Europe’s Societal Challenges

An analysis of global societal trends to 2030 and their impact on the EU

Stijn Hoorens, Jeremy Ghez, Benoit Guerin, Daniel Schweppenstedde, Tess Hellgren, Veronika Horvath, Marlon Graf, Barbara Janta, Sam Drabble, Svitlana Kobzar
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Prepared for the Bureau of European Policy Advisers of the European Commission
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This report presents the findings of a study of global societal trends and their impact on the EU in the next two decades. The work is part of the European Strategy and Policy Analysis System (ESPAS) set up to develop a lasting framework to assess global trends and to develop policy responses across EU institutions over the next institutional cycle (2014-2019). The first phase of the project culminated in a report on the long-term, international, domestic, economic and political trends facing the European Union; the second phase of the project split trends into three streams, focusing on the economy, governance and power, and society.

This Trend Report aims to explore the evidence base, uncertainties and potential trajectories underpinning global societal trends and their impact on the EU. The work is based on a review of the available data and literature on societal trends in a number of thematic areas. It also builds on inputs harnessed through an online Delphi exercise involving more than 200 international experts, as well as a series of 29 semi-structured interviews, involving experts from academia and think tanks, policymakers, and leading thinkers from the private or third sector.

The report has been commissioned by the Bureau of European Policy Advisors (BEPA) on behalf of the ESPAS Task Force. However, beyond those involved in ESPAS, the report may be of interest to a much broader audience of decision makers, researchers and stakeholders interested in the societal challenges that the EU may be facing in the coming years.

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Executive Summary

1. Objectives and approach of this study

The European Strategy and Policy Analysis System (ESPAS) is an inter-institutional EU initiative involving the European Commission, the Council, the Parliament and the External Action Service (EEAS). It was launched in 2010 and aims to develop cooperation through common strategic thinking on the long-term trends and policy challenges likely to face Europe over the next institutional cycle (2014–19) and beyond. RAND Europe was commissioned on behalf of the ESPAS Task Force to investigate further the societal changes that will affect the EU until 2030.

Several reports have attempted to describe, assess and determine which trends are likely to shape the international strategic landscape, or the landscape of a specific region. The objective of this study is not to replicate these existing efforts but rather to assess the available evidence base and bring the existing uncertainty surrounding these trends to the policymakers’ attention. The findings presented in this report are based on two main phases of research: 1) analysis of the available literature and data; and 2) expert consultation through an online Delphi exercise and in-depth interviews.

This report presents a series of identified trends related to the rise of a new global middle class, a growing and ageing population, employment and the changing labour market, evolving patterns and impacts of migration, connected societies and individual empowerment. Many of these trends are uncertain and their very direction and magnitude depend on the future course of exogenous drivers beyond the control of decision makers. Each of these trends, in turn, could have various types of consequences for the European Union’s long-term landscape.

At the risk of simplification, we summarise these trends, drivers and outcomes in Figure E.1. The consequences for the EU have been grouped under four topics:

- rising inequality and more vulnerable groups
- the consequences of a new global consumer class
- adapting to a new demographic reality
- opportunities for individual empowerment but risks of a divide.

This executive summary is structured along these four topics.
2. Rising inequality and more vulnerable groups

The challenge that cuts across many of the areas we analysed is the increasing level of inequality between EU citizens. The gap between rich and poor in the EU has widened in recent crisis years. Austerity packages tend to have a disproportionate effect on lower incomes and seem to exacerbate the differences. The expectation is therefore that inequality in the EU will increase further in the coming years. Not only would this represent a break in trends for the EU – income inequality, for instance, has declined in most member states in recent decades – it is also at odds with the EU’s foundation: inclusive growth. We conclude that inequality will be the single most prominent societal challenge for the EU in the coming decades. Changes in the structure and direction of inequalities are likely to pervade all policy areas, resulting in a need for innovative approaches.

Forecasts suggest sluggish economic growth, with the response of the labour-market lagging behind in the next few years. This indicates that the trend of rising long-term unemployment and an increasing labour market mismatch will continue to dampen employment prospects, for low-skilled workers particularly, over the next decades.
Middle class set to grow worldwide; rising within-country inequality

The global population in income groups that are considered middle class is projected to grow considerably. This is largely driven by Asia, which has seen its middle class double over the past two decades as lower classes become wealthier. At the same time, inequality within countries is rising, particularly in the United States and Europe, as the income share of those in the top decile increases. In emerging economies, growing inequality may be attributed to the rich becoming richer at a faster rate than the poor become wealthier. Much uncertainty remains as to the future relation between inequality and middle-class growth.

