the top of distribution for some countries and at the bottom for others. In Denmark, Finland, France, Italy and The Netherlands, women with the highest ability (top 10 percent) experience a greater wage gap than median-ability women. This means that women experience a 'glass ceiling' in these countries. Austria and Spain show distinct signs of a 'sticky floor', at which women with low ability (who are also probably low skilled) find it more difficult than women of higher ability to establish any wage growth. Belgium and Ireland exhibit a constant wage gap across the conditional wage distribution.

When examining demographic characteristics associated with a country's level of income inequality, only two countries, Belgium and the United Kingdom, show a greater proportion of income inequality attributed to age than to education (Tsakoglou and Cholezas, 2005). Age is still a contributing factor in income inequality; in Greece age alone accounts for 18 per cent of earnings inequality and across Spain, Belgium, Ireland, Luxemburg, Italy and France, age is accountable for roughly 10 per cent of the observed wage inequality. The proportion of hourly wage inequality due to gender is fairly consistent across Member States, approximately 2–5 per cent.

#### Single parents with dependent children

Family structure influences the ability of individuals to access a country's resources and opportuni-

**Figure 4.7**  
At-risk-of-poverty rate by age, 2001 and 2006



SOURCE: Eurostat, 2006.

ties. For the EU-15 in 2006, single parents with dependent children have at-risk-poverty rates more than double those of two-parent, two-children households, at 32 per cent and 14 per cent respectively. The at-risk-poverty rate for single parents has been decreasing since the mid-1990s, but the rate has yet to converge with that of two-parent, two-children households. Similarly, families with three or more children have an at-risk-poverty rate of 22 per cent, which is 50 per cent greater than that of two-parent, two-children households for 2006 (see Table 4.3). Furthermore, evidence points to relatively well-educated individuals marrying other well-educated individuals, which compounds the impact of education on income

**Table 4.2**  
Estimated gender wage gap, percentage raw gap explained by different returns

	Mean*	10%	25%	50%	75%	90%
Belgium	0.13	0.12	0.11	0.13	0.17	0.12
Denmark	0.12	0.09	0.08	0.10	0.15	0.21
Germany	0.18	0.19	0.18	0.17	0.17	0.19
Ireland	0.21	0.22	0.23	0.22	0.19	0.17
Spain	0.19	0.22	0.21	0.19	0.18	0.17
France	0.20	0.19	0.16	0.17	0.19	0.23
Italy	0.16	0.16	0.15	0.14	0.14	0.18
Netherlands	0.14	0.10	0.11	0.12	0.17	0.21
Austria	0.22	0.24	0.21	0.20	0.20	0.21
Finland	0.23	0.15	0.17	0.22	0.28	0.31
UK	0.19	0.21	0.22	0.22	0.23	0.24

\* OLS Regression

SOURCE: Arulampalam *et al.* (2007).

**Table 4.3**  
At-risk-of-poverty rates for the EU-15, by household types

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
One adult with dependent children	41	37	37	39	38	40	32	36	36	34	30	32
Two adults, two children	13	13	12	12	12	13	14	12	11	14	13	14
Two adults, three or more dependent children	28	26	26	25	26	26	27	24	22	26	22	22

SOURCE: Eurostat, 2008.

inequality and the influence of intergenerational immobility (Raum *et al.*, 2007).

### Migrants

Drawing on the data analysis of EU-SILC 2004 by Lelkes (2006), we examined the level of poverty among migrants in 14 European countries (Figure 4.8). It was found that migrants from outside the EU tend to face higher poverty rates than the native population. Lelkes first defined migrants as people whose country of birth was outside the EU, and found that the at-risk-of-poverty rate is 43 per cent for people in Belgium, 38 per cent in Spain and Luxemburg, and somewhere between 25 and 30 per cent in a number of other countries (France, Italy, Finland, Greece, Ireland and Austria). The situation of migrants is worse when migrants are defined as non-citizens. In Belgium 55 per cent of those who have non-EU citizenship are at risk of poverty. The at-risk-of-poverty rate for those in France and Luxemburg is 45 per cent. In Spain,

Finland, Greece, Ireland, Italy and Sweden about 30 per cent of non-EU citizens living in the country are at risk. The disparity between the non-EU-born migrants and non-citizen migrants points to the importance of naturalisation policies in combating poverty.

### Factors affecting inequality

There are generally two broad categories within which correlation with income inequality is examined (Nielson *et al.*, 2005), as follows:

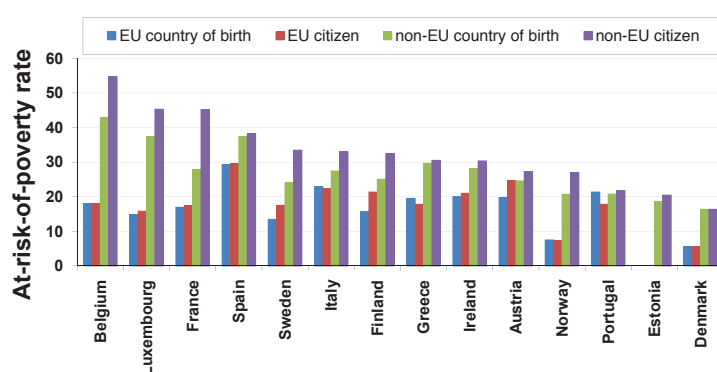
- Changes affecting labour supply – for example, immigration, trends in education, female labour force participation, rise of part-time labour, government transfers.
- Changes affecting labour demand – for example, technological (skill-based) change, increased international trade, outsourcing, taxation and labour market institutions (e.g. changes in minimum wages and the degree of unionisation, tax law changes, deregulation).

These two categories of trends and drivers are discussed below.

### Changes affecting labour supply: a look at trends in education

The primary factors associated with wage inequality for 13 Member States in the year 2000 are returns to education, tax structures and centralisation (Tsakloglou and Cholezas, 2005). The relationship between these factors and income inequality also reflects strongly some fundamental differences in the social models of Member States. The characteristics of social institutions such as the welfare state play a direct role in the degree of upward social mobility and labour market segmentation.

**Figure 4.8**  
At-risk-of-poverty rates of migrants



SOURCE: Lelkes (2006), based on 2004 EU-SILC.



Here we look in more detail at trends in education. In Portugal returns to education account for approximately 35 per cent of inequality in the hourly wage distribution. For Ireland, Italy, France, Spain, Greece and Luxemburg, the education premium accounts for 15–23 per cent of wage inequality (Tsakloglou and Cholezas, 2005). The source of education-related inequality is the growth of disparity within education groups, rather than across different education groups. Therefore studies looking at the impact of years of education find little or no evidence of education-related income inequality (Jaumotte *et al.*, 2008). Further evidence of inequality within education groups is that those with higher unobserved ability gained more from education than those with relatively less ability (Martins and Pereira, 2004). Table 4.4 shows the average return of an additional year of education in the mid-1990s and returns across the conditional wage distribution (e.g. ‘ability’ distribution). For example, in Austria the average rate of return is 9.3 per cent. The

lowest ability individuals (tenth percentile) earn 7 per cent, while individuals with the highest ability (ninetieth percentile) earn 12 per cent more for each additional year of education.

Thus the mechanism changing wage inequality recently in most European Member States was the change in inequality within groups (education, age, gender and sector), rather than the change in population shares or mean earnings of those groups (Tsakloglou and Cholezas, 2005). Table 4.5 presents the percentage change in inequality in terms of hourly earnings due to changes within group inequality, population share and group mean earnings over the period. The table indicates that in Germany, for example, hourly wage inequality would have been 13.2 per cent higher in 1998 than in 1984 if there had been no change in the gender of the labour force and the average hourly earnings of each gender group relative to mean earnings. For Finland and France the changes in inequality within gender groups reduced wage inequality to 0.6 per cent and 1.0

**Table 4.4**  
Returns to education, Ordinary Least Squares (OLS) and quantile regression estimates

	Austria (1993)	Denmark (1995)	Finland (1993)	France (1993)
10%	0.07	0.06	0.07	0.06
50%	0.09	0.06	0.09	0.08
90%	0.12	0.07	0.10	0.09
Mean*	0.09	0.06	0.09	0.07
	Germany (1995)	Greece (1994)	Ireland (1994)	Italy (1995)
10%	0.07	0.07	0.08	0.07
50%	0.08	0.06	0.10	0.06
90%	0.08	0.06	0.10	0.07
Mean*	0.08	0.06	0.09	0.06
	Norway (1995)	Netherlands (1996)	Portugal (1995)	Spain (1995)
10%	0.05	0.05	0.07	0.07
50%	0.06	0.06	0.12	0.09
90%	0.07	0.08	0.15	0.09
Mean*	0.06	0.07	0.12	0.08
	Sweden (1991)	Switzerland (1995)	United Kingdom (1995)	
10%	0.02	0.08	0.05	
50%	0.04	0.09	0.07	
90%	0.06	0.10	0.09	
Mean*	0.04	0.09	0.08	

\*Mean estimates are determined by OLS regression method  
SOURCE: Martins and Pereira (2004).

per cent respectively. There is further supporting evidence, which reveals that wage rigidity and increased supply of skills held income inequality lower in Europe compared with the United States (Fernandez-Kranz, 2006). Essentially the population shares and group mean earnings in Europe were not drivers of income inequality, as one finds with the United States. For Europe it is clear that the dispersion within groups is a driving factor of income inequality.

Looking at changes in education levels between generations also provides some useful understanding of social mobility. The least mobile countries are Italy, Portugal and Spain; the most mobile are the United Kingdom, Austria and Denmark (Comi, 2004).

An examination of inequality across the EU, United States and Canada finds a negative relationship between intergenerational mobility and income inequality. Public subsidies to higher education may theoretically reduce inequality, but the impact on mobility depends on subsidy take-up by low-skilled households. There is evidence that individuals with high ability are more likely to acquire education subsidies, which reduces the impact of education subsidies on income mobility (Dur and Teulings, 2003).

The more similar children are to their parents in economic terms, the less intergenerational mobility a society has. The standard economic approach to measuring intergenerational mobility is to regress the natural logarithm or logarithm of the adult child's income on the natural logarithm of parental income. Italy, Portugal and Greece are the least mobile countries when evaluating father-son incomes and Germany is the least mobile for father-daughter incomes. There appears to be no statistically significant relationship between parent-child incomes for The Netherlands and Denmark (Comi, 2004).

Recent findings (Bratsberg *et al.*, 2007b) indicate that intergenerational mobility is not linear across the income distribution for all countries of Europe, and that it is important to consider the pattern of mobility within income groups. Put differently, poorer households may experience no mobility, while mobility increases as wealth increases for the richest households. In particular, Nordic (Danish, Finnish and Norwegian) households experience this type of nonlinear intergenerational mobility and the United Kingdom has a

**Table 4.5**  
Effect of structural changes on income inequality, by groups

	Change in hourly earnings due to percentage change by group		
	Within-group inequality	Population shares	Group mean earnings
<b>Based on education</b>			
Germany	34.30	-24.30	2.50
Greece	12.80	1.00	-0.10
France	1.90	-3.40	0.50
Italy	6.40	2.30	-1.20
Finland	7.40	-9.00	-0.40
Sweden	-6.60	10.90	-0.40
UK	3.00	1.90	-2.90
Norway	31.30	6.30	-0.10
<b>Based on age groups</b>			
Germany	20.80	-9.40	1.20
Greece	12.40	1.00	0.20
France	-3.80	2.70	-0.10
Italy	12.20	-0.40	-4.30
Finland	-1.40	-0.70	0.10
Sweden	-2.30	6.00	0.10
UK	0.50	1.90	-0.40
Norway	40.00	-3.00	0.50
<b>Based on gender</b>			
Germany	13.20	0.00	-0.70
Greece	12.40	1.50	-0.20
France	-1.00	-0.20	0.00
Italy	7.40	0.20	0.00
Finland	-0.60	-0.20	-1.30
Sweden	5.70	-1.40	-0.40
UK	2.70	-0.10	-0.60
Norway	41.10	-3.00	-0.60
<b>Based on sector</b>			
Germany	10.60	1.80	0.10
Greece	16.10	-2.50	0.10
France	-1.90	0.70	0.00
Italy	8.80	-1.40	0.10
Finland	-4.10	2.00	0.10
Sweden	-1.80	5.40	0.20
UK	1.00	0.90	0.10
Norway	34.90	2.50	0.10

SOURCE: Tsakloglou and Cholezas (2005).

linear relationship. 'Sons growing up in the poorest households (of Nordic countries) have the same adult earnings prospects as sons in moderately poor households – and are increasingly positive in middle and upper segments' (Bratsberg *et al.*,



2007b, p. 1). In the United Kingdom, however, poor children have some room for income growth compared with their parents.

**Changes affecting labour demand: globalisation, taxation, labour market institutions and technology**

The influence of globalisation and technology appears to be an aspect of within-education-group inequality. Evidence indicates that globalisation<sup>20</sup> and technology increase returns to human capital (Jaumotte *et al.*, 2008). Thus the ability to adapt to growing information technologies and expanding markets is not reflected in the premium for years of education in itself, but in the returns to unobservable qualities such as ability and adaptability. It is the interaction of increasing education and technological adaptability that increases wages for individuals at any education level.

Evidence shows that the more progressive tax systems are correlated with less inequality in after-tax hourly earnings (Tsakloglou and Cholezas, 2005, p. 7). All else equal, the income difference between highly paid workers and all other employed persons is reduced, thus income inequality is reduced.

In terms of globalisation, there is some evidence that trade globalisation reduces measured inequality, while financial globalisation increases inequality indicators. Specifically, results indicate that lower average tariff rates reduce income inequality (Jaumotte *et al.*, 2008). One standard deviation reduction in the mean tariff rate would reduce income inequality by 1.7 per cent for the whole sample of countries (51 countries). Tariff reductions benefit the poor more than the rich because on average the tariffs affect the type of goods consumed disproportionately more by the poor (Jaumotte *et al.*, 2008). Furthermore, an increase in the export-to-GDP ratio (an indicator of trade openness) is correlated to reduced income inequality – a one standard deviation increase from the (sample) mean export-to-GDP ratio would reduce the Gini coefficient by 3.4 per cent. When breaking down the exports into sectors (agriculture, manufacturing, services), it appears

that agricultural exports have the largest influence on the reduction in the Gini coefficient (Jaumotte *et al.*, 2008). This confirms that the poor are disproportionately represented in the agricultural sector, within and across countries.

The stock of inward foreign direct investment (FDI) as a ratio to GDP increases inequality for the total sample of 51 countries. In particular, a one standard deviation increase in inward FDI increases inequality by 2.7 per cent (Jaumotte *et al.*, 2008). The financial globalisation driver in income inequality stems from the fact that FDI is associated with investments in high-skilled and technology-intensive sectors. This increases the demand for high-skilled workers. The increase in demand leads to an increase in highly skilled workers' wages, which widens the income distribution.