Labour demand may affect vulnerable groups

Although there are prospects for long-term growth on the demand side of the labour market, the jobs created, especially in new technology sectors, may displace workers rather than create demand for new workers. On the supply side of the labour market, a global shortage of medium- and high-skilled workers is projected over the next few decades. However, at the same time there is likely to be a surplus of low-skilled workers, which could lead to long-term and permanent joblessness among young people without secondary training and older workers who cannot retrain to meet requirements for new skills. As a consequence of this skills mismatch, income inequality is projected to expand. It is expected that young workers, female workers and workers aged 55 and over will be hardest hit. Workers from immigrant backgrounds will also be disproportionately represented among those affected.

Inequalities that arise from economic stress, distorted expenditure on welfare and healthcare and changing population structures may result in particular groups within populations becoming increasingly vulnerable. There is a risk of greater poverty and disenfranchisement among these groups, with important consequences in a range of areas. These groups include vulnerable households facing higher poverty risks as well as vulnerable (elderly or low-skilled) workers, migrants and their children, and NEETs (young people not in education, employment, or training), in both industrialised nations and emerging countries.

Migration could allay long-term labour demand but could also raise issues of integration

Economic growth, notably in Europe, may affect global migration patterns. Findings point to the importance of specific (political, social or economic) factors in both sending and receiving contexts, such as economic growth and employment prospects that influence individual decisions to migrate. Any long-term projection of international migration flows is characterised by high levels of uncertainty but shift patterns are likely as migration transitions occur in countries that are transforming into destination countries in their own right, for example Turkey.

Migration may help allay labour market demands in Europe, but it also adds the issue of integration to the political agenda, with implications for social cohesion. In addition to European attitudes towards migration, the extent to which the EU is able to recover from the crisis will also contribute to its attractiveness as a destination for migrants. Although it has been suggested that the crisis has caused a
reduction in migration flows to the EU, it is too early to assess the impact of the financial crisis on the EU environment and migration flows.

3. The consequences of a new global consumer class

Economic growth in emerging economies, the rise of a global middle class, population growth, changing population structures, the use of natural resources and environmental damage will all affect global consumption levels and patterns.

*Low- and middle-income population growth will affect consumption and pollution patterns*

Global population growth and changing population structures will affect consumption levels and patterns. An expanding ‘consuming class’ may have significant impact on future demand for certain goods and services. These changes may push the EU to ensure that the supply of natural resources such as water or energy remain stable in the future.

The rise of the global middle class and associated consumption levels may also lead to increasing pollution. The bulk of carbon emissions appears to be attributable to energy consumption in cities and global population growth and the rise of the middle class are associated with increasing urbanisation. The effects are global. Changes on one side of the world might lead to effects on crop yields, migration, infectious disease, flood risk and vulnerability to extreme weather conditions on the other. While the science of climate change is relatively undisputed, there is still some debate over the timescale and severity of climate change impacts.

*These trends are highly dependent on long-term economic recovery*

In this period of economic crisis, tensions and distortions, many suggest that economic recovery and stability will be the long-term solution to many of the issues currently facing both mature and emerging economies. In the longer run, the key question lies in determining the possible transformative effects of economic growth – or lack of it – on the EU landscape. Our analysis shows that the projections of the future size of the global middle class are highly sensitive to assumptions about long-term economic growth. On the other hand, a growing consuming class, which to some extent has been lifted out of poverty, can also be an important engine for the economy. This is particularly true in Latin America, India, China and Africa. Degrees are likely to vary, however, as this process remains vulnerable to income inequality. On the other hand, as our analysis shows, the projections of the future size of the global middle class are highly sensitive to assumptions about long-term economic growth.
Are global values diverging or converging?

It has been argued that globalisation and the rise of a new consumer class acts as an integrative and harmonising force across the globe. The expectation is that we should witness a convergence of values affecting how people think and behave. The emergence of such a common ethos will, in turn, influence some of the themes discussed above, particularly the lifestyle and values of the urban middle class, the diffusion and use of new media and technologies and migration flows. However, such statements should be analysed with caution. While there is some evidence of the emergence of a common ethos in certain areas and strata of the global population, much is still down to speculation. There are several examples of the opposite trend – a global divergence of values and attitudes – revealed by radicalisation and religious extremism, the emergence of grassroots or populist political movements, and the mobilisation of internet freedom activists.

4. Adapting to a new demographic reality

Many middle- and low-income countries are experiencing a demographic window of opportunity through relatively high fertility combined with a decline in infant mortality. The resulting youth bulge will grow and become part of the country’s active population in the long term, provided that states are able to generate work opportunities for younger generations.

On the other hand, having started in high-income countries, population ageing will eventually reach the developing world as well. The consequence in the next two decades is that the working-age population in developing countries will continue to grow quickly, while that in Europe and other advanced economies will shrink.

A demographic deficit could lead to stagnation of economic output

Changes in population size and structure may have implications for economic growth, domestic savings, investment, consumption, labour markets and intergenerational transfers, among others. Europe may face increasing immigration pressure from Africa and parts of Asia where the youth bulge may outweigh the demand for labour. In countries with a shrinking working-age population, economic output will decline if productivity per capita does not grow to compensate for the smaller workforce. Member states with very low fertility rates and large numbers of young people emigrating to find work will be particularly affected by this phenomenon.

Stagnating economic output and GDP per capita may have a depressing impact on net wages for working-age populations, and subsequently on living standards and savings rates.

The transformation of the welfare state model?

A rising old-age population and a smaller workforce will be accompanied by significant challenges to the affordability of welfare systems, for instance pensions. Retirement ages have remained more or less
unchanged in the EU from the early days of the European social model through the end of the twentieth century. In that same period, however, life expectancy in the EU increased by more than 15 years.

Moreover, the changing profile of the world’s population is likely to impact on healthcare systems. Data suggest that the elderly are healthier than ever before. However, the age window where frailty is high is expanding and the prevalence of Alzheimer’s, for instance, may increase significantly. While advances in medical technology may lead to longer, healthier lives, they are not only costly but also increase the risk of greater numbers of individuals eventually contracting degenerative and non-communicable diseases, adding to the burden of care. Eventually, demographic change in Europe may lead to the possible emergence of intergenerational conflicts due to changing population structures, as a larger proportion of public expenditure is dedicated to pensions and healthcare expenditure for the elderly as opposed to spending for the working-age population or children.

The analysis indicates that the member states may need to tackle the range of effects generated by population changes in Europe by maintaining sustainable growth levels, reforming pension systems, stabilising the cost of healthcare linked to ageing populations and coping with a declining working-age population. Building a more inclusive labour market, particularly towards young people, women and the elderly, may become ever more important.

5. Opportunities for individual empowerment but risks of a divide

Empowerment refers to the process of obtaining basic opportunities to improve well being for marginalised people. On a global scale, economic development, improved access to education, gender equality and new technologies that increase connectedness are thought to help promote empowerment. However, unequal access could polarise communities and populations into those who can take advantage of these opportunities and those who are left behind. The consequences of individual empowerment are likely to be manifested in increasing access to education, and changing relationships with the state. Technology and informal educational systems can improve accessibility to education.

*Globally widening access to education is likely to drive empowerment*

As more and more societies across the world are transitioning away from industrialised towards knowledge-based economies, access to tertiary education, and its overall quality, will become essential predictors of power and economic prosperity. The evidence suggests the gap between developing and high-income countries may close when it comes to future access to education. However, the role technology can play in this process remains uncertain.

The widening access to further education is likely to drive and be influenced by increased individual empowerment. This in turn may generate greater support for increasing gender equality and the empowerment of women. As countries seek to develop knowledge-based economies, this issue will become increasingly salient. At the same time, new technologies and learning formats, such as distance learning, Massive Open Online Courses (MOOCs) and new methods
for measuring and monitoring performance, will reduce the need to be physically located near the educational institution, offering low-cost opportunities for access and more personalised education. These mechanisms could help specific countries to increase their tertiary education attainment rates and overcome differences between regions and member states, which continue to be significant.

**Digital divides within and between countries are likely to remain**

It is undeniable that in the last two decades the internet and mobile technologies have had a transformative impact on societies and economies. These and other technologies, such as quantum computing, nanotechnology, big data, or geno-technologies, will continue to change individuals’ lives, business models, governance and democracies and their effects are likely to be manifold but are yet uncertain. Evidence from recent trends has shown that many tend to overstate the pace of influence of technological innovation. But technologies will change society only to the extent that individuals and societies understand, accept and absorb them. Diffusion of internet and mobile technologies, in particular social networks, has shown that user penetration may also outpace predictions.

Despite an anticipated trend of improved connectedness through mobile and internet technologies and a rise in social computing, digital divides within and between countries are likely to remain. Experts question the extent of truly global interconnectedness in the future, as the evidence suggests most online platforms and services are used mainly on a local or national level. Also, unequal access to e-skills may be a factor contributing to a persistent digital divide. Discrepancies in connectivity between low-income countries and middle- and high-income states may also contribute to this divide, although the gap is projected to be narrowed over the coming years. While in some parts of the world the divide in internet access and mobile technologies has is being bridged through ‘leapfrogging’, it is likely to be reproduced with the adoption of new technologies and applications, such as mainstreaming of ubiquitous computing or personalised medicine. The benefits of these new technologies are likely to accrue initially to the wealthier strata of society, reproducing socio-economic inequalities.

**Some factors that impact individual empowerment may affect relations between individual and state**

Empowerment and interconnectedness may result in a myriad impacts, one of which could be the increased likelihood of non-homogeneous, fragmented public opinion throughout Europe, which could in turn contribute to a degree of instability. Others argue that the pluriformity of available news and information from online sources may help nuance debates.

Despite or owing to these trends, recent surveys demonstrate declining levels of trust in political (including European) institutions. This is likely to represent important consequences for policymakers seeking to maintain the legitimacy of their institutions.
The influence of new and social media on political participation and democratisation may have been overstated in recent years. The evidence underpinning its influence on individual empowerment remains to be assessed, for instance in the context of the interaction between online and offline political engagement, to understand the extent to which the former could crowd out the latter and result in ‘slacktivism’, or indeed be a formidable tool to mobilise young audiences.