Labour market institutions play a role in a country's income distribution. Centralisation of the labour market has a statistically significant relationship to hourly earnings inequality. 'Centralisation refers to the level(s) at which decisions are taken, and to the authority or enforceability of those decisions' (Visser, 2006, p. 144). More centralised systems compress incomes and keep inequality lower (Tsakloglou and Cholezas, 2005). Unions reduce income inequality by compressing wages, so that the wage gap between skilled and unskilled workers is smaller than that outside the union. The incentives to join a union are, therefore, different across skill and ability levels. It is not coincidental that during a period of high demand for skilled workers, the union wage-bargaining framework changes. Trade-union behaviour has shown a variable trend across the EU. Table shows union centralisation levels for European countries. There is a strong decentralisation trend in Sweden, and to a lesser extent in Denmark and Norway. A trend towards centralisation occurred in Ireland and Finland, although the levels are still lower than that in Sweden. There is an upward trend for more centralisation in Belgium and The Netherlands. However, it is suggested the drivers are different (Visser, 2006). In The Netherlands union mergers drive the centralisation, whereas in Belgium central level bargaining has remained very prominent.

Evidence suggests that the drop in centralisation is due to skill-biased technical change and the resulting change in incentives to remain in a union. As skill-biased technical change increases

<sup>20</sup> There are many different aspects of globalisation. It is not our intention to define globalisation here. However, the review will look at factors such as trade and finance in further detail.

**Table 4.6**  
Levels and change of union centralisation in  
14 European nations

	1980–3	1990–3	2000–3	Change
Belgium	46	56	56	up
Denmark	41	38	37	down
Germany	38	39	36	stable
Ireland	28	55	56	up
Spain	43	16	31	variable
France	16	15	16	stable
Italy	42	38	28	variable
Netherlands	34	42	45	up
Austria	52	52	51	stable
Finland	44	35	50	up
Sweden	66	48	35	down
UK	12	12	13	stable
Norway	46	36	41	down
Switzerland	22	22	21	stable
Mean	38	36	37	
St. dev.	(14.4)	(14.8)	(14.1)	

SOURCE: Visser (2006).

the demand for skilled workers, skilled workers are able to negotiate higher rates if they go outside the union because unions are designed to keep pay gaps to a minimum. Further evidence for Sweden (Granqvist and Regnér, 2006) and Great Britain (O’Leary *et al.*, 2004; Machin, 1997) is that individuals with high ability benefit from a decentralised wage-setting process. Less productive workers benefit more from a centralised system (Granqvist and Regnér, 2006). Therefore, in order to maintain membership, unions had to adopt a decentralised approach. Despite this, union membership has been declining over the last 25 years. Table 4.7 indicates the percentage change in union membership for a range of countries throughout the world. It is clear that union membership declined during the period 1980–2003 throughout many countries. In particular, union membership in the EU-25 declined by 7.6 per cent over the most recent period covered in the table (1990–2003). Excluding Ireland, some European nations experienced a decline in union membership ranging from 7 per cent to 27 per cent.

Large cross-national differences appear to persist, indicating that union behaviour and union membership possess an institutional dimension specific to national labour markets (Visser,

2006). The functioning of labour markets again seems strongly related to some ideal typologies of social models. Table 4.8 presents membership rates among all employees and rates for gender and sector groups. The overall membership rates range from 84 per cent in Denmark to 11 per cent in Portugal and Spain. Although there is a tendency to believe that blue-collar workers are more likely to be unionised, Table 4.8 shows that membership is balanced: half the countries have more white-collar workers unionised than blue-collar workers.<sup>21</sup> Likewise, membership rates for men and women are relatively similar with only 10 of the 18 countries having males more likely to be members than females. Other evidence finds that nearly all the growth in union membership in the EU is due to women (Visser, 2006). This has interesting implications for the future as more females enter the labour force.

## Conclusion

Over the last decade, there has been little change in overall income inequality at the European level. In 2008, at the start of the crisis, income inequality had risen slightly compared to 2007. However, there are large variations across countries. Thus an overall view masks great variance at the country level, in which some countries experienced large reductions and others large increases in income inequality. In addition, there are several groups in specific EU Member States that are still at a significant risk of poverty. They include women, elderly, single-parent families and jobless households. There are policy challenges associated with the levels of income inequality in a society where some individuals struggle for a basic standard of living while others live in extreme wealth. The real question is to what extent income inequality is bad for society. Some inequality may be good to incentivise growth and individual performance, though sustained inequality associated with societal stratification is seen as a source of stagnation and rigidity. Although it is the poor of Europe who are most negatively affected by income inequality, the externalities associated with income inequality – such

<sup>21</sup> The definition of white- and blue-collar workers follows the International Labour Organization’s International Standard Classification of Occupations.

**Table 4.7**  
Change in union membership rates (per cent)

	Germany	Ireland	France	Italy	UK	EU-25	US	Japan	Republic of Korea
1970–80	17.1	28.6	-5.1	51.8	15.7	28.7	35.4	6.6	100.3
1980–90	-1.7	-10.0	-40.0	-18.3	-23.2	-10.1	-5.5	-0.8	103.8
1990–2003	-11.2	16.9	-7.0	-9.3	-27.1	-7.6	-5.8	-14.1	-16.9
1970–2003	2.2	35.2	-47.1	12.5	-35.2	76.8	-11.3	-9.3	239.3

SOURCE: Schnabel and Wagner (2005).

**Table 4.8**  
Trade union membership rates, by groups

	All	Male	Female	Blue collar	White collar
Belgium	39.7	42.0	37.4	56.3	35.0
Denmark	83.6	82.0	85.3	84.6	83.2
Ireland	37.6	43.6	32.3	45.2	35.2
Greece	12.4	12.9	11.8	8.6	14.4
Spain	11.3	12.9	8.9	10.3	12.2
France	15.6	15.2	16.0	n/a	n/a
Italy	18.2	22.9	13.8	17.9	19.2
Hungary	13.1	11.0	15.2	10.5	14.8
Netherlands	28.6	32.5	24.7	29.9	28.2
Austria	31.1	36.2	25.9	31.1	31.2
Poland	15.7	13.8	18.3	17.4	14.7
Portugal	11.1	12.3	10.1	8.6	14.0
Slovenia	41.2	37.7	44.8	42.9	40.5
Finland	68.9	63.4	74.4	68.5	69.2
Sweden	76.8	74.0	79.8	80.0	75.7
UK	26.6	26.3	26.8	24.5	27.4

SOURCE: Schnabel and Wagner (2005), using European Social Survey 2002/3. data.

as the spill-over effects of poor health, increased health and welfare spending and decreased productivity, more problematic civic relations and rising crime rates – make income inequality everyone's problem. Though recent statistics around the time of economic crisis show similar inequality patterns to before the crisis, it is likely that poverty and inequality have increased in the course of the current economic situation.

We know to an extent how trends interplay with income inequality. At the macro-economic level, reduction in trade tariffs and increasing exports seem to benefit the poor relatively more and reduce the dispersion of incomes. This is because trade liberalisation tends to be most beneficial for low-income professions – for example, the rural economy – compared to other sectors. In addition, a lowering of trade barriers makes imports less expensive, raising the relative spend-

ing power of low-income groups. Foreign direct investment tells a slightly different story. As the proportion of foreign direct investment to GDP increases, the wealthy gain relatively more and income inequality increases because investment is directed at high-skill sectors. Progressive taxation and centralisation of wage bargaining tend to reduce income inequalities in societies.

Another European policy challenge is the change in inequality within groups (education, age, gender and sector). ICT-led economic development has reinforced inequality within skill level groups. This means that groups with the same education, age, gender and sector profiles are showing higher degrees of wage inequality. Moreover, other factors that are thought to be driving inequalities – such as changes in mean earnings across groups and population shares – are less prominent in Europe than, for instance, in the United States.

This has some important consequences for policy makers. Reducing within-group inequality reflects on the flexibility of the labour markets as more flexible labour markets (with higher-job insecurity and part-time working) tend to have higher within-group inequality. It reflects on training

programmes as education alone is not sufficient; training needs to focus on the development of skills in demand by the labour market. It reflects on wage policy as guaranteed minimum income and active wage setting are ways towards level wages in a sector and within groups.

## Chapter 5 Considering trade-offs between income inequality and a number of outcomes

### Introduction

Chapter 4 implies that there could be trade-offs between reducing income inequality and several labour market outcomes. The most important of these is unemployment. There is some academic debate about an ‘inequality–unemployment trade-off’ in which governments must accept higher levels of unemployment in order to achieve lower levels of inequality because redistribution reduces a firm’s ability to invest and thus lowers employment. Other trade-offs are also debated – for instance, between reducing income inequality and economic output and labour market productivity. Finally, there are also assumptions about a number of associated benefits of income inequalities. Income inequalities are thought to have an impact on health outcomes and social relations and indeed the happiness of the general population. These are often used as a justification for policy aimed at reducing income inequalities.

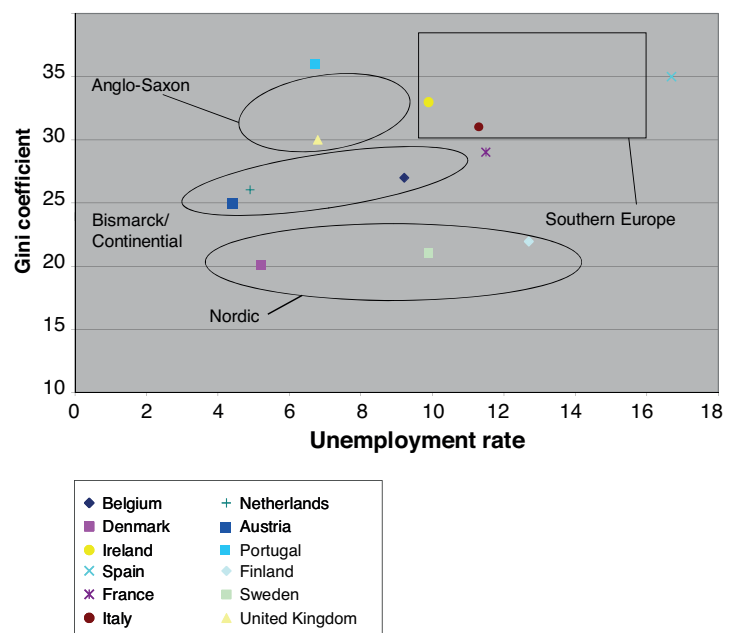
Considering trade-offs and wider benefits is important in arriving at policy decisions. Firstly, it looks at some of the unintended outcomes of prioritising one outcome over another in European social and employment policy. It also reflects on why reducing income inequality is important *per se* and whether there is a perfect state of income inequality in which public welfare is maximised. Secondly, it allows a wider discussion of which drivers might enable or hinder progress on a number of outcomes.

### A look at employment and income inequality

Statistical data for unemployment rates and Gini coefficients for 12 European nations reveal no distinct relationship. In Figure 5.1, each country’s unemployment rate and corresponding Gini coef-

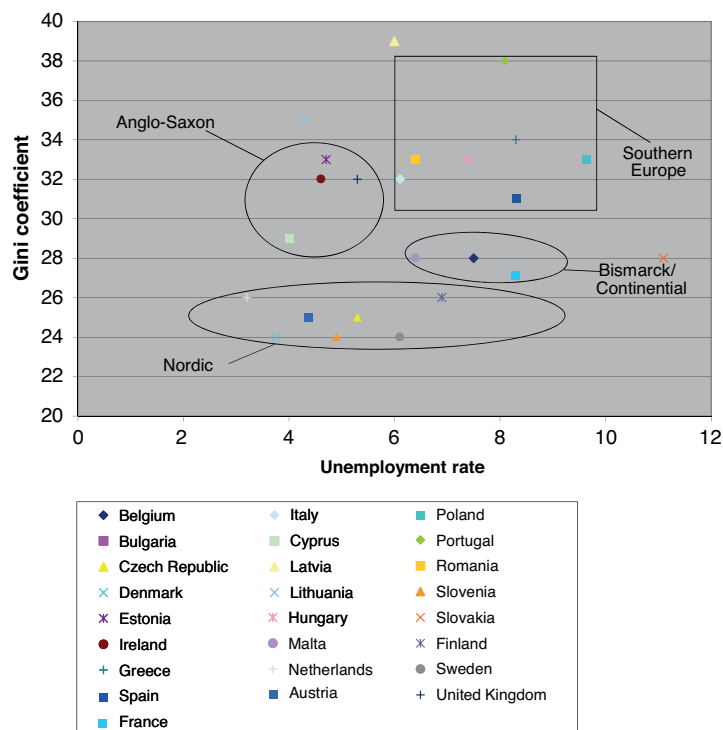
ficient for 1997 is plotted on the x–y graph. It is interesting to examine the countries as grouped in particular groups, corresponding to particular unemployment rates and Gini coefficients. The lower oval includes Scandinavian social democratic countries (Denmark, Sweden and Finland), the square contains north-western European liberal systems (Ireland and the United Kingdom), and the large circle encompasses Mediterranean models (France, Spain and Italy). Firstly, the Scandinavian countries maintained low levels of inequality, but unemployment levels varied significantly from 5.2 per cent in Denmark to 12.7 per cent in Finland. Northern European countries were fairly condensed in both unemployment and inequality levels, while the Mediterranean coun-

**Figure 5.1**  
Cross-plot of unemployment rates and Gini coefficients, 1997



SOURCE: Eurostat, 2008.

**Figure 5.2**  
**Cross-plot of unemployment rates and Gini coefficients, 2006**



SOURCE: Eurostat, 2008.

tries experienced relatively high levels of inequality and unemployment.

The situation in 2006, depicted in Figure 5.2, seems fairly similar to that in 1997. Enlargement countries joining the Scandinavian 'oval' of relatively low inequality are the Czech Republic and Slovenia. It still remains the case that Denmark has lower unemployment and inequality than Sweden and Finland. The Netherlands is included in the oval with lower unemployment rates, but slightly higher inequality than Denmark and Sweden. In the north-western Europe square, accession countries include Cyprus, Estonia and Romania. Regarding the Mediterranean circle, Greece and Poland are included in this relatively high unemployment and inequality paradigm. France falls out of this category with lower inequality in 2006; however, it does not yet enter into the Scandinavian framework. There are two striking outliers: Latvia has a relatively large inequality score and Slovakia has relatively high unemployment rates. The cross-plots are consistent with empirical evidence (Ayala *et al.*, 2002), which finds there are different factors driving income inequality and

unemployment. Labour market institutions play a greater role in income inequality than unemployment, suggesting that policies designed to have an impact on income inequality will not necessarily affect unemployment.

## A look at output and income inequality trends

There are concerns that short-term improvement in the relative status of the poor is made at the expense of long-term output and productivity, which reduces economic and social health in the long term. The idea is that redistribution away from the rich reduces capital investment, which reduces future growth and innovation. These are a function of productivity, a measurement for standard of living, in which case the future average standard of living falls with short-term redistribution.

One method of assessing the level of well-being is to examine levels of output and output growth. Table 5.1 displays the rate of change in GDP as an index relative to the EU-27 (where EU-27=100 in each year), and the rate of change in the Gini coefficient. All former communist countries that joined the EU in 2004 experienced relatively high rates of growth over the period 2001–6. This is due to initially low levels of GDP. Italy exhibits the largest rate of reduction in GDP, approximately –14.5 per cent. When compared to the growth rate of inequality, there is not a clear relationship with GDP growth. The country with the largest reduction in GDP, Italy, also experienced a growth in inequality measure of 9.38 per cent. At the same rate of income inequality growth (9.38%), Ireland experienced a growth of GDP at a rate of 9.86 per cent. Similarly, Belgium, the Czech Republic, France and Sweden experience no change in the Gini coefficient and yet GDP fell in Belgium and France at the rates of –2.92 and –3.86 per cent respectively, and grew in the Czech Republic and Sweden at the rates of 9.88 and 2.18 per cent respectively.