**Trends towards improved gender equality in the EU are not mirrored on a global level**

There are various signals that the gender gap is closing, given women’s growing involvement in politics, rising enrolment rates in higher education and increased participation in the labour market. This could prefigure a trend towards improved equality between men and women. However, despite a certain convergence towards more equality in the EU and a number of highly developed countries, these trends are not mirrored on a global level. Regions such as the Middle East and northern Africa appear to lag behind, for example with regard to female political participation.

It appears that attitudes and values in relation to gender equality are likely to affect several policy areas in the future, owing to their relation with a variety of unpredictable factors, such as fertility levels, migration flows and individual empowerment. For instance, the entry of women into education, higher education and the labour force is partly made possible by a change in values regarding the role of women. In some EU member states this has materialised as the emergence of a dual-earner household model. However, in some member states with paternalistic family values, a more traditional male breadwinner model remains relatively persistent.

6. From strategic analysis to strategic action

In its next institutional cycle (2014–19), the EU could face a set of challenges stemming from the societal trends that our study has sought to identify and document. The trends uncovered have varying degrees of uncertainty and levels of evidence. Our assessment could inform debates about what could constitute salient policy challenges that require specific policy actions and more adaptive policy approaches that are resilient under different future circumstances. We explain how our analysis could help policymakers tailor existing EU strategies – in particular, Europe 2020 and its flagship initiatives – to the future landscape. We then look at how our research can help EU policymakers contain the institution’s vulnerabilities, regardless of whether or how these materialise in the future.

**Breaking the cycle of inequality in the EU**

We identified new and growing inequalities as the leitmotif of many trend areas. These trends could profoundly shape the EU landscape in this coming institutional cycle and beyond, by 2030. Their consequences are far-reaching and could be the source of disruption. If there is one challenge the EU should single out in the next institutional cycle, our analysis suggests it should be breaking this cycle of inequality.

If there is one challenge the EU should single out in the next institutional cycle, it should be breaking the cycle of inequality.
Many sources have pointed to the need for investing in human capital by equipping citizens with the skills that are in demand on the labour market: investing in formal education, vocational training and lifelong learning, and efforts to harmonise labour standards. Those too young to take part in the labour force can be targeted by early childhood education and care (ECEC), part of a broader strategy to foster the development of vulnerable children, and also effective in tackling disadvantage. The sooner children receive high-quality ECEC, the higher the returns on investment for the whole of society. The looming challenge of a lost generation can be mitigated by investing in the human capital of young people who are currently not in employment, education or training (NEETs). Investing in lifelong learning, vocational training and apprenticeships will help this generation to acquire specialised IT, science, engineering and technology skills that are required in some important and upcoming industries (such as mobile, internet or green technologies and services) or softer skills needed in sectors such as health, mental and social care.

While the Europe 2020 strategy has elements targeting these challenges (eg the agenda for new skills and jobs), the significance of these trends could require the EU to persist in its efforts to adapt its Europe 2020 strategy to tailor these better to strategic realities. While the strategy is there, the political attention seems to have been focused on fighting the debt crisis by reducing expenditure.

Preparing for what we know will happen

In addition to rising inequality, we identified a set of other trends characterised by relatively low uncertainty and a relatively high level of evidence. These could require the European Union and its member states to begin developing today long-term policy approaches that will enable them to tackle these issues better in the future. We formulated 11 policy challenges that we know will be salient in the coming years (see Table E.1). They include tackling issues such as the consequences of demographic change for pension systems and healthcare costs. While these trends are relatively certain and their potential (mitigation) solutions are well documented, decisionmaking may still be complicated. The adoption and implementation of the necessary pension reforms, for example, requires political will and the courage to trade off a long-term perspective against potential electoral backlash. The nature and specification of these long-term policy measures will also be steered by the prevalent political colour and corresponding priorities, such as income security versus labour-market flexibility.

Many of the objectives included in Europe 2020 overlap with the policy challenges identified here, such as the focus on targets related to early school leaving or fighting poverty, and the objectives of flagship initiatives, such as Youth on the Move, New Skills for New Jobs, the Digital Agenda for Europe and the Innovation Union. Our analysis also suggests some other dimensions that the EU could include in its future strategy – in particular, a measure of the digital divide, polarisation of the labour market and a measure of inequality across the EU and within member states.
Table E.1. Eleven salient policy challenges

<table>
<thead>
<tr>
<th>1 INVESTING IN CITIZENS</th>
<th>Equipping EU citizens with the tools to seize opportunities as they come along and protecting the most vulnerable citizens against misfortune</th>
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<tbody>
<tr>
<td>• Addressing the increasing risk of vulnerable employment, NEETs and growing inequalities between middle-/high- and lower-income groups</td>
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<td>• Managing the consequences of stagnating economic growth for wellbeing and poverty</td>
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<td>• Addressing inequalities in access to technologies and technology-based services between different population groups</td>
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<td>• Completing the gender gap bridge</td>
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<td>• Improving education and labour market outcomes for (first- and second-generation) migrants</td>
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<tr>
<th>2 PREPARING FOR A NEW GROWTH PARADIGM</th>
<th>Enabling citizens and businesses to reap economic opportunities and compete globally</th>
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<tbody>
<tr>
<td>• Addressing the shortage of workers with specialised STEM skills, e-skills and skills in softer sectors such as health, social and mental care</td>
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<td>• Matching the migrant skills to labour market demand</td>
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<td>• Bridging the digital divide between member states</td>
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<td>• Improving the innovative capacity of SMEs</td>
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<th>3 REINVENTING GOVERNMENT</th>
<th>Recalibrating the public sector machinery and services to accommodate the realities of the 21st century</th>
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<tr>
<td>• Mitigating the increasing pressure on the affordability of welfare systems, particularly health and pensions</td>
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<td>• Addressing a declining institutional legitimacy and mitigating its consequences</td>
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Building resilience to limit vulnerability to the most unpredictable trends

In some cases, when there is more uncertainty, the challenge of adaptation is even more critical, as it could require greater efforts from EU policymakers in terms of flexibility in response to unforeseen trajectories. The EU therefore should acknowledge the fact that it may not always be able to anticipate – let alone predict – changes in these realities, given the complexity and the uncertainty of some of these trends. This complexity and uncertainty could require EU policymakers to face more disruptive periods. As a result, in addition to adaptive policymaking, greater resilience could help the EU face these disruptive periods better, however they materialise in the future and for whatever reasons.

For example, the direction, patterns, magnitude and impacts of labour mobility and migration are to some degree still unclear. Decisionmakers would therefore be advised not to bank on one of the potential future trajectories. Rather, policies should be tested for their robustness. Instead of selecting the optimising policy effects for one scenario (eg the EU as a net receiver of migrants), robust policies should perform reasonably effectively in a variety of plausible future scenarios (eg the EU as a net receiver and net sender). Ideally these policies should be adaptable as well as robust in case any unexpected trends materialise.

Finally, some of the trends we have uncovered are characterised by high uncertainty and a low level of evidence. By 2030 these trends could constitute the most erratic and unpredictable elements of the
strategic environment. They could be the source of profoundly disruptive periods for the EU as by definition they are much harder to monitor than targets, because their underlying mechanisms and implications are poorly understood.

In order to prepare better for these, the EU could consider an introspective approach that would allow it to consider how to contain some of its most significant vulnerabilities, regardless of the scenario in which these could become threats to the institution. This could require the EU to revisit, redefine, tailor or confirm its fundamental values and model in the light of the deep, structural changes occurring at the global level. This would help the EU build its own institutional resilience.
Acknowledgements

The research team would like to thank the members of the Dedicated Working Group (DWG) associated to this project, for their valuable insights and suggestions, as well as the ESPAS Task Force for overseeing the work conducted under the initiative. We are particularly grateful to Dr Isabelle Ioannides (BEPA) and Dr Franck Debié (European Parliament), respectively rapporteur and chair of the Working Group, for their support and guidance throughout the course of the study.

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We are grateful to the large number of experts who participated in our in-depth interviews and the online Delphi exercise. All individuals who provided consent are listed in Appendix A. We thank them for their engagement, contributions and challenges to the data. Many of the participants also attended the Expert Seminar organised on 19 September 2013 to present the preliminary results of this work and to solicit feedback. The contributions and discussions during this seminar have led to a number of improvements in this report. We thank all delegates and particularly the speakers and discussants at this seminar.

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In 2010, the European Commission sought to investigate the global trends that will prevail in 2030 and to determine the challenges that European policymakers will be faced with in the coming decades. The European Strategy and Policy Analysis System (ESPAS) project was launched and embedded within a wider context of building a permanent EU forecasting capacity, relying on the collaboration of various EU institutions and actors in the individual member states. The goal behind this effort is to put in place a continuous framework to assess global trends and to develop policy responses across the EU institutional framework, in collaboration with other global networks, such as the National Intelligence Council (NIC) and the Institute of World Economy and International Relations. It constitutes an effort in the field of strategic and long-term analysis and bears a direct link with similar initiatives throughout Europe and the United States.

The initial effort, carried out by the EU Institute for Security Studies (EUISS, 2012), aimed at assessing ‘the long-term, international and domestic, political and economic environment facing the European Union over the next 20 years’. It now acts as a pilot project setting the scene for further investigation and evaluation of global trends in 2030 in the field of international relations and governance, society and macroeconomic trends.