There may be regional variation for wealth within countries. Table 5.2 illustrates each country's regional dispersion of GDP and the difference of that rate from the EU-27. Regional dispersion of GDP (at NUTS<sup>22</sup> level 3) is measured by 'the sum

<sup>22</sup> Nomenclature of Territorial Units for Statistics (from French).



**Table 5.1**  
Growth rate of GDP and Gini coefficient, 2001–6

	GDP growth rate (%)	Gini growth rate (%)
Belgium	-2.92	0.00
Bulgaria	20.22	-8.33
Czech Republic	9.88	0.00
Denmark	-2.08	8.33
Germany	-2.64	7.41
Estonia	31.60	-6.06
Ireland	9.86	9.38
Greece	10.36	2.94
Spain	6.30	-6.45
France	-3.86	0.00
Italy	-14.48	9.38
Cyprus	0.98	.
Latvia	27.66	.
Lithuania	26.55	11.43
Luxemburg	15.97	3.57
Hungary	9.12	24.24
Malta	-1.17	.
Netherlands	-1.75	-3.85
Austria	1.34	4.00
Poland	9.00	9.09
Portugal	-4.04	2.63
Romania	28.94	9.09
Slovenia	10.66	8.33
Slovakia	17.51	
Finland	0.60	-3.85
Sweden	2.18	0.00
United Kingdom	-0.50	-9.38

SOURCE: Eurostat, 2008.

of the absolute differences between regional and national GDP per inhabitant, weighted with the share of population and expressed in per cent of the national GDP per inhabitant.<sup>23</sup> If the regional GDP is identical across all regions within an economic area or country, the value for dispersion of GDP per person (first column of values in Table 5.2) is zero. As the difference between regions increases, the dispersion percentage increases. Table 5.2 indicates that the least amount of regional variation exists in The Netherlands, followed by Ireland and the Nordic countries (Denmark, Finland, Sweden). The most regional variation exists in Hungary and Slovakia.

<sup>23</sup> See [http://epp.eurostat.ec.europa.eu/cache/ITY\\_SDDS/ENreg\\_e0digdp\\_base.htm](http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/ENreg_e0digdp_base.htm) (accessed August 2009).

**Table 5.2**  
Regional and national variation in GDP, 2006

	Dispersion of regional GDP (%)	Difference from the EU-27 (%)
Belgium	25.8	3.4
Bulgaria	26.2	3.0
Czech Republic	25.1	4.1
Denmark	16.3	12.9
Germany	17.4	11.8
Ireland	14.7	14.5
Greece	26.5	2.7
Spain	18.2	11.0
France	19.9	9.3
Italy	23.8	5.4
Hungary	35.7	-6.5
Netherlands	11.6	17.6
Austria	17.4	11.8
Poland	19.4	9.8
Portugal	23.2	6.0
Romania	25.4	3.8
Slovenia	18.9	10.3
Slovakia	32.3	-3.1
Finland	15.7	13.5
Sweden	16.3	12.9
United Kingdom	20.4	8.8
EU-27	29.2	

SOURCE: Eurostat, 2008.

### Productivity and income inequality trends

It is generally thought that one of the most powerful quantitative measures for a country's standard of living is labour productivity – the amount of goods and services the average worker produces in an hour of work. Productivity growth means labour is used more efficiently, indicating economic progress. Generally speaking, faster productivity growth leads to greater real wages and increasingly better average living standards. It is important to note that labour is not the only factor in production; changes in productivity are also the result of changes in technology, workforce skills and firm use of capital. Nevertheless, growth in real per capita income and increases in living standards tend to follow growth in labour productivity (Duke and Torres, 2005). Table 5.3 displays the GDP per hour worked for Member States. The top three nations are Luxemburg, Ireland and Belgium, and the bottom three are Poland, Hungary and Portugal.

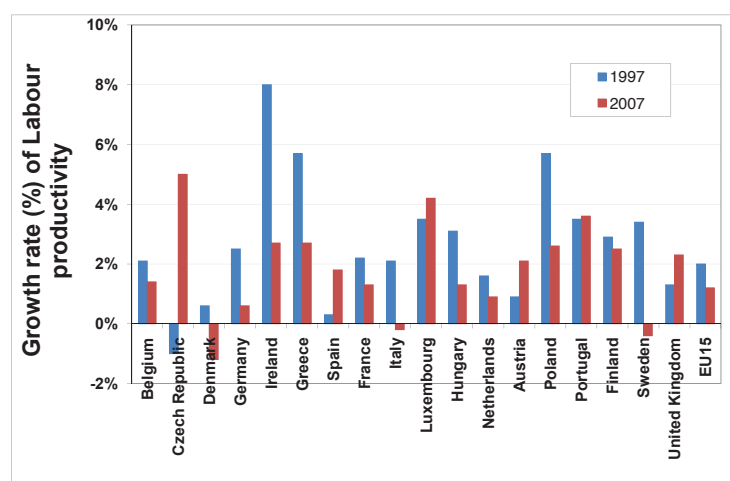
Figure 5.3 illustrates the annual productivity growth rates for 1997 and 2007 for the EU-15 and

**Table 5.3**  
GDP per hour worked, 2007 (US\$)

Belgium	54.2
Denmark	44.0
Germany	48.1
Ireland	54.8
Greece	31.9
Spain	41.9
France	52.9
Italy	38.6
Luxemburg	76.3
Hungary	24.3
Netherlands	52.7
Austria	46.0
Poland	20.1
Portugal	26.4
Finland	42.7
Sweden	46.6
United Kingdom	42.5
EU15	44.6

SOURCE: OECD, 2008.

**Figure 5.3**  
Growth rate in labour productivity, 1997–2007 (%)



SOURCE: OECD, 2008.

many of the Member States. The EU-15 experienced a slowing, albeit minimal, in productivity growth from 2 per cent in 1997 to 1.2 per cent in 2007. Only 6 of the 18 countries for which information is available – the Czech Republic, Spain, Luxemburg, Austria, Portugal and the United Kingdom – experienced greater rates of productivity growth in 2007. The general trend for a slowing down in productivity growth suggests a slowing of real wage growth and decline in aver-

age living standards. However, as before with economic output, it is difficult to find strong relationships between increases in labour productivity and rising income inequality. The countries with the biggest increases in labour market productivity do not necessarily show similar patterns in income inequality, as shown in Table 5.1.

## Health and social relations and income inequality

One way to evaluate the impact of income inequality on a society is to investigate the change in health outcomes. In most EU countries income growth between 1993 and 2001 was not amassed solely by rich households and, excluding Austria, income elasticities of health are positive (Ourti *et al.*, 2006). This evidence indicates that there were few changes in income inequality and thus small increases in health inequality in the majority of EU countries. The effect of increased income inequality, not just level of inequality, on health and well-being depends on the associated social changes and psycho-sociological factors (Marmot and Bobak, 2005). Poland, Czech Republic and Hungary show positive trends in health outcomes, while the Baltic states do not. Yet both regions experienced increasing income inequality. The missing explanation may be the level of control people feel they have over their lives (Marmot and Bobak, 2005). It may be that judicial, law enforcement and other state institutions (e.g. the welfare state) underlie the link between changing inequality and health outcomes.

In addition to health outcomes, previous research has shown links between income inequality and the quality of social relations, such as societal trust and social capital (Wilkinson and Pickett, 2007). Using data from World Values Surveys, Uslaner (2002) found cross-sectional evidence for countries without a legacy of communism. He found that the Nordic nations of Norway, Sweden, Denmark, Finland and The Netherlands, all with equitable distributions of income, also have the highest levels of trust. At a sub-national level, Putnam (1993) used 20 years' data for 20 regions in Italy to develop an index of civic participation, as measured by the density of citizens' participation in community and organisation; and reported a strong correlation ( $r=0.81$ ) between this civic participation index and income inequality.



## Subjective well-being and inequality

In addition to standard measures of well-being, such as health outcomes, there is an empirical literature investigating subjective levels of 'life-satisfaction'. The models regress macro- and micro-economic variables on individuals' responses of 'happiness', controlling for individual characteristics. Using well-being responses from the Eurobarometer Survey Series for 12 European nations, evidence indicates that the happiness of Europe's poor is more affected by inequality than is the case for the rich (Alesina *et al.*, 2004). While this may seem a trivial finding, the exact opposite is true for Americans, among whom the poor are unaffected and rich are negatively affected by levels of inequality.<sup>24</sup> The perceptions of social mobility, rather than actual mobility, appear to drive results as Americans believe their situations are chosen (Alesina *et al.*, 2004). Results indicate that a ten percentage point increase in the Gini coefficient of Europe (12 countries) increases the proportion of people reporting 'Not very / at all happy' from 19.6 per cent to 24.9 per cent.

## Conclusion

Finding relationships between reducing income inequality and other outcomes is not straightforward. Reducing income inequalities in Europe may be associated with a number of other out-

comes, such as greater social capital and perceptions of happiness. In terms of health outcomes, the enlargement countries, which experienced striking changes in inequality, showed no consistent change in health outcomes. Here factors such as social safety nets providing specific health interventions to the poor and other institutions such as healthcare systems may play a role. There are also no clear cut trade-offs between reducing income inequality and outcomes such as unemployment, economic output and labour productivity. The empirical evidence seems to imply that there are limited policy dilemmas for policy makers in combating income inequality with regard to the set of outcomes considered here.

Looking in more detail at the relationship between income inequality and unemployment, there appear to be different groupings across Europe with characteristic rates of income inequality and unemployment. Indeed, differences in outcomes may reflect on the differences in the organisation of welfare systems in Member States. However, even in those there are significant variances in unemployment rates between the members of a group. In terms of employment, there are different factors driving income inequality and unemployment. Labour market institutions play a greater role in income inequality than unemployment, suggesting that policies designed to have an impact on income inequality will not necessarily affect unemployment. This is an important observation for policy makers.

<sup>24</sup> Happiness responses for Americans come from the US General Social Survey.



## Chapter 6 An uncertain future: trends and policy challenges

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In the previous chapters we used insights from recent history to look at how certain trends relate to outcomes such as labour force participation and income inequality. Going forward, it is obvious that there is significant uncertainty around developments. Since the success of any future strategic orientation will depend on an interplay of factors beyond the control of policy makers, these trends or events need to be anticipated.

In this chapter we highlight a number of trends, issues and developments that will inevitably play a role in EU employment and labour market policy over the next ten years. Some of the future trends will be characterised by relatively low uncertainty. For example, the social and economic outlook after the financial crisis is still relatively uncertain, and so is the future of the Union. There is less doubt about a number of future developments, owing to some long-term trends that began decades ago – for example, the transition to a knowledge-based economy, the transition to a family-friendly economy adapted to ageing European societies, and the transition to a low-carbon economy. This is not to say that the impacts of these trends are difficult to predict. We shall discuss these trends in this chapter and speculate about their potential impacts and the subsequent policy challenges.

### The transition to a knowledge-based economy

Chapter 2 identified that many traditional sectors, such as agriculture, have declined in importance over the last ten years; while others, such as the service sector, expanded. This is consistent with the shift towards a global knowledge-based and service economy, a phenomenon that is shared by all Member States to varying degrees. The change is reflected in the increasing proliferation of jobs in analytical, scientific and technical occupations

– that is, work actively involved with the creation and diffusion of knowledge. The transition is likely to affect the types and quality of jobs available and the skills required.<sup>25</sup>

Although the exact nature of the technologies that will underpin tomorrow's economy is inherently uncertain (see Cave *et al.*, 2010), they will probably have substantial impacts on employment, labour mobility, income security, income equality and social cohesion in the long term. The share of the service sector in European economies is expected to continue to increase, particularly in new Member States. Technology and knowledge-intensive services will increase demand for analytically skilled white-collar labour. Technological progress may be biased towards highly skilled and adaptable workers and favour non-routine skills. At the same time, the supply of low-skilled jobs is expected to fall over time, and hence the demand for traditional blue-collar skills will decrease. Evidence from the literature supports this conclusion; however, the bias towards the highly skilled in a knowledge-based economy seems to be declining over time (O'Mahonya *et al.*, 2009).

Participation in tertiary education is expected to continue expanding as the demand for highly skilled labour increases (Altbach *et al.*, 2009; Scott, 2009). As knowledge-intensive industries start to dominate the labour market, higher education will increasingly become the norm. Female participation in higher education in particular has grown considerably over recent decades and this trend is expected to continue. Between 1997 and 2008, the number of students in tertiary education grew by 26 per cent, and nearly 60 per cent of those are now female (Eurostat, 2009). But

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<sup>25</sup> For an extensive review of the potential impacts of technological changes on the future of work, see Panis and Karoly (2004).

whereas a university degree used to guarantee a successful career, the value of such qualifications is likely to be eroded. Competition for higher-echelon positions will be stronger, increasingly leaving university graduates with a sense of frustration about their career prospects.

### **Towards a more family-friendly and silver economy**

There is no doubt that the mean age of the European population as a whole will continue to increase over the coming decades. Despite uncertainties over migration and fertility, the baby-boom generation will retire and life expectancy will rise further. In some parts of Europe (central and Eastern Europe, German-speaking countries and southern Member States), fertility rates have been unsustainably low; these areas will face rapidly ageing populations and even population decline.

Population ageing will affect the economy as a whole (Grant and Hoorens, 2006). Productivity and productivity per capita are expected to decrease because the size of the working population will shrink, and because older workers tend to be less productive. Since the ratio of older people (over 65 years) to working age people (between 15 and 65 years) will increase substantially, the affordability of European pension systems will become an issue,<sup>26</sup> and the costs of current social security systems, particularly those that are age-dependent (e.g. healthcare) may increase substantially (Dang *et al.*, 2001). Meier and Werding (2010) estimate that, if pensions systems remain unchanged, the increase in expenditure on old-age pensions, survivor benefits, health care and long-term care will amount to 11.5 per cent in France, 16.6 per cent in Spain, 18.7 per cent in Austria and more than 20 per cent in Italy, Germany and Poland. According to these authors, the most important driver of these changes is pension expenditure under the assumption of constant eligibility rules, benefit levels and retirement behaviour. This would suggest that pension reforms could have an important mitigating effect.

<sup>26</sup> Particularly those based on a pay-as-you-go (PAYG) system, in which the current labour force population contributes to the pension benefits of the current generation of pensioners.

Some argue that harnessing the 'knowledge economy' may offer a substitute response to ageing pressures. Using smarter and more efficient methods of work to maintain productivity growth could compensate for negative growth of the workforce. This implies higher living standards, which would provide additional scope for modifying pension benefit levels and contribution rates. Furthermore, the economic burden of dependency on an ageing workforce may be counterbalanced by reduced young-age dependency – the ratio of young people in the population and the working-age population – and increased female labour participation. The proportion of GDP spent on education and healthcare for young people is likely to decrease. Some argue that the ratio of labour force to population will increase in most countries because declining fertility has been, and may continue to be, correlated with greater female labour force participation. Bloom and colleagues show that for every unit reduction in fertility, women tend to work two years more over their lives (Bloom *et al.*, 2009). Also, fewer children generally means healthier, smarter, and better-educated children as parents divide their resources among fewer offspring, which in turn may boost economic growth (Bloom and Canning, 2000).