In 2012, three interinstitutional working groups were set up to oversee an intensive analytical process, including outreach to those interested in engaging with ESPAS, in order to draft trend reports in three key fields: the economy, society, and governance and power. On behalf of ESPAS, the Bureau of European Policy Advisors (BEPA) has commissioned RAND Europe to investigate further the theme of societal changes by drawing from the experience of the pilot project, analysing key global trends in this field and drawing their implications for the EU. The Task Force specified a set of thematic areas that the study should aim to investigate:

- **The rise of a global middle class in the wake of the rapid development of emerging economies worldwide.** What are the foreseeable consequences of this phenomenon in terms of income distribution, consumption patterns and social cohesion? How does such a rise at international level contrast with a potential decline of the middle class in Europe and the other parts of the Western world? And with the rise of emerging economies and the gap between developed and developing countries narrowing, is there a risk of new inequalities within countries?

- **The increased access to education and the role of new technologies and new media.** Is there uniform evidence that more and more people are attaining higher levels of education? Is the digital divide narrowing or widening as a result of increased access to free information and knowledge through new media? And what are the potential implications in terms of individual rights, public control, data protection and transparency? Is all this conducive to a
global convergence on values, expectations and promoting secularism? Is the gender gap narrowing worldwide and how is women’s access to education and information evolving?

- **The empowerment of individuals.** Is it legitimate to talk about a growing empowerment of individuals, groups and networks? And, if so, to what extent? Will new media lower the threshold for new actors to enter the public debate and occupy political space? Are the loci for political training, recruitment and mobilisation becoming increasingly virtual, based on informal yet volatile networks? And how do these phenomena affect European policies and by extension the EU?

- **The changing demography of a globalised world and its impact on different societies.** Is there an established worldwide trend towards an irreversible decrease in mortality rates? How will population growth evolve in developed, least developed and emerging countries? How will population ageing affect societies, in terms of economic and social behaviour, expectations and general attitudes? As longevity is rising faster than retirement age, especially in the West, what are the foreseeable challenges for public policies, both globally and regionally? And what effects might a growing and ageing global population have on the availability and use of natural resources?

- **The role of mobility and migrations and their impact on national identity.** What are the key drivers of human mobility in the globalised world? What are the main foreseeable patterns of migration? How is mobility both inside and across societies and borders expected to impact on the identity and self-perception of states and communities? How far are cultural issues (tradition, religion, education) likely to affect the integration of migrants in a globalised and interconnected world?

- **Old and new labour – and work.** What is the likely composition of the active workforce in the foreseeable future, both worldwide and in the EU? What changes can be expected in terms of segmentation, age, gender and ethnicity? What impact will these have on society and what implications for its functioning? What are the factors driving labour demand and labour supply? How will the composition of skills available in the EU labour force evolve over time and how does that fit with the demand for labour in the future? What will the working environment look like?

### 1.1. Analytical framework

We have used a common framework for strategic trend analysis. While there are a few deviations, we have used terminology consistent with the DCDC report produced by the UK Ministry of Defence (2010). The framework, which is illustrated schematically in Figure 1.1.1, assumes that a trend is of strategic importance to a decisionmaker if its future outcomes deviate from the desired outcomes from the decisionmakers’ perspective. These outcomes may manifest themselves in multiple dimensions, for example economic, social or environmental. The difference between these outcomes and the desired outcomes, as defined by risks, determines policy challenge. For example, population ageing (trend) may lead to increased healthcare costs (economic outcome), which would threaten the affordability of healthcare systems (risk). The policy challenge would be: how can governments maintain the affordability and quality of their healthcare system faced with an ageing population?
Decisionmakers may have policy options at their disposal to steer these trends and avoid or mitigate their outcomes. Future trends may also have positive outcomes, which would lead to opportunities that decisionmakers could seize.

Unfortunately, it is difficult to predict future trends that are of strategic importance to decisionmakers. The pattern of change of these societal developments depends on a myriad exogenous and endogenous factors. The former – factors that the decisionmaker has no control over – are called drivers. Trends may be influenced by multiple drivers or by a series of interconnected drivers. For example, longevity is influenced by, among other factors, lifestyle (e.g., diet), medical progress (e.g., a cancer treatment drug) and risk factors (e.g., HIV/AIDS, natural disasters, etc). Some drivers are so pervasive in nature and influence that they affect the trajectory of many trends and cut across various themes.