Population trends present a number of policy challenges. In October 2006, the European Commission presented its views on these challenges and the best ways to address them (European Commission, 2006a). In addition to active employment policies for more productive labour markets, the European Commission argued for a number of policy responses in this communication including promoting demographic renewal in Europe, receiving and integrating migrants in Europe, and establishing sustainable public finances to guarantee adequate social protection and equity between the generations. Classifying these trends as an opportunity may oversimplify their complexity. They touch upon some of the most intractable and challenging issues facing Member States and the EU as a whole.

The responses suggested by the European Commission have been attempted in a number of Member States, with mixed results. Structural reform, for example, is required for sustainable public finances and social protection. Recent experiences, however, have shown that introducing further reforms in healthcare or pension systems may

be difficult since older workers and pensioners will increasingly dominate the electorate and may use their domination to exert political influence.

Depending on future social models, these trends may also increase the number of elderly at risk of poverty. Pension benefits are likely to decrease, contributions will probably increase and the age of retirement may be raised further in many Member States. This will keep older workers in the labour market, and may affect unemployment rates among younger workers. The two age groups may not compete for all jobs as some jobs may be more suitable for older workers than others, but older people will be healthier than they used to be. Younger generations may also face negative financial consequences because intra-family transfer of wealth is an important factor in income security. Transfers of money and assets from older to younger generations may decrease as old-age poverty increases.

Many Member States have shied away from using explicit pronatalist policies to promote demographic reform, in order to avoid being associated with totalitarian regimes. Recently, though, a number of countries have introduced implicit pronatalist policy measures aimed at improving the balance between work and family life. These policies – such as investment in child-care, extended parental leave and flexible working arrangements – help parents to combine their careers and parenthood. Authors seem to agree that there is a correlation between direct and indirect incentives and fertility, but the effect is limited and expensive, and often temporary. More structural change towards societies in which a career and parenthood are fully compatible for both men and women require substantive and comprehensive investment. This kind of investment may not be at the top of Member States' political agendas in a period of high public deficits.

Finally, migration affects the EU's objectives of full employment and social inclusion in a number of ways. Labour migrants may be needed in areas with high demand for skilled or unskilled labour. The proportion of people over 80 years of age who require domestic care will increase substantially in the EU, and it is likely that migrant workers will be needed to meet this demand. However, greater rates of migration and EU mobility will put greater pressure on the cohesiveness of societies. Unsustainably high numbers of immigrants and

difficulties with integration combined with economic downturn could promote anti-immigrant sentiments and intolerance.

## Transition to a low-carbon economy

Climate change has started to feature prominently on political agendas worldwide (see, for example, European Commission, 2010a). Low-carbon and climate change mitigation strategies have a number of potential economic and social impacts. Firstly, there will be important redistribution effects between sectors and between countries, with negative impacts probably concentrated in southern Europe. Primary sectors, such as agriculture, forestry and fisheries, are expected to be affected more severely than others, and tourist destinations will change (ETUC *et al.*, 2007).

Secondly, large investments in green industries and services may have an indirect impact on the quality of work, employment and income security. The 'green skills for green jobs' agenda holds that a low-carbon economy requires specific skills, which will need to be developed. In response to the current economic crisis, European governments are introducing stimulus packages that attempt to combine reviving the economy with actively steering it to become greener; the Innovation Union flagship initiative and the Energy 2020 strategy are examples of such initiatives. In the short term, jobs will shift from high-carbon activities to low-carbon activities (Frankhauser *et al.*, 2008). The longer-term effects are more difficult to gauge. Climate policy may trigger widespread structural adjustment, a form of 'creative destruction' that might be associated with innovation, job creation and growth.

However, climate change may interact with other critical problems – such as water shortages, the loss of biodiversity, the use of energy and so on – which may consequently influence work, production and consumption practices. Climate change may also drive intra-EU migration or immigration of non-EU citizens from areas hardest hit by changing temperatures and weather patterns (see, for example, Raleigh *et al.*, 2009). The potentially high numbers of migrants may have consequences for social cohesion in the receiving countries.

## The aftermath of the financial crisis

For the immediate future, employment and social policy priorities will be dominated by the consequences of the financial and economic crisis. A number of economic indicators demonstrate that the EU has experienced the biggest economic downturn since the 1930s, including negative GDP growth, reduced industrial production, damaged consumer confidence, and soaring unemployment. In many countries enterprises and governments are responding with reductions in working time, unpaid administrative leave and wage arrears.

Tax payers' money has been allocated to bailing out troubled financial institutions, but is also required to finance the numerous stimulus packages aimed at reversing the downward cycle in Member States. The European Recovery Plan, proposed by the European Commission (2008a) and endorsed in the European Council of December 2008, highlighted the need for 'smart' investments in infrastructure and public goods to support aggregate demand and stimulate confidence in the short term, and also the need to invest in a number of more strategic sectors, including future skills needs, energy efficiency, cleaner technologies, low-carbon markets, infrastructure and transport inter-connectivity. Whether these measures will be successful is as yet unknown. This creates considerable uncertainty for the long-term outlook of the EU economy in the global context.

EU Member States did not go into the crisis on an equal footing. Unemployment rates differed substantially in the EU prior to the crisis, and therefore the labour market consequences will not be uniform across the EU. Fiscal and current account balances also differ considerably, and some Member States will face greater constraints than others as they implement responses to counter the crisis. Furthermore, there is considerable uncertainty about the future of the Eurozone. Several scenarios are plausible, including the bailing out of a number of vulnerable economies with high public debts, those countries (notably Portugal, Italy, Ireland, Greece and Spain, referred to as PIIGS) leaving the Eurozone, a number of stronger economies stepping out, and a complete abolishment of the Euro project. Each of these scenarios would have far-reaching consequences for the

stringency of economic reforms in Member States, and for economic recovery of the countries most affected and of the EU as a whole. Regardless of which of these scenarios will materialise, there will be considerable variation in the degree to which citizens (tax payers, young people, older people, etc.) in different Member States will be affected by the reforms and economic growth or stagnation.

As a consequence of these differences, there is still a real risk that Member States will revert to protectionist policy measures – either explicitly or implicitly – if the situation becomes critical again. The aftermath of crisis may fuel public resentment towards the mantra of globalisation and international free trade. Political leaders may follow public opinion and attempt to protect local products and businesses and promote local or regional self-sustainability. Domestic industries, financial institutions and workers may be prioritised over those abroad. It is unclear whether the EU leadership will be able to dissuade Member States from encouraging domestic investments and putting up barriers to overseas investment, which may lead to further deterioration in international trade. Some Member States may also be unwilling to fund recovery in vulnerable Member States. This could lead to a trend-break, away from globalisation towards localisation, with an increased focus on local issues.

There are conflicting views about the direction in which Europe's economic model is heading. There may also be growing dissatisfaction with market liberalisation, and Europe may move away from the neoliberal model. Such trends may have considerable consequences for the future of European Monetary Union and the single currency. Member States may assume a stronger role in economic policy – for example, through increased public ownership and state regulation in financial and other sectors. Since the economic crisis and demographic ageing are likely to increase pressure on public finances, this may curb the opportunity for state intervention. For this reason, public systems in countries under extreme financial pressure may embrace further experiments with deregulation and privatisation of welfare provision, such as pensions, healthcare and insurance.

Although forecasts project a modest recovery, considerable uncertainty remains for the longer term. The consequences of the crisis for structural unemployment are unclear. Europe may face a



'lost generation' threatened by social exclusion:<sup>27</sup> a cohort of young people lacking a few years of crucial working experience, which may haunt them throughout their career. A number of factors may affect certain other groups disproportionately. Low-skilled workers, working poor, elderly workers and school leavers are typically the most vulnerable groups in a shrinking economy. They are more likely than others to be affected by job cuts and by labour market reforms that aim to make it easier for employers to hire and fire.

The worsening economic conditions may also be a breeding ground for social unrest in the hardest-hit countries. Protectionism, social unrest and increased nationalism, which often tend to flourish during periods of economic downturn, could promote anti-immigrant sentiments and intolerance.

## The future of the European Union

The process of European integration has witnessed a dual trend over recent years: a downward spiral in public support for the integration project and a concomitant increase in opportunities for the public to express these concerns (De Vries and Edwards, 2009). A number of developments and events have fed political debates and public sentiment has become increasingly critical of the European project. The 2009 European Parliament election results confirmed this. Member States are culturally, socially, economically and politically diverse, and there are concerns about losing these identities if further European integration takes place.

Some politicians have successfully harvested concerns over EU integration and used them to campaign for a transfer of competences from the EU to the Member States. Regimes and citizens in countries of net contributors are becoming increasingly critical of EU spending in net receiving countries; national interests are increasingly dominating the discussions. There has also been a degree of controversy surrounding the relatively swift expansion of the EU, particularly with the accession of Bulgaria and Romania. These views are also reflected in concerns regarding the potential accession of Iceland, Croatia, Serbia, Bosnia

and, particularly, Turkey as full members.

The adoption of the Lisbon Treaty was a milestone for the future of the EU. But despite ratification by national governments, anti-EU sentiments will be reflected in the increasing numbers of Euro-sceptic seats in the European Parliament, and also by falling election turnouts. Further declining public support for the EU may affect the European Commission's mandate in relation to that of Member States as well as its budget.

Protectionist attitudes within Member States could spur discord within the EU, and Member States may no longer enforce or adhere to important aspects of the *acquis* (e.g. non-discrimination against homosexuals) or the stability pact in the Eurozone. This could lead to an erosion of European institutions and of the contributions of Member States to such institutions, which in turn could have far-reaching consequences in such policy areas as employment policy, which is traditionally within the mandate of the Member States.

This is particularly important for the feasibility, effectiveness and availability of EU employment and labour market policy instruments. For instance, the success of the OMC depends on peer pressure to reach common targets and carry out mutually agreed commitments (Mailand, 2008; Jacobsson, 2004) and strategic use by (sub-)national actors. Such soft policy instruments may lose traction in an increasingly decentralised and heterogeneous union. Alternatively, OMC may become the only instrument that is politically acceptable in the face of declining support for hard EU regulation.

A trend-break, on the other hand, is not implausible either. The tables may turn if effective EU coordination defeats some of the tough challenges that Europe faces. The popularity of the Union could recover if issues such as the economic crisis, the energy crisis, climate change, migration and international conflicts are addressed effectively. Economic recovery and restoration of consumer confidence, entrepreneurship and innovation capacity could revitalise confidence in the European project. If faith in the EU recovers on the back of economic recovery, however, the ambitions of a renewed Union may be different from those of the past. The emphasis may be on the internal market and free trade economic growth, rather than social inclusion or social protection.

<sup>27</sup> Compare Denmark in the 1980s (Clasen, 2000) and Japan in the 1990s (Furlong, 2008).

## The future of work

The future of work is widely debated and there are a number of dimensions to any potential change. Firstly, the location of work may be affected by several trends. Congestion problems may further disincentivise commuting, and flexible working arrangements may reduce the need to be physically present at a centralised work location. Although ICTs such as video-conferencing have had limited impact thus far, the transition to a low-carbon economy may introduce strong disincentives to travel, which could provoke a shift to more.

Secondly, the systems of rewarding employment may change. The paradigm of basing salaries on the amount of time spent at work and the length of service (seniority) may become less dominant. The fact that the workforce as a whole has become older may put pressure on firms to reward skills rather than seniority (Chen and Hsieh, 2006). Other trends may include team-based pay and variable reward, although the controversy about bonuses in the financial sector may well reverse this trend.

A third dimension of potential change may be the traditional sequence of education, career and then family formation. This is particularly relevant for women who have had higher education, for whom education and establishing a career could eventually lead to involuntary childlessness. This sequence may need to change if the trend of delayed parenthood continues.

A final dimension incorporates employer–employee relations and the future of organisational structures. A shift towards more analytical and technical professions could imply the emergence of more independent workers. Future work may consist of networks of individual experts, a looser organisation with more dynamic flexible contexts in which teams are configured around projects. ICT is likely to enable people to work independently.

## The future of a European Union social model

The trends listed above are closely related to the future of social protection in the EU. Although it is unlikely that welfare systems in Europe will converge towards a common EU social model, reform of European welfare systems is needed to respond to

the challenges of stagnating economic growth, globalisation and population ageing. In the EU reform agenda, Member States may preserve country-specific values and ways of working in order to follow their own path-specific route in addressing apparently common labour market challenges. However, it is uncertain whether such national employment models would remain distinctive, and to what extent this diversity would continue to exist.

Countries such as France and Italy, for example, have struggled to implement labour market reforms. The future of labour market flexibility in these countries will largely depend on the urgency of the problems and the perseverance of political leadership. The question will be whether the sentiment of protecting jobs in vulnerable, and often nationally important, sectors prevails over flexibility or training and reintegration of those who have lost their jobs. In the latter case, politicians may face considerable public opposition. When and whether further reforms combining a flexible, mobile European labour market with income security will be introduced remains uncertain.

Although the key competences lie with national governments, social protection policy is no longer fully controlled by Member States. Not only are there sunk-costs and institutional lock-in effects of EU coordination, but, as Ferrera *et al.* (2007) state, ‘the complexity of decision-making, the accommodation of diverse positions and attempts to resolve Treaty anomalies create enormous potential for unintended consequences and strengthen non-state actors, especially the Commission and the Court of Justice’. The above considerations explain why there is considerable uncertainty regarding the future of Europe’s Social Model: regimes may converge or diverge, emphasise the flexibility component of flexicurity towards a more liberal social model, or emphasise the security component towards a more rigid but more protective social model.

While the direction of social welfare transition is as yet unclear, it seems likely that the role of collective bargaining in these future systems will be smaller. Union membership has declined considerably over recent decades and unions do not seem to appeal to young workers any more (Visser, 2006). Erosion of union influence will have important consequences for the social model in Member States that rely strongly on collective bargaining systems. Employees of the future may



turn to other mechanisms to enhance their bargaining power, and may use more informal social networking to solve disputes or negotiate working conditions with their employer.

## Conclusion

In this chapter we have identified a number of future trends and developments. The direction of these trends is relatively certain in some areas – for example, population ageing, and transition to a low-carbon and knowledge-based economy. The

direction of other trends is characterised by relatively high uncertainty – for example, the social and economic outlook after the financial crisis, the future of work, the future of the Union and its future social model. All of these trends are likely to hold some clear risks and opportunities for EU employment and labour market policy. We have identified a number of policy challenges for EU and Member State employment policy that are expected to emerge over the coming years. The question is how the EU can take advantage of these opportunities and mitigate the risks.



## Chapter 7 Policy implications

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This report has looked at two important aspects of the EU policy agenda: promoting labour force participation, in particular the participation of young (16–24) and old (55–64), and reducing sustained income inequality between groups and territories in the EU. In this chapter we shall collate the findings of a review of past and future trends and developments, and assess their significance for the future of EU employment and labour market policy.

### What does recent history tell us about labour force participation?

The preceding chapters have shown some progress against the main targets set out in the Lisbon Strategy. In terms of employment, rates steadily climbed until the start of the current economic crisis, when employment rates decreased sharply in several European Member States

Progress against the Lisbon targets rightly focused attention on targeting vulnerable groups. There are significant groups of individuals with low labour force participation rates. They seem particularly vulnerable at time of economic crisis and often struggle to participate in the labour force. This matters in making progress on Lisbon Strategy and Europe 2020 agenda as well for societal reasons. Labour force participation is important from a social standpoint<sup>28</sup> – especially so for younger people, older people, and vulnerable groups such as migrants – for the following reasons (see also Hemerijck, 2005):

- Participation is deemed important in limiting the growth of inequality in society (Kenworthy, 2008).
- Participation is an instrument for promoting the social inclusion of minority groups (Hemerijck, 2005).
- Labour force participation of young people prevents further social exclusion and longer-term unemployment.
- Employment of older people is becoming more salient, given the trends of population ageing and the longer-term demand from the labour market.
- Participation is crucial in terms of the longer-term viability of the welfare state.

These observations are especially relevant, given present and future developments. The current economic crisis is likely to have more impact on vulnerable groups than on others. The labour force participation of these groups is particularly sensitive to changes in aggregate unemployment rates. Chapter 3 identified a positive association between the aggregate unemployment rates and young and old groups deciding not to participate in the labour market. Population ageing puts pressure on the welfare state and likely requires workers who are older to stay in employment for longer.

Targeting these groups requires some consideration of what keeps them out of the labour market at present. As we saw in Chapter 3, various drivers of labour market developments have an impact on the participation rates of young and older people. Moving towards higher-paid white-collar service jobs and changes in the industry mix enhances the probability of the young being in work. However, it also enhances the chances of young people not being in employment or school, an increasingly important issue for policy makers. A significant

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<sup>28</sup> There is an intensive debate in the literature. Work is an increasingly important part of social interaction, given the breakdown of family and community. For an overview see Kenworthy (2008).

number of young people are not in education or work and face potentially long-term unemployment. For the older groups, there are positive associations between those of this group who are working and population ageing and changes in the industry mix of the European economy. However, changes in skill requirement lead to workers who are older participating less in the labour market. Increases in the aggregate unemployment rate are also associated with reduced working within this group.

It seems clear that changes in the aggregate employment may affect groups differentially. The current crisis shows that younger workers are affected more severely than older workers, whose LFPRs have shown some resilience in the face of crisis (ILO, 2010). The differences between groups also speak to the need to understand the trade-offs in labour force participation between them. An important finding in our review is that there is limited evidence that there are significant trade-offs between the labour force participation trends of different groups – for instance, between female, older and young groups. This does not mean that these groups are not substitutes in the labour market but that trends can move positively together and should encourage policy makers on two levels:

- Effective labour market policy will affect the more vulnerable groups positively.
- Targeting the overall labour force participation of specific groups does not need to be at the expense of other groups.

### What works in promoting labour force participation?

Promoting labour force participation is complex as it requires an understanding of the choices people make and the institutional and policy context within which they can or cannot make these choices, and the evidence base for what works in what context. However, a policy consensus seems to be emerging.

From a policy perspective it seems clear that investment in education and skills is critical for promoting labour force participation and integrating individuals into labour markets (Atkinson, 2008). For these population groups given current trends, it is important:

- to keep the young in employment or school;
- to upgrade the skills of older workers and invest in skills training over the lifecycle of employment;
- to promote the uptake of new ways of working and ensure working conditions are suitable for participation in the labour market of the young and old;
- to promote employment in general, as labour force participation rates in these groups will also benefit from general improvements in the aggregate rate of employment.

These policy recommendations reside on a general level. For young people, preventing school drop-out seems to be of key importance. Staying in education is a significant factor; 15 to 20 per cent of young people drop out of secondary education without the skills and the knowledge required to enter employment. Education and investment in skills are complementary and also share the so-called recursive productivity feature, which means that education at one stage is an input into the learning process of the next stage (Heckman and Carneiro, 2003). Evidence from the United States suggests that educating children in their early childhood may be highly efficient, especially when targeted at disadvantaged children (Heckman and Carneiro, 2003). For European countries, there are few well-designed research studies for comparison.

In terms of improving the skills of workers and of those seeking employment, there has been a lot of debate about the effectiveness of active labour market programmes and education. The evidence is often clouded owing to the absence of systematic evaluation of programmes. This report as such is a call for further systematic evaluation in this area and for a general improvement of the evidence base. We discuss a number of components: training programmes, adult learning and vocational education.

Training programmes, the most widely used labour market policy intervention, appear to be effective for some groups (i.e. adult women) but not for others (adult and young men) (European Commission, 2007a, p. 138). Eurofound (2008) points to the importance of ensuring that training opportunities are available, for instance for older workers.

Despite all the efforts undertaken to evaluate labour market policies, there is no clear-cut evidence regarding the effect of labour market poli-

cies on outcomes. The variety of programmes and instruments introduced and lack of incentive to consider the long-term effects are possible explanations. A recent meta-study for the EU (Kluve *et al.*, 2008) found that training programmes have increased re-employment rates. However, there is some evidence that programmes are ineffective in improving workers' employability (in Sweden, for instance; OECD, 2004a). Evaluating the impact of training policies at the macro level found that spending on active labour market policies has a positive impact on unemployment and eases labour market adjustment (OECD, 2004a).

Most Member States have introduced lifelong learning approaches in their adult training policies. This is in part in response to the target set by the European Commission (OECD, 2006c, p. 117), that at least 12 per cent of the adult population of working age should participate in further training by 2010. It is argued that policy makers should have a life-cycle perspective because it is more efficient to improve the labour market status of unskilled adults if they had some training as children (Hornstein *et al.*, 2005). Unskilled adult workers with little technological know-how are unable to keep up during technologically progressive periods, and wage or job subsidies may be more effective than retraining programmes (Hornstein *et al.*, 2005).

Studies show a number of areas of improvement in Europe. One of the areas that could be improved is the link between training and employment (Doudeijns and Dumont, 2003). For instance, one conflict in the past has been the focus on short-term training adopted by the public employment services, which has had negative effects on long-term, higher-qualification programmes. Some countries have attempted to tailor adult training programmes to labour market needs. In the United Kingdom collaboration between public employment services and different partners has been introduced through the Skills Alliance and the current collaboration between Jobcentre Plus and the Learning and Skills Council. Many recipients of welfare programme are low skilled and need to be encouraged to participate in the labour market. This raises the need to link adult learning to social welfare programmes. More work could be done to foster and consolidate collaboration with social partners; such collaboration may help to ease the skill-upgrading process – includ-

ing, for example, the certification and recognition of skills. Collaboration has been taking place in Austria and Germany for some time, and trades unions and business associations have jointly developed curricula and examinations for certain professions. The OECD (Doudeijns and Dumont, 2003) has suggested that action is needed on several levels to overcome existing supply and demand barriers. Among other things, companies – particularly small and medium enterprises (SMEs) – need encouragement to set up skills-based training plans. They also need to look for multiple ways of reconciling production time with training time, for example by using worker rotation schemes.

In several Member States vocational education has an important role at the end of or directly after the compulsory schooling cycle. The debate on vocational versus academic qualifications and their pay-offs is more heated in some European countries than others. But despite its prevalence in many European countries, there is a lack of empirical evidence on the impact of vocational training. Europe-wide assessments are particularly hard to arrive at because the extent, design and implementation of vocational education are different across countries and even across sectors within countries (Soskice, 1995).

The work environment and working conditions may be barriers for individuals staying in employment, especially older workers (Eurofound, 2008). Moreover, young individuals could receive more work opportunities under flexible working arrangements. Thus the uptake of new working arrangements and setting of working conditions to encourage either the integration of young workers or the retention of older workers could be a valuable policy lever. Such working conditions also relate to how restructuring occurs. For instance, arrangements between companies and social partners could encourage early retirement, affecting the labour force participation of the old (see, e.g., Hurley, Mandl *et al.*, 2009). Finally, employment promotion in general seems to improve the labour market outcomes of vulnerable groups.

### **What does recent history tell us about inequality?**

Inequality has remained unchanged over the life of the Lisbon Strategy and changed only moderately at the start of the economic crisis in 2008.

Enlargement, which was expected to have a negative impact on inequality rates, has not produced that result. When looking at inequality in society, there is a debate as to what extent inequality matters. Income inequality varies between regions and Member States. The main finding here is that it is important to assist groups that are at risk of sustained poverty and to ensure that those in society have similar access to opportunities. Sudden changes in income inequality may be problematic. These sudden changes may be more pronounced when the population is ageing and during a transition to a knowledge-based, low-carbon economy. Here education interacts with income inequality. In general terms, the impact of educational attainment on income inequalities depends on the balance between ‘composition’ and ‘wage compression’ effects (Knight and Sabot, 1983). The ‘composition’ effect refers to the increase of income inequality when the educational level of the population rises, while the ‘wage compression’ effect means that promoting education in general tends to lower income inequality over time.

An interesting finding is that within-group (by education, gender, age or sector) inequality is becoming more important in the EU than inequalities between groups. This differentiates Europe from the United States, where inequality between groups is more characteristic. Within-group inequality in Europe appears to be associated with flexible labour markets, which allow part-time and flexible working arrangements. The concept of flexicurity has shaped the European labour market policy for the decade to 2010. Moreover, flexible working arrangements have been touted as potential policy levers to encourage older workers to stay in work and offer opportunities for younger workers. Understanding the dynamic of within-group inequality is therefore of importance in going forward. If policy makers are serious about tackling within-group inequality, some difficult choices about how and where to intervene and reduce the flexibility of employers and employees need to be made.

In Chapter 4 we looked at the evidence of significant trade-offs between labour market outcomes and income inequality. The evidence suggests to some extent that lower income equality is not associated with lower employment. This means that addressing income inequality may not lead to major distortions in the labour markets.

## What works in reducing income inequality?

There is not one policy for tackling inequality. As in labour force participation and as seen in Chapter 4, inequality is often part of the fabric of a country. It is a product of the social model of a country and the choices that people make within society. Indeed, outcomes such as inequality and employment rates are often associated with specific groups of Member States with characteristic institutional set-ups and social policies (see Ferrara, 2005).

A comprehensive overview of what works to combat income inequality is therefore beyond the scope of this report. That would require an evaluation of the effectiveness of the welfare state and indeed judgement about which particular social model is best. Nonetheless, the review offers some hints about what policy makers may consider. There are broadly four ways in which policy makers try to address income inequality:

- skills training;
- transfer payments consisting of pension payments, social assistance and employment insurance;
- active labour market programmes;
- regulation.

We can be brief about skills training as we covered this in the previous section. The assumption is that improving the skills of workers and those seeking work improves outcomes such as employment and wages. However, as noted in our analysis in Chapter 3, the key problem is managing those groups with which moves towards more education and high-skilled jobs are associated with low labour force participation.

Transfer payments have been the predominant strategy in the last decade. Governments now ‘spend more on social protection than any time in history’ (OECD, 2008b). In the decade to 2010, the total expenditure on social protection has increased in all the EU countries for which data are available by 1.4 times to 2.1 times. The largest share of social protection expenditure was to the old age and survivors’ function, followed by the sickness function, accounting for 46 per cent and 29 per cent of total expenditure respectively in 2005. The shares of different functions have been about the same in 1996.



An evaluation of the effectiveness and efficiency of European (British, Dutch, Finnish, French, Italian and Swedish) social assistance benefit systems on income inequality finds more is not necessarily better (Hölsch and Kraus, 2006). Specifically, greater social assistance reduces inequality in the United Kingdom, The Netherlands and Sweden; however, in Italy levels of social benefits do not affect inequality. When considering the efficiency (calculated as the percentage reduction in the share of social assistance expenditure in GDP), Sweden, Finland and France improve their ranking while the United Kingdom no longer performs well. There are problems with cross-country comparisons, however, since the definition of social assistance funds is slightly different across countries. Although the French system performs relatively well in terms of efficiency compared with the United Kingdom, a more in-depth analysis of France finds fiscal redistribution from the employed to unemployed reduced incentives for firms to engage in skill-biased technological change (Piketty, 1999). The effect was to exert downward pressure on the wages of the skilled and keep incomes less dispersed. However, the same type of outcome – low wage dispersion – could have been achieved at a lower cost with a job subsidy policy instead of an income maintenance policy ‘simply because it is always less costly to have people at work producing something’ (Piketty, 1999, p. 1). Since transfers are relatively generous in France, using transfers to cut low-wage payroll taxes alleviates the tax burden on highly skilled workers. Essentially, firms are incentivised to hire low-wage labour even during periods of technology-induced changes.

A longer-term solution is to help people get out of poverty by getting them into work so that they have a sustainable income. A wide range of ‘welfare-to-work’ programmes has been adopted by a number of OECD countries. The idea was that beneficiaries’ entitlement to unemployment-related benefits was conditional upon taking up help in finding and actively preparing for work. Examples of these programmes include automatic referral of beneficiaries to available vacancies, services aimed to facilitate the transition from benefits to work, changes in tax and benefit rules to reduce possible unemployment traps, tighter obligations on beneficiaries to accept suitable job offers, and benefit sanction in case of non-compliance. Addi-

tionally these active labour market policies need to be targeted at vulnerable groups. Again, we are unaware of any systematic evaluation of welfare-to-work programmes across Europe.

One of the more interesting findings in this review is the occurrence of within-group inequality in Europe. Regulation is often mooted as a way to manage within-group inequality, which is prevalent in the EU. Within-group inequality is associated with flexible labour markets, which allow part-time working and flexible working arrangements. A traditional approach to addressing within-group inequality would be to reduce some of the flexibility of the market – for example, by setting a guaranteed minimum income or wage level, or ensuring effective minimum standards and protection for employment for employees and reasonable ones for employers. However, there is limited evidence for the effectiveness of increasing the minimum wages with regard to within-group inequality. In addition, given the current economic climate and the debates around introducing more labour market flexibility, it seems unlikely that many governments will seriously consider further raising the minimum requirements and strengthening regulations on working conditions in the short term. The challenge for policy makers interested in managing income inequality and promoting employment is therefore to find a balance between labour market flexibility and an acceptable level of inequality.

### **What will be the key policy challenges going forward?**

In our reviews, the relationships between trends and labour market outcomes and income inequalities were examined more closely. As summarised in Table 7.1, we have shown that labour market outcomes have been and may continue to be driven by occupational upgrading, changes in the industry mix and population ageing. In particular, challenges will remain around the inclusion in the labour force of vulnerable groups who may be susceptible to changes such as occupational grading and changes in the industry mix. Population ageing speaks to the importance of the labour force participation of older workers (55–64).

For income inequality, occupational upgrading is important. In addition, possible reductions in government transfers, new modes of working,



**Table 7.1**  
**Overview of trends per review**

	Labour market developments	Income inequality
Demographic change	X	
Change in female participation	X	X
Educational expansion	X	X
Change in industry mix	X	
Occupational upgrading	X	X
Increase in flexible working		X
Increase in government transfers		X
Change in labour market institutions		X
Progressive taxation		X
Opening up of trade		X

possible trade protection, and uncertainty on how European policy will be coordinated are all factors that could be relevant in the future. Policy makers need to manage inequality while reforming social welfare and pension systems, reducing government expenditure, anticipating new modes of working, and building common European platforms where traditionally the European Commission has not had a mandate. The latter is made harder by an economic crisis that has had a differential impact across the EU.

We have presented evidence for the effects that these trends have on outcomes in labour force participation and income inequality, and we have shown that addressing some of the trends may in some cases be at the expense of other objectives. While this will help policy makers in addressing these challenges in the future, there are limitations to using historical evidence for decision making about the future. Labour markets and the drivers underpinning them may behave in different ways because the future exhibits uncertainty and unpredictability. The future developments presented in Chapter 6 may have a variety of effects on EU labour markets. Given the varying degree of uncertainty, rather than trying to predict the developments and their impacts it is important to anticipate plausible future trends and events. Policy challenges may involve taking decisions that are robust under different future conditions

rather than those that are optimal under specific scenarios. In Table 7.2, we have listed a number of those policy challenges derived from the analysis of future trends. The level of uncertainty is based on what is described in the literature cited in Chapter 6.