Finally, some events may lead to an abrupt alteration in the strategic context. These unlikely events are often labelled wild cards, or more recently 'black swans' (Taleb 2001). While these disruptive elements are by their nature impossible to predict, analysts could consider their manifestation plausible and therefore anticipate their consequences. Our analysis focuses on uncovering the evidence underpinning various plausible speculations, and therefore we consciously steer clear of systematically identifying these black swans. However, we do highlight high-impact events or developments that result in a discontinuity or an abrupt alteration in the strategic context when they emerge in the analysis. When these trends and their causal links with drivers are well understood, strategic analysis could lead to the identification of early warning signals, indicators that highlight the likely trajectory of a trend and its outcomes.
Table 1.1.1. Terminology used in this conceptual framework

<table>
<thead>
<tr>
<th>TERMS</th>
<th>DEFINITION</th>
<th>CHAPTER IN REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trend</td>
<td>A trend is a discernible pattern of change.</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>(Cross-cutting) driver</td>
<td>A driver is a factor that directly influences or causes change. Typically, drivers are exogenous factors to the system under analysis and are beyond the reach of decisionmakers. A cross-cutting driver is so pervasive in nature and influence that it will affect a range of trends across different domains.</td>
<td>Chapter 3</td>
</tr>
<tr>
<td>Outcome</td>
<td>A description of salient features of the future strategic context as a consequence of a particular trend or an interaction of multiple trends and/or drivers. Alternative outcomes are judged less likely than probable outcomes.</td>
<td>Chapter 4</td>
</tr>
<tr>
<td>Policy challenges and opportunities</td>
<td>Depending on their magnitude, the nature of the risks and benefits and hence their desirability, outcomes may pose policy challenges. A policy challenge is defined by the ambition to prevent or mitigate risks to society and to capitalise benefits. A policy opportunity refers to the possibility of reaping societal benefits created by future trends.</td>
<td>Chapter 4 and 5</td>
</tr>
</tbody>
</table>

Figure 1.1.1. Graphic representation of the conceptual framework of this study

Adapted from: UK Ministry of Defence (2010)

1.2. Approach and methodology

Several reports – most of which are referenced in our analysis – have attempted to describe, assess and determine which trends are likely to shape the international strategic landscape, or the landscape of a specific region. The EUISS (2012) report and the regular efforts of the National Intelligence Council (eg NIC, 2012) are perhaps the most notable examples in this context. Our objective is not to replicate these
existing efforts but rather to deepen their analysis by bringing the uncertainty surrounding these trends to policymakers’ attention.

The findings presented in this report are based on two phases of research. The first is a review of the available literature and data on each of the major trends listed under the themes identified by the ESPAS Task Force for the Societal Trend Report. The second is the consultation of experts who have knowledge of the fields relevant to this study and practical experience in them.

Our approach is designed to identify consensus as well as disagreement on a given trend within a specific theme and therefore to describe the phenomenon drawing on previous analysis and literature. This has allowed us to identify the drivers behind the trends and the conditions and assumptions under which they will materialise. The research team has sought to review and discuss the evidence for these assumptions and conditions and the level of uncertainty surrounding them. When appropriate, and relying on the assessment of this uncertainty, the research team has been able to generate alternative trajectories for specific trends, which stand in contrast to the consensus. This document includes a bibliography of all sources consulted for this study, not just those cited in the text.

The second phase of the research (expert consultation) harnessed the knowledge of leading experts worldwide for each of the themes studied through an approach based on the Delphi method. Using an online consultation tool called ExpertLens, we conducted separate expert elicitations on six topics, each consisting of: a first round of closed questions; a second round in which the results were revealed and discussed; and a final round with the same question set offering participants the opportunity to alter their answers. In total, 412 experts participated in round 1, while eventually 116 experts remained involved until round 3.

This effort was followed by a series of interviews with leading academics, policymakers and thinkers from the private or third sector to build on findings from the Delphi exercise, and in particular to unpick the impact for the EU and its policy consequences. Information from the expert consultation phase was used to uncover further the surrounding uncertainty for each of the global trends derived from the literature review.

Finally, we organised an expert seminar on 19 September 2013 to present the preliminary results of this work and to solicit feedback. The valuable contributions and discussions between more than 60 participants in this seminar led to a number of improvements in this report. Appendix A gives a list of experts, policymakers and stakeholders who contributed to this study either as part of the Delphi process, the interviews and/or the seminar.

This approach is not without limits. For example, in contrast to scenario analysis, this approach considers trends one by one and therefore in isolation from all others, while they could be imagined to interact with each other. We try to alleviate this issue by making explicit the assumptions in the literature we review. We also tackle this issue by considering cross-cutting phenomena that could drive the interaction and the convergence of these trends, limiting our reliance on the well known ceteris paribus principle.

Furthermore, this report by no means provides an exhaustive compendium of global societal trends. Depending on the level of aggregation, there will inevitably be issues, trends, drivers or challenges that are not addressed in this document. We acknowledge this; however, while guided by thematic areas
preselected by the ESPAS Task Force, we aimed to be thorough and comprehensive and to focus on the societal issues that matter most for the EU and its decisionmakers.

1.3. The structure of this report

This trend report is structured alongside the three main elements of the analytical framework: trends (Chapter 2), drivers (Chapter 3) and outcomes (Chapter 3). This structure is summarised in Figure 1.3.1.

First, Chapter 2 summarises the global societal trends identified during our review of the available evidence, structured along five themes (see Figure 1.3.1.). The sections in this chapter present the key findings of much more extensive review of the evidence in these themes.