## Summing up

This report has tried to understand how key drivers interact with some of the targets of the Lisbon Strategy and the current Europe 2020 agenda – labour force participation and reducing income inequality – with a view to informing the policy debate on the future of EU employment and labour market policy. The intention was to take stock of the achievements and remaining challenges of the Lisbon Strategy moving forward to the Europe 2020 agenda, to investigate the scope for addressing these challenges without concessions to other priorities, and to highlight future trends and uncertainties that may affect these challenges.

Both low labour force participation and high income inequality remain significant policy problems across the European Union. Progress in these two areas is crucial in Europe achieving the targets set in the Europe 2020 agenda. The aftermath of the economic crisis of 2008 has undone much of the progress on improving employment and growth in Europe over the last 20 years. Vulnerable groups in particular remain at risk of poverty and not being in employment and education. Progress on the Europe 2020 agenda requires targeting the problems of social inclusion of these vulnerable groups. To make progress on these objectives, it is important to understand what is driving low labour force participation and income inequality in specific groups. Our analysis shows that certain trends are particularly problematic for specific groups. In labour force participation, we highlighted the negative association between skills upgrading and older workers being in employment. We also noted the problem of young people not in education and work and the positive association between this labour market state and changes in the industry mix and a move to white collar employment. Educational expansion and a move towards higher skilled jobs among others also show an association with higher income inequality. Going forward, as outlined in the previous sec-

**Table 7.2**  
**Future trends and their challenges for EU labour markets and employment policy**

Future trend	Level of uncertainty	Policy challenges
Knowledge-based economy	Low/medium	<ul style="list-style-type: none"> <li>Raising the stock of workers with scarce skills in the EU labour force to fill increasing supply of knowledge-intensive jobs</li> <li>Managing the increasing mismatch between demand and supply at both ends of the skill distribution to minimise the duration and negative impacts of subsequent structural unemployment</li> </ul>
Population ageing	Low	<ul style="list-style-type: none"> <li>Investing in education and training to prepare young people for the labour market</li> <li>Bringing more people into the labour market, including migrants, women, and the disabled, in an economically challenging climate and against increasingly anti-immigrant sentiments</li> <li>Encouraging substantial and comprehensive investments in the compatibility of career and parenthood during a time of high public deficits to promote employment</li> <li>Minimising the adverse consequences of conflicting interests between the young and the old</li> <li>Reforming Europe's welfare systems while guaranteeing adequate social protection and equity between the generations</li> <li>Creating public support for the introduction of structural reform in Europe's pension, healthcare and labour market systems</li> </ul>
Low carbon economy	Medium	<ul style="list-style-type: none"> <li>Managing the employment effects of climate change mitigation policies by preparing labour markets and education systems</li> <li>Dealing with the potential trade-off between shifting to a low-carbon economy and keeping unemployment low elsewhere</li> <li>Addressing the impacts of climate change on migration, risk of poverty, social cohesion, and vice versa</li> <li>Furthering human capital and skills as a means of raising labour productivity, and as a vehicle for social mobility, through the education and the workplace</li> </ul>
Aftermath of the financial crisis	Medium/High	<ul style="list-style-type: none"> <li>Mitigating the disproportionate impact of the crisis on vulnerable groups, including young people, elderly people, working poor, disabled people, etc., and avoiding further income inequalities, and persistently high poverty rates</li> <li>Strengthening cooperation with external partners, particularly the emerging economies, so as to take better advantage of worldwide economic and social networks</li> <li>Fostering creative destruction and a new social deal: introducing structural reform while guaranteeing adequate social protection and investing in human capital while under economic pressure (e.g. stimulus packages for a low-carbon economy)</li> <li>Maintain public and private investment in research, education and innovation in a climate of economic downturn and budget pressures</li> <li>Avoiding a race to the bottom in labour costs and conditions and not pursuing competitiveness strategies based either on low costs or on monopolisation</li> </ul>
Future of the Union	High	<ul style="list-style-type: none"> <li>Identifying the role for EU employment and social strategy and the mandate of EU institutions</li> <li>Developing a contingency strategy for hard regulation: in a Europe where common goals and interests are sparse, should the Commission become an honest broker, and establish a basis for mutual learning, identifying mutual interests and supporting Member States to act on them?</li> <li>Identifying the common denominator with regard to employment policy issues in a highly fragmented Europe, such as working conditions, income inequality, anti-discrimination, adequate social protection, and active employment policy</li> </ul>
Future of work	Medium/High	<ul style="list-style-type: none"> <li>Signalling, identifying and addressing new employment risks that merge with new ways of working.</li> <li>Monitoring systems of rewarding labour and addressing potentially new trends in income inequalities and poverty</li> <li>Encouraging Member States to facilitate the combination of higher education and a career with family life, as both labour participation and family formation are important determinants of economic growth and social inclusion.</li> <li>Developing a contingency plan for the social inclusion strategy. Social inclusion through employment is relatively ineffective in case structural unemployment is soaring and the incentives to join the work force are low</li> </ul>
Future of EU social model	Medium/High	<ul style="list-style-type: none"> <li>Reconsidering social partners in Member States since the influence of unions is changing</li> <li>Developing alternatives to employment as the only solution to social inclusion, given the need to cope with increasing structural unemployment</li> <li>Supporting convergence of national social policies and common learning as all Member States are struggling to reform their policies to deal with similar challenges</li> </ul>

tion, these trends will remain and in cases such as population ageing and occupational upgrading (a move towards white collar employment) become more pressing, while other trends such as the move to a low-carbon economy will come into play.

Targeting specific outcomes or problems in specific groups also requires an understanding of whether what is done to support progress on one priority does not have consequences for other outcomes or vulnerable groups. Our analysis shows that what is done to support the labour force participation of specific vulnerable groups does not have to come at the expense of others. This is a novel and important insight for policy makers. Moreover, a reduction of income inequality across society may not have to impact other macroeconomic outcomes such as employment.

However, evidence on concrete policy solutions is still limited. On the one hand, there is an absence of systematic evaluations that outline what works in specific environments. On the other hand, contextual factors make it difficult to collect good comparable data on policy outcomes across Europe. We know something about the general policy principles that appear important such as early (childhood) intervention, good labour market policy in general (flexible labour markets), job placement, keeping young people and other vulnerable groups in education or work, setting minimum standards for employment (e.g. minimum wage), skills training over the lifecycle of employment (incorporating employers) among others.

These policy principles are useful for European policy makers. In addition, they emphasise the importance of enabling social policy or social investment such as job placement and training, skills upgrading, and early childhood interventions targeted to specific groups at risk of exclusion from the labour markets or of poverty. Evidence from Nordic countries shows that the increased use of enabling social interventions could effectively complement basic social insurance such as income guarantees and defined benefit schemes in mitigating against social risks with high social costs such as sustained poverty and long-term unemployment. Moreover, as the review highlights these targeted policies do not need to impact other macroeconomic outcomes or other groups.

Europe has responded to the global economic crisis by effectively promoting enabling social

policy and emphasising later retirement, promoting training and job placement, and extending flexible working arrangements among others. For Europe to achieve its Europe 2020 obligations, it needs to continue to make social investments in a climate of fiscal austerity. This presents some challenges as fiscal austerity could imply significant welfare cuts. Policy makers also need to find the political will to invest in policy measures such as early childhood interventions and training that will only yield results in the longer run.

Action at European level at this time seems intuitively important as divergence of labour force participation and income inequality rates across groups between Member States may undermine European cohesion and the process of European integration. What would European action consist of? Firstly, there is a clear need for better information among policy makers to understand which aspects of policy work in specific national and regional contexts. Collecting such information becomes more pressing given the challenges of future and current trends that we know about and are outlined above. Secondly, improving labour force participation and addressing income inequality across Europe requires a concerted strategy to define common principles on social and employment policy and values that can facilitate effective policy coordination and exchange. Clearly, Europe has some good performers in these policy areas and countries can learn from each other in how policy challenges have been addressed and social models have evolved. European institutions could more effectively facilitate this process.

The Europe 2020 agenda is important in framing strategies and monitoring progress. However, the key challenge for European institutions such as the European Commission will be facilitating the exchange of best practice and information on what works across Member States, with the aim at times to bring Member States closer together and seek some convergence in how social models evolve, while at the same time acknowledging a degree of flexibility to reflect the national and regional contexts. This balancing act will be difficult given the limited European mandate in this area, but seems imperative in ensuring a competitive and inclusive Europe and supporting the current process of European integration going forward.

## List of references

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- Abraham, K.G., and Faber, H.S. (1987), Job Duration, Seniority, and Earnings, NBER Working Paper No. W1819. Available at: <http://www.nber.org/papers/w1819.pdf>
- Acemoglu, D. (2001), Human Capital Policies and the Distribution of Income: A Framework for Analysis and Literature Review, New Zealand Treasury Working Papers No. 01/03, Available at: <http://www.treasury.govt.nz/publications/research-policy/wp/2001/01-03/twp01-03.pdf>.
- Alesina, A., R. Di Tella and R. MacCulloch (2004), 'Inequality and Happiness: Are Europeans and Americans Different?', *Journal of Public Economics*, 88, pp. 2009–42.
- Altbach, P.G., L. Reisberg and L.E. Rumbley (2009), Trends in Global Higher Education: Tracking an Academic Revolution, A Report prepared for the UNESCO 2009 World Conference on Higher Education, Available at: <http://129.194.160.51/webdav/site/developpement/shared/developpement/cours/E759/Altbach,%20Reisberg,%20Rumbley%20Tracking%20an%20Academic%20Revolution,%20UNESCO%202009.pdf> (accessed 30.11.2010).
- Artige, L., and R. Nicolini (2006), Labor Productivity in Europe: Evidence from a Sample of Regions, CREPP Working Paper 0608, Centre de Recherche en Economie Publique et de la Population (CREPP; Research Center on Public and Population Economics) HEC-Management School, University of Liège, Available at: <http://www2.ulg.ac.be/crepp/papers/crepp-wp200608.pdf>.
- Arulampalam, W., A.L. Booth and M. Bryan (2007), 'Is there a Glass Ceiling over Europe? Exploring the Gender Pay Gap across the Wages Distribution', *Industrial and Labour Relations Review*, 60(2), pp. 163–86.
- Atkinson, A.B. (2008), *The Changing Distribution of Earnings in OECD Countries*, Oxford: Oxford University Press.
- Atkinson, A.B., B. Cantillon, E. Marlier and B. Nolan (2005), Taking forward the EU Social Inclusion Process, independent report commissioned by the Luxembourg Presidency of the Council of the European Union, Available at: [http://www.esri.ie/pdf/BKMNEXT067\\_Taking%20Forward.pdf](http://www.esri.ie/pdf/BKMNEXT067_Taking%20Forward.pdf).
- Autor, D.H., F. Levy and R.J. Murnane (2003), 'The Skill Content for Recent Technological Change: An Empirical Exploration', *Quarterly Journal of Economics*, 118(4), pp. 1279–1333.
- Ayala, L., R. Martinez and J. Ruiz-Huerta (2002), 'Institutional Determinants of the Unemployment–Earnings Inequality Trade-off', *Applied Economics*, 34, pp. 179–95.
- Baldwin, R.E. (1994), 'The Effects of Trade and Foreign Direct Investment on Employment and Relative Wages', *OECD Economic Studies*, Winter, p. 23.
- Banks, A.S. (2001), Cross-National Time-Series Data Archive [dataset]. Binghamton, NY: Computer Systems Unlimited, Available at: <http://www.databanksinternational.com>.
- Berman, E., J. Bound and S. Machin (1998), 'Implication of Skill-biased Technological Change: International Evidence', *Quarterly Journal of Economics*, 113, pp. 1245–79.
- Blanchard, O. (1998), Revisiting European Unemployment: Unemployment, Capital Accumulation, and Factor Prices, NBER Working Paper No. W6566, Available at: <http://www.nber.org/papers/w6566.pdf>
- Blanchard, O. (2004), A Macroeconomic Survey of Europe, Available at: <http://econ-www.mit.edu/files/754>.
- Blanchflower, D.G. (2001), 'Unemployment, well-being and wage curves in Eastern and

- Central Europe', *Journal of Japanese and International Economies*, 15, 364-402.
- Blanchflower, D.G., and R.B. Freeman (2000), 'The Declining Economic Status of Young Workers in OECD Countries', in D.G. Blanchflower and R.B. Freeman (eds.) *Employment and Joblessness in Advanced Countries*, Cambridge MA: NBER.
- Bloendal, S., S. Fickel, N. Girouard and A. Wagner (2002), *Investment in Human Capital through Post-compulsory Education and Training*, Paris: OECD.
- Bloom, D.E., and D. Canning (2000), 'The Health and Wealth of Nations', *Science*, 287, pp. 1207-9.
- Bloom, D.E., D. Canning, G. Fink and J. Finlay (2009) 'Fertility, Female Labor Force Participation, and the Demographic Dividend', *Journal of Economic Growth*, 14(2), pp. 79-101.
- Borghans, L., and B. ter Weel (2002), 'Do Older Workers have more Trouble using a Computer than Younger Workers?', *Economics of Skill Obsolescence*, 21, pp. 139-73.
- Boucekkine, R. (2002), 'Vintage Human Capital, Demographic Trends, and Endogenous Growth', *Journal of Economic Theory*, 104(2), pp. 340-375.
- Bratsberg, B., K. Røed, O. Raaum, R. Naylor, M. Jäntti, T. Eriksson and E. Österbacka (2007a), 'Marital Sorting, Household Labor Supply, and Intergenerational Earnings Mobility across Countries', *Advances in Economic Analysis & Policy*, 7(2), p. 1767.
- Bratsberg, B., K. Røed, O. Raaum, R. Naylor, M. Jäntti, T. Eriksson and E. Österbacka (2007b), 'Nonlinearities in Intergenerational Earnings Mobility: Consequences for Cross-Country Comparisons', *Economic Journal*, 117 (519).
- Brown, O. (2008), *Migration and Climate Change*, IOM Immigration Research Series, No. 31, 64 pp, Available at: <http://www.iisd.org/publications/pub.aspx?pno=954> (accessed 30.11.2010).
- Cave, J.A.K., van Oranje, C., Schindler, R., Shehabi, A., Brutscher, P.B. and Robinson, N. (2010), *Trends in connectivity technologies and their socio-economic impacts*, Final report of the study: Policy Options for the Ubiquitous Internet Society TR-776-EC.
- Chen, H.M., and Y.H. Hsieh (2006), 'Key Trends of the Total Reward System in the 21st Century', *Compensation Benefits Review*, 38(6), pp. 64-70.
- Christev, A., O. Kupet and H. Lehmann (2005), *Trade Liberalization and Employment Effects in Ukraine: Comparative Economic Studies*, Available at: <http://amsacta.cib.unibo.it/archive/00001815/01/552.pdf> (accessed 30.10.2008).
- Clasen, J. (2000), 'Motives, Means and Opportunities: Reforming Unemployment Compensation in the 1990s', *West European Politics*, 23(2), pp. 89-112.
- Comi, S. (2004), *Intergenerational Mobility in Europe: Evidence from ECHP*, Centre for Household, Income, Labour, and Demographic Economics, Child Working Paper No. 18/2004, Available at: <http://www.unicatt.it/istituti/economiaimpresalavoro/quaderni/ieil0057.pdf>
- Crul, M., and H. Vermeulen (2003), 'The Second Generation in Europe', *International Migration Review*, 37(4), pp. 965-86.
- Dang, T.T., P. Antolin and H. Oxley (2001), *Fiscal Implications of Ageing: Projections of Age-related Spending*, OECD Economics Department Working Papers No. 305, Paris: OECD Publishing, Available at: <http://www.oecd.org/dataoecd/1/22/2085481.pdf>.
- De Vries, C.E., and E.E. Edwards (2009), 'Taking Europe to its Extremes - Extremist Parties and Public Euroscepticism', *Party Politics*, 15(1), pp. 5-28.
- Doudeijns, M., and J. Dumont (2003), *Immigration and Labour Shortages: Evaluation of Needs and Limits of Selection Policies in the Recruitment of Foreign Labour*, paper presented at OECD and European Commission conference The Economic and Social Aspects of Migration, Brussels, 21-22 January, Available at: <http://www.oecd.org/dataoecd/13/59/15474016.pdf>.
- Duke, J., and V. Torres (2005), 'Multifactor Productivity Change in the Air Transportation Industry', *Monthly Labor Review*, 128(3), pp. 32-45.
- Dur, Robert A.J. and Coen N. Teulings (2003), 'Are Education Subsidies an Efficient Redistributive Device?', Tinbergen Institute, Tinbergen Institute Discussion Papers 03-024/3.



- ETUC, ISTAS, SDA, Syndex and Wuppertal Institute (2007), *Climate Change and Employment – Impact on Employment in the European Union-25 of Climate Change and CO2 Emission Reduction Measures by 2030*, Available at: <http://www.tradeunionpress.eu/Web/EN/Activities/Environment/Studyclimatechange/rapport.pdf> (accessed October 2009).
- Eurofound (2008), 'Working conditions of an ageing workforce, EF/08/57/EN.
- Eurofound (2009), 'Older people –keeping active and involved', EF/09/109/EN.
- European Commission (1992), *Towards a Europe of Solidarity – Intensifying the Fight Against Social Exclusion, Fostering Integration*, COM (92) 542, Brussels.
- European Commission (2005), *Employment in Europe 2005, Recent Trends and Prospects*, Available at: [http://ec.europa.eu/employment\\_social/employment\\_analysis/employ\\_2007\\_en.htm](http://ec.europa.eu/employment_social/employment_analysis/employ_2007_en.htm) (accessed 30.10.2008).
- European Commission (2006a), *The Demographic Future of Europe – From Challenge to Opportunity*. COM (2006) 571, adopted on 12 October 2006, Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=com:2006:0571:fin:en:pdf> (accessed August 2009).
- European Commission (2006b), *A Roadmap for Equality between Women and Men 2006–2010*, Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the regions, COM (2006) 92 final, Brussels, Available at: [http://europa.eu/legislation\\_summaries/employment\\_and\\_social\\_policy/equality\\_between\\_men\\_and\\_women/c10404\\_en.htm](http://europa.eu/legislation_summaries/employment_and_social_policy/equality_between_men_and_women/c10404_en.htm).
- European Commission (2007a), *Renewed Social Agenda: Opportunities, Access and Solidarity in 21st Century Europe*, COM (2008) 412, Available at: <http://ec.europa.eu/social/BlobServlet?docId=453&langId=en>.
- European Commission (2007b), *Employment in Europe 2007*, Available at: [http://ec.europa.eu/employment\\_social/employment\\_analysis/employ\\_2007\\_en.htm](http://ec.europa.eu/employment_social/employment_analysis/employ_2007_en.htm) (accessed 30.10.2008).
- European Commission (2007c), *Joint Report on Social Protection and Social Inclusion 2007*, Brussels: Directorate-General for Employment, Social Affairs and Equal Opportunities, Available at: [http://register.consilium.europa.eu/pdf/en/07/st06/st06694\\_en07.pdf](http://register.consilium.europa.eu/pdf/en/07/st06/st06694_en07.pdf).
- European Commission (2008a), *A European Economic Recovery*, Communication from the Commission to the European Council, COM (2008) 800, Available at: [http://ec.europa.eu/commission\\_barroso/president/pdf/Comm\\_20081126.pdf](http://ec.europa.eu/commission_barroso/president/pdf/Comm_20081126.pdf) (accessed August 2009).
- European Commission (2008b), *Fifth Progress Report in Economic and Social Cohesion – Growing Regions, Growing Europe*, Communication from the Commission to the European Parliaments and the Council, COM (2008) 371 final, Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0371:FIN:EN:PDF>.
- European Commission (2010a), *Energy 2020 – A Strategy for Competitive, Sustainable and Secure Energy*. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of the Regions. SEC(2010) 1346, Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0639:FIN:EN:PDF> (accessed 30.11.2010).
- European Commission (2010b), *Europe 2020: A European Strategy for Smart, Sustainable, and Inclusive Growth*, Available at [http://europa.eu/press\\_room/pdf/complet\\_en\\_barroso\\_\\_\\_007\\_-\\_europe\\_2020\\_-\\_en\\_version.pdf](http://europa.eu/press_room/pdf/complet_en_barroso___007_-_europe_2020_-_en_version.pdf) (accessed 19.01.2011).
- European Council (1975), 'Council Decision of 22 July 1975 concerning a Programme of Pilot Schemes and Studies to Combat Poverty', 75/458/EEC, *Official Journal of the European Communities*, L 199, Brussels.
- European Council (2000), *Presidency Conclusions*, Lisbon, 23 and 24 March 2000, Available at: [http://www.europarl.europa.eu/summits/lis1\\_en.htm](http://www.europarl.europa.eu/summits/lis1_en.htm) (accessed August 2009).
- Eurostat (2006), 'Expenditure on Training Measures for the Unemployed Across the EU', *Statistics in Focus*, 5/2006.
- Eurostat (2008a), *In the Spotlight. Demographic Change: Challenge or Opportunity?*, Luxembourg: Office for Official Publications

- of the European Communities. Available at [http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-CD-07-001-SPOT/EN/KS-CD-07-001-SPOT-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-CD-07-001-SPOT/EN/KS-CD-07-001-SPOT-EN.PDF).
- Eurostat (2008b), *The Life of Women and Men in Europe: A Statistical Portrait*, Luxembourg: Office for Official Publications of the European Communities, Available at [http://epp.eurostat.ec.europa.eu/portal/page?\\_pageid=1073,46587259&\\_dad=portal&\\_schema=PORTAL&p\\_product\\_code=KS-80-07-135](http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1073,46587259&_dad=portal&_schema=PORTAL&p_product_code=KS-80-07-135).
- Eurostat (2009), Population and Social Conditions Database – Education and Training, Online Database, Available online: <http://epp.eurostat.ec.europa.eu>.
- Eurostat (2010a), *17 per cent of Europe at Risk of Poverty*, News Release January 2010.
- Eurostat (2010b), Euro Area Unemployment Rate stable at 10.1 Per Cent, News Release August 2010., Available at: [http://epp.eurostat.ec.europa.eu/cache/ITY\\_PUBLIC/3-01102010-AP/EN/3-01102010-AP-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/3-01102010-AP/EN/3-01102010-AP-EN.PDF).
- Featherstone, K., and C.M. Radaelli (2003), *The Politics of Europeanisation*, Oxford: Oxford University Press.
- Fernandez-Kranz, D. (2006), 'Why has Wage Inequality increased more in the USA than in Europe? An Empirical Investigation of the Demand and Supply of Skill', *Applied Economics*, 38, pp. 771–8.
- Ferrera, M. (2005), *The Boundaries of Welfare*, Oxford: Oxford University Press, p. 247.
- Ferrera, M., A. Hemerijck and M. Rhodes (2007), *The Future of Social Europe: Recasting Work and Welfare in the New Economy*, Report to the Portuguese Presidency of the European Union, Available at [http://www.aueb.gr/deos/MASTER-GR/Ferrera\\_Hemerijck\\_Rhodes.pdf](http://www.aueb.gr/deos/MASTER-GR/Ferrera_Hemerijck_Rhodes.pdf).
- Frankhauser, S., F. Sehlleier and N. Stern (2008), 'Climate Change, Innovation and Jobs', *Climate Policy*, 8, pp. 421–9.
- Friedberg, L. (1999), *The Impact of Technological Change on Older Workers: Evidence from Data on Computers*, UCSD Discussion Paper 99-11, Available at: <http://digitalcommons.ilr.cornell.edu/ilrreview/vol56/iss3/9/>.
- Furlong, A. (2008), 'The Japanese Kikikomori Phenomenon: Acute Social Withdrawal among Young People', *Sociological Review*, 56(2), pp. 309–25.
- Gangl, M. (2002), 'Changing Labour Markets and Early Career Outcomes: Labour Market Entry in Europe over the Past Decade', *Work, Employment & Society*, 16(1), pp. 67–90.
- Geddes, A. (2003), *The Politics of Migration and Immigration in Europe*, London: Sage Publications.
- Giddens, A., P. Diamond and R. Liddle (2006), *Global Europe, Social Europe*, Cambridge: Polity Press.
- Goldin, C. (2004) 'Women's Educational Attainment and Early Choices', *Regional Review*, Q4.
- Granqvist, L., and H. Regnér (2006), *The Outcome of Individual Wage Bargaining and the Influence of Managers' Bargaining Power: Evidence from Union Data*, Swedish Institute for Social Research (SOFI), Stockholm University, Working Paper 3/2006, Available at: [http://econpapers.repec.org/paper/hhssofiw/2006\\_5f003.htm](http://econpapers.repec.org/paper/hhssofiw/2006_5f003.htm).
- Grant, J., and S. Hoorens (2006) 'The New Pronatalism – Policy Responses to Low Fertility in Europe', *Public Policy Research*, 13(1), pp. 13–25.
- Grant, J., S. Hoorens, S. Sivadasan, M. Loo van Het, J. DaVanzo, L. Hale, S. Gibson and W. Butz (2004) *Low Fertility and Population Ageing: Causes, Consequences, and Policy Options*, RAND MG206, Available at: <http://www.rand.org/pubs/monographs/MG206.html>.
- Guiguère, S. (2008), *More Than Just Jobs – Workforce Development in Skills-based Economy*, Paris: OECD.
- Hannan, D., and P. Werquin (1999), *Education and Labour Market Change: The Dynamics of Education to Work Transitions in Europe*, A TSER-European Socio-Economic Research conference, Available at: <http://www.cedefop.europa.eu/EN/Files/3008EN353HannanWerquin.pdf>.
- Heckman, J.J., and P. Carneiro (2003), *Human Capital Policy*, IZA Discussion Paper, No. 821, Available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=434544](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=434544).
- Heckman, J.J., and T.E. Macurdy (1980) 'A Life Cycle Model of Female Labour Supply', *Review of Economic Studies*, 47(1), pp. 47–74.



- Hecló, H. (1974), *Modern social politics in Britain and Sweden: From relief to income maintenance*, New Haven, CT: Yale University Press.
- Hemerijck, A. (2005), *Gebaande en ongebaande paden in Sociaal Europa: Over de institutionele samenhang van de nationale verzorgingsstaat en het proces van Europese integratie: Oratie Erasmus Universiteit Rotterdam*, Amsterdam: Amsterdam University Press, pp. 42–3.
- Hölsch, K., and M. Kraus (2006), ‘European Schemes of Social Assistance: An Empirical Analysis of Set-ups and Distributive Impacts’, *International Journal of Social Welfare*, 15, pp. 50–62.
- Hornstein, A., P. Krusell and G. Violante (2005), ‘The Effects of Technical Change on Labor Market Inequalities’, in P. Aghion & S. Durlauf (eds.), *Handbook of Economic Growth*, ed. 1, vol. 1, pp. 1275–1370.
- Hurley, J., Mandl, I. *et al.* (2009), *Restructuring in Recession*, ERM Report. Dublin, European Restructuring Monitor (ERM), European Monitoring Centre on Change (EMCC).
- International Labour Organisation (2010), ‘Global Employment Trends for Youth’, August 2010, Available at [http://www.ilo.org/empelm/what/pubs/lang--en/WCMS\\_143349/index.htm](http://www.ilo.org/empelm/what/pubs/lang--en/WCMS_143349/index.htm) (date accessed 19.01.2011).
- Jacobsson, K. (2004), ‘Soft Regulation and the Subtle Transformation of States: The Case of EU Employment Policy’, *Journal of European Social Policy*, 14(4), pp. 355–70.
- Jaumotte, F. (2003), *Female Labour Force Participation: Past Trends and Main Determinants in OECD Countries*, Paris: OECD.
- Jaumotte, F., S. Lall and C. Papageorgiou (2008), *Rising Income Inequality: Technology, or Trade and Financial Globalization?*, International Monetary Fund, Working Paper WP/08/185, Available at: <http://www.imf.org/external/pubs/ft/wp/2008/wp08185.pdf>
- Juhn, C., K. Murphy and B. Pirece (1993) ‘Wage Inequality and the Rise in Returns to Skill’, *Journal of Political Economy*, 101(3), pp. 410–42.
- Kenworthy, L. (2008), *Jobs with Equality*, Oxford: Oxford University Press.
- Kluve, J., D. Card, M. Fertig, M. Góra, L. Jacobi, P. Jensen, R. Leetmaa, L. Nima, E. Patacchini, S. Schaffner, C.M. Schmidt, B. van der Klaauw and A. Weber (2008), *Active Labor Market Policies in Europe. Performance and Perspectives*, Papers in Regional Science, 87(3), pp. 479–80. Published online (accessed 11.11.2008).
- Knight, J.B., and R.H. Sabot (1983), ‘Educational Expansion and the Kuznets Effect’, *American Economic Review*, 73(5), pp. 1132–6.
- Korenman, S., and D. Neumark (2000) ‘Cohort Crowding and Youth Labor Markets: A Cross-National Analysis’, in D.G. Blanchflower and R.B. Freeman (eds.), *Youth Employment and Joblessness in Advanced Countries*, Chicago, IL: University of Chicago Press.
- Kremer, M., and J. Thomson (1998), ‘Why isn’t Convergence Instantaneous? Young Workers, Old Workers, and Gradual Adjustment’, *Journal of Economic Growth*, 3, pp. 5–28.
- Kunze, A. (2002), *The Timing of Careers and Human Capital Depreciation*, IZA Discussion Paper No. 509, Available at: <http://ftp.iza.org/dp509.pdf>
- Lelkes, O. (2006) ‘Why are the Poor Poor?’, in European Observatory on the Social Situation, European Commission, Final Report of the Network on Social Inclusion and Income Distribution, DG Employment, Social Affairs and Equal Opportunities, Available at: [http://ec.europa.eu/employment\\_social/social\\_situation/docs/sso2005\\_social\\_inclusion\\_report.pdf](http://ec.europa.eu/employment_social/social_situation/docs/sso2005_social_inclusion_report.pdf).
- Machin, S. (1997), ‘The Decline of Labour Market Institutions and the Rise in Wage Inequality in Britain’, *European Economic Review*, 41, pp. 647–57.
- Maegher, G., and K. Healy (2006), *Who Cares? Volume 2: Employment Structure and incomes in the Australian Care Workforce*, Report to the Australian Council of Social Service.
- Mailand, M. (2008), ‘The Uneven Impact of the European Employment Strategy on Member States’ Employment Policies: A Comparative Analysis’, *Journal of European Social Policy*, 18(4), pp. 353–65.
- Marmot, M., and M. Bobak (2005), ‘Social and Economic Changes and Health in Europe East and West’, *European Review*, 13(1), pp. 15–31.
- Martins, P.S., and P.T. Pereira (2004), ‘Does Education Reduce Wage Inequality? Quantile

- Regression Evidence from 16 countries', *Labour Economics*, 11, pp. 355–71.
- Meier, V., and M. Werding (2010), Ageing and the Welfare State: Securing Sustainability. CESIFO Working Paper #2916. Available at: <http://www.ifo.de/> (accessed 30.11.2010).
- Meyer, J.W., F.O. Ramirez, R. Rubinson and J. Boli-Bennett (1977), 'The World Educational Revolution, 1950–1970', *Sociology of Education*, 50, pp. 242–58.
- Nickell, W. (2006), The CEP-OECD Institutions Data Set: 1960–2004, CEP Discussion Paper No. 759, Available at: [http://eprints.lse.ac.uk/19789/1/The\\_CEP-OECD\\_Institutions\\_Data\\_Set\\_\(1960-2004\).pdf](http://eprints.lse.ac.uk/19789/1/The_CEP-OECD_Institutions_Data_Set_(1960-2004).pdf).
- Nielson, F., A. Alderson and J. Beckfield (2005), *Exactly how has Income Inequality changed? Patterns of Distributional Change in Core Societies*, Luxemburg Income Study Working Paper Series, No. 422.
- O'Leary, N.C., P.D. Murphy and D.H. Blackaby (2004), 'Quantile Regression Estimates of the Union Wage Effect for Great Britain', *Manchester School*, 72(4), pp. 497–514.
- OECD (2004a), 'Improving skills for more and better jobs: does training make a difference?', *OECD Employment Outlook*, 2003, Paris: OECD, Available at: <http://www.oecd.org/dataoecd/8/26/34846890.pdf>.
- OECD (2004b), *Trends in International Migration 2004*, Paris: OECD.
- OECD (2006a), *International Migration Outlook*, SOPEMI.
- OECD (2006b), *OECD Employment Outlook, Boosting Jobs and Incomes*, Paris: OECD, Available at: <http://dipeco.economia.unimib.it/persona/colombo/silsis/oecd-emp-outlook-2006-stats.pdf>.
- OECD (2006c), *Promoting Adult Learning*, Paris: OECD, Available at: <http://www.oecd.org/dataoecd/14/54/35268366.pdf>
- OECD (2008a), *OECD Economic Outlook*, Nora 83, June. OECD (2008b) *OECD Employment Outlook*, Paris: OECD; downloadable: <http://www.oecd.org/dataoecd/14/16/41674412.pdf>
- OECD (2008c), *Education at a Glance – OECD Indicators*, Paris: OECD, Available at: [http://www.oecd.org/document/52/0,3746,en\\_2649\\_39263238\\_45897844\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/52/0,3746,en_2649_39263238_45897844_1_1_1_1,00.html)
- O'Mahonya, M., C. Robinson and M. Vecchic (2009), 'The Impact of ICT on the Demand for Skilled Labour: A Cross-country Comparison', *Labour Economics*, 15(6), pp. 1435–50.
- Ourti, T., V. Doorslaer and X. Koolman (2006), The Effect of Growth and Inequality in Incomes on Health Inequality: Theory and Empirical Evidence from the European Panel, Tinbergen Institute, Tinbergen Institute Discussion Papers 06-108/3; downloadable from: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=954708](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=954708).
- Panis, C.W.A., and L.A. Karoly (2004), *The 21st Century at Work – Forces shaping the Future Workforce and Workplace in the United States*, MG-164-DOL, RAND Corporation: Santa Monica, Available at: <http://www.rand.org/pubs/monographs/MG164.html>.
- Pellegrino, A. (2004) *Migration from Latin America to Europe: Trends and Policy Challenges*, prepared for the International Organisation for Migration, Geneva, Available at: <http://www.oas.org/atip/migration/iom%20report%20migration%20lac%20to%20eu.pdf>.
- Pettigrew, T. (1998), 'Reactions towards the New Minorities of Western Europe', *Annual Review of Sociology*, 24, pp. 77–103.
- Piketty, T. (1999), 'Explaining the Evolution of Income Inequality: Can Fiscal Redistribution undo Skill-biased Technical Change? Evidence from the French Experience', *European Economic Review*, 43, pp. 839–51.
- Putnam, R.D. (1993), *Making Democracy work: Civic Traditions in Modern Italy*, Princeton NJ: Princeton University Press.
- Raleigh, C., L. Jordan and I. Salehyan (2009), *Assessing the Impact of Climate Change on Migration and Conflict*, World Bank: Washington DC, Available at: [http://siteresources.worldbank.org/EXTSOCIALDEVELOPMENT/Resources/SDCCWorkingPaper\\_MigrationandConflict.pdf](http://siteresources.worldbank.org/EXTSOCIALDEVELOPMENT/Resources/SDCCWorkingPaper_MigrationandConflict.pdf) (accessed 30.11.2010).
- Raum, O., Bratsberg, B., Røed, K., Österbacka, E., Eriksson, T., Jäntti, M., Naylor, R. (2007). "Marital Sorting, Household Labor Supply and Intergenerational Earnings Mobility across Countries", mimeo, Russell Sage Foundation.
- Schnabel, C., and J. Wagner (2005), *Determinants of Union Membership in 18*

- EU Countries: Evidence from Micro Data, 2002/03*, Institute for the Study of Labor, IZA DP No. 1464.
- Schofer, E., and A. Hironaka (2005), 'World Society and Environmental Protection Outcomes', *Social Forces*, 84, pp. 25–47.
- Scott, P. (2009), Access in Higher Education in Europe and North America: Trends and Developments, paper prepared for the UNESCO Forum on Higher Education in the Europe Region: Access, Values, Quality and Competitiveness, 21–24 May 2009, Bucharest, Romania, Available at: [http://193.230.149.3/forum/pdf/Scott\\_access.pdf](http://193.230.149.3/forum/pdf/Scott_access.pdf) (accessed 30.11.2010).
- Shimer, R. (2001), 'The Impact of Young Workers on the Aggregate Labor Market', *Quarterly Journal of Economics*, 16(3), pp. 969–1007.
- Skirbekk, V. (2003), Age and Individual Productivity: A Literature Survey, Max-Planck-Institut fuer demographische Forschung, Working Paper 2003-028, Available at: <http://www.demogr.mpg.de/papers/working/wp-2003-028.pdf>.
- Soskice, D. (1995), 'A Comparative Review of National Training Models: Germany, the UK, the USA and Japan', in R. Koch and J. Reuling (eds.), *The European Dimension in Vocational Training*, Bundesinstitut Berufsbildung, Bielefeld: Bertelsmann Verlag.
- Spitz, A. (2004), Are Skill Requirements in the Workplace Rising? Stylized Facts and Evidence on Skill-biased Technological Change, ZEW Discussion Paper 04-33, Available at: <ftp://ftp.zew.de/pub/zew-docs/dp/dp0433.pdf> (accessed 30.10.2008).
- Spitz, A. (2005), The Effects of Changes in the Unemployment Compensation System on the Adoption of IT by Older Workers, IZA Discussion Paper No. 04-40, Available at: <ftp://ftp.zew.de/pub/zew-docs/dp/dp0540.pdf> (accessed 10.10.2008).
- Stevens, A., D. Berto, V. Kersch, K. Oeuvray, M. van Ooyen, E. Steffan, W. Heckmann and A. Uchtenhagen (2003), Summary Literature Review: The International Literature on Drugs, Crime and Treatment, University of Kent, Available at: [http://www.kent.ac.uk/eiss/documents/pdf\\_docs/QCTpercent20Europepercent20summarypercent20litpercent20review.pdf](http://www.kent.ac.uk/eiss/documents/pdf_docs/QCTpercent20Europepercent20summarypercent20litpercent20review.pdf) (accessed 30.10.2008).
- Stevens, A., M. Trace and D. Bewley-Taylor (2005), Reducing Drug Related Crime: An Overview of the Global Evidence, The Beckley Foundation Drug Policy Programme, Report 5, Available at: <http://www.beckleyfoundation.com/pdf/reportfive.pdf> (accessed 30.10.2008).
- Tsakoglou, P. and I. Cholezas (2005), Earnings Inequality in Europe: Structure and Patterns of Inter-temporal Changes, Athens University of Economics and Business, Department of International and European Economic Studies (mimeo).
- Uslaner, E. (2002), *The Moral Foundations of Trust*, Cambridge: Cambridge University Press.
- Visser, J. (2006), 'Union Membership Statistics in 24 Countries', *Monthly Labor Review*, 129(1), pp. 38–49.
- Wilkinson, R., and K. Pickett (2007), 'The Problems of Relative Deprivation: Why some Societies do Better than others', *Social Science & Medicine*, 65, pp. 1965–1978.



# Annex: Modelling association between labour market trends and labour force participation of young and old

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## Introduction

During the literature review of this study, the evidence suggested that there were some key developments associated with the supply of and demand for young and older workers across the Member States, such as female labour force participation. The extent to which these developments were still associated factors into 2009 was an empirical question not yet fully explored and a potentially interesting one for researchers and policy makers alike; therefore we conducted an econometric study into associated factors in the labour market situations for young and older people in the EU.

The importance of this work is that for years to come researchers will seek to understand the implications of the economic recession of the end of the first decade of the 2000s, and a particular avenue of interest may be the employment situation for young and older workers. Furthermore, policy makers may benefit from understanding what key developments are associated in young and old people's labour market situations.

Against this background, we examine the extent to which key developments are associated with the labour situations observed for the young and old people of nearly every Member State of the EU. We employ an empirical strategy in which we divide labour market outcomes into sets of discrete choices for young people and a set for older people. The reason is that this enables us to understand the situation of the young and old in more detail. It allows us, for example, to study not only what is associated with young people who are less likely to be working, but are also less likely to stay in education – and thus become idle. Similarly, for the old, rather than looking at whether the developments are associated with older workers not working in general, we specifically assess to what extent the

developments are correlated with older people not working *and* retiring.

In this annex we present the theoretical underpinnings for the basis of our empirical model. We then describe our empirical strategy by presenting the empirical model, describing the data set used to estimate the model and summarising the data statistically. We then present the results.

## Theoretical underpinnings

The basic theoretical framework is one of supply and demand for workers. As the supply of workers (i.e. the number of workers) increases, then with no change in demand there will be more workers applying for the same number of jobs. Unless any additional workers employed produced more than the others who were employed, firms would be hard pressed to hire the additional workers. They may lower wages in order to hire more workers; if that is not possible (e.g. due to union agreements) they may simply not hire any more. In that case, the probability of employment would decrease. If the group of additional workers was made up of young people, they may stay in school longer to avoid the low probability of employment. If the group of additional workers were older people, they may begin their retirement at an earlier age than expected in order to avoid poor employment prospects. There are, however, complementarities to consider. It is possible that the additional workers would make current workers more productive. In that case, hiring the additional workers improves the bottom line and it is still profitable to hire them.

For all these reasons, we may observe the young and old responding with alternative employment, schooling and retirement choices.

This is the standard neoclassical view of economics, and whilst there are additional complexi-

### Summary table of the empirical strategy

<b>What kind of model is it?</b>	A choice model estimated through multinomial logistic regression.
<b>What is the aim of the model?</b>	To describe quantitatively the extent to which key developments in the labour market are associated with particular labour market states for young and old people
<b>Why did we choose the model?</b>	We develop a model based on the theory of the firm because it incorporates how firms and workers behave. It is empirically a multinomial logistic regression because results are easily interpretable and consistent with the nature of the data.
<b>What does the model test?</b>	As key developments changed, was there no change/increase/decrease in young people's likelihood of being in one of three particular labour market states, as opposed to being in school and not working? For older people, as key developments changed, was there no change/increase/decrease in their likelihood of being in one of three particular labour market states, as opposed to working and not being retired?
<b>What can it tell us?</b>	Whether certain developments in the economy and society are associated with poor employment situations for young and old people.

ties to consider (e.g. altruism, short- and long-run strategies), it is a basis from which to start. Previous literature also frames the discussion. Blanchflower (2004) points out, for example, that a decline in the proportion of youth – all else being equal – should lead to both improved employment prospects and reduced unemployment rates.

### Empirical strategy

We follow Blanchflower (2001), in which we estimate the probability of a set of outcomes that are combinations of whether one is working or not and whether one is in school, out of school (or retired or not retired if aged 55+).

Formally, we estimate the following:

$$y_{it}^j = \alpha_j + \beta d_t + \gamma r_t^j + \varepsilon_j$$

where  $y$  is one of four labour market states for individual  $i$  at time  $t$  of age group  $j$ ;  $d$  is a set of key developments with a value at time  $t$ ;  $r$  is the unemployment rate of group  $j$ ; and  $\varepsilon$  is the random error term. There are two age groups comprising  $j$ , such that  $j \in (A, B)$  where  $A$  is for the ages of 16–24 (young) and  $B$  is for the age of 55 and older.

The parameters of interest are  $\beta$  and  $\gamma$ , where the former tells us the odds of being in a particular labour market state (relative to the baseline) as developments change marginally and the latter tells us the odds of being in a particular labour market state (relative to the baseline) as unemployment rates of the age group change marginally.

Following Blanchflower (2001), we allow  $y^A$  to be a set of four discrete outcomes:

- Being in school and not working (baseline)
- Being in school and working
- Not being in school and not working
- Not being in school and working.

For older people, the outcomes of  $y^B$  consist of the following four discrete outcomes:

- Being retired and not working
- Being retired and working
- Being not retired and not working
- Being not retired and working (baseline).

Our identification strategy is to use the variation within countries over time. That is, countries' rates of female labour force participation, for example, are changing over time, as is the proportion of people in various labour market states. As these variables change over time within a country, a statistically significant relationship may or may not begin to develop.

Given that there are multiple outcomes that are not ranked in any way, we estimate the model using multinomial logistic regression. We generate results (i.e. coefficients) in terms of odds ratios. Odds ratios provide a measure of effect size and illustrate the strength of association for binary data values.

Findings are expressed as an odds ratio, which is the *change* in likelihood of ending up in one labour market state as opposed to a baseline labour market state, given that there is a change in key developments. The baselines we choose are: 'being in school and not work' for the young, and 'being in work and not retired' for the old.



The aftermath of the economic crisis of 2008 has undone much of the progress on improving employment and growth in Europe over the last 20 years. Vulnerable groups in particular remain at risk of poverty and not being in employment and education, especially in light of trends that have shaped the labour market including changes in educational requirements and the changes in work.

The insights from our analysis and review form a useful input into developing European policy discussions. The review concludes that policy makers should focus more on enabling social policy that allows individuals to achieve their full productive potential and participate in the labour market as a complement to welfare approaches such as social insurance. Evidence from Nordic countries shows that the increased use of enabling social interventions can make an effective contribution to mitigating against social risks such as sustained poverty and long-term unemployment. Moreover, as the review highlights these targeted policies do not need to impact other macroeconomic outcomes or other groups.

European action is important. Improving labour force participation and addressing income inequality across Europe requires a concerted strategy to define the principles in employment and social policy and values and mechanisms that can facilitate effective policy coordination and exchange. It is obvious that Member States could learn from each other given the differences in income inequality and labour force participation rates in Europe. Further improvements also require better information on which particular policy responses are effective.

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