Chapter 3 discusses a series of seven cross-cutting themes that have been identified as a result of the analysis of the available literature and expert consultation. We analyse the causal mechanisms by which these issues cut across all the thematic areas. Their future development will to a large extent determine the direction and magnitude of the societal trends identified in Chapter 2, as well as their outcomes.

In Chapter 4, we derive the outcomes of these trends and drivers for the EU and discuss potential consequences and policy challenges of relevance to policymakers at EU and national level. The outcomes will in part depend on the uncertainty surrounding these trends and drivers. Where possible, we allude to suggested options.

Finally, the synthesised findings build a basis for discussing the impact of the key global trends on the EU landscape as well as potential policy challenges with regard to the 2030 time horizon and the 2014-19 institutional cycle. Chapter 5 suggests a way forward for the EU to tackle these long-term challenges and anticipate uncertainties.
Figure 1.3.1. Structure of the report

CHAPTER 3: CROSS-CUTTING DRIVERS

3.1 People & behaviour
3.2 Gender equality
3.3 Demographic change
3.4 Urbanisation
3.5 Technology & media
3.6 Economic growth & recovery
3.7 Barriers to connectedness

CHAPTER 2: OBSERVABLE TRENDS

2.1 The rise of the global middle class
2.2 A growing and ageing population
2.3 Employment and the changing labour market
2.4 Evolving patterns and impacts of migration
2.5 Connected societies, empowered individuals

CHAPTER 4: OUTCOMES

4.1 Rising inequality and more vulnerable groups
4.2 The consequences of a new global consumer class
4.3 Adapting to a new demographic and economic reality
4.4 Uneven opportunities for individual empowerment
In this chapter we summarise the analysis performed on a non-exhaustive series of global societal trends. These global trends – defined as a discernible pattern of change with a global reach – are structured along five clusters based on themes defined by the working group:

- the rise of the global middle class
- a globally expanding and ageing population
- employment and the changing labour force
- evolving patterns and impacts of migration
- connected societies, empowered individuals.

Many of these trends are uncertain and their very direction and magnitude depend on the future course of exogenous drivers beyond the control of decisionmakers. Each of these trends, in turn, could have different types of consequences for the European Union’s long-term landscape. These implications will be discussed in the subsequent chapters of this report.

### 2.1. The rise of the global middle class

With regard to global and regional income distribution and associated societal developments, our research identified six major trends.

First, decreasing inequality between countries, including a significant reduction of poverty rates, can be discerned from the literature and expert consultations. Accelerating economic growth in Asia, Latin America and Africa has led to decreasing inequality between countries, structural change and falling absolute poverty rates, helping billions of people out of extreme poverty over the last decade (see Figure 2.1.1.).

Second, decreasing inequality between countries can be associated with the rise of a new global middle class, – a contested term. It is important to note the methodological challenges of forming valid global estimates for a concept that carries different associations, and implies different standards of living, across regions. A distinction might also be made between the ‘new’ global middle class, comprising predominantly recent additions to the middle classes in emerging economies, and the established (or ‘secure’) middle classes, resident for the most part in the developed world. All the studies reviewed point to an increase in the size of the new middle class, irrespective of the definition employed.
A strong interrelationship has been reported between the pace at which a country grows and the size and share of the income held by its middle class (Easterly, 2001). The future size of the middle class will strongly depend on growth. For instance, under a lower economic growth scenario, the size of the global middle and rich (GMR) class in India would be 42% lower in 2050 compared to high growth assumptions (see Figure 2.1.2). The literature places Asia firmly at the centre of this trend. The region as a whole accounts for 81% of the expansion in the number living on $2–13 per day (Ravallion, 2009). Substantial middle-class growth has also occurred in Africa, increasing to 34.3% of the population in 2011 (African Development Bank, 2011). By Kharas’ analysis (2010), defining the global middle class as those households with daily expenditures between $10 and $100 per person (in 2005 PPP terms), the prevailing trend is set to continue, with the size of the global middle class projected to increase from 1.8 billion to 4.9 billion people by 2030 – a trend that was confirmed by the Delphi exercise.
Third, this increase will see the European and North American share of the global middle class fall significantly over the coming decades. Fourth, in addition, there is evidence that the middle class in these regions is on the decline, notably in the US, UK and Sweden (Pressman, 2007).

There is consensus that poorer countries will continue to grow faster than richer ones. It has been argued that, in this sense, the world as a whole may become more equal (Economist, 2012). However, the models that project massive increases in numbers of the new global middle class are by their own admission deterministic and devoid of policy context (Kharas, 2010). They fail to take into account a considerable level of uncertainty surrounding these trends, and thus a number of plausible scenarios, including protectionist policies, geopolitical strife, climate change, and the recurrence of financial crises. Delphi participants rated climate change, global/regional conflict and economic crises as fairly significant threats to the development of middle-income economies within the next 15 years. The new global middle class might be more insecure and unstable than is commonly estimated. A significant threat to the realisation of vast growth in the global middle class is the concept of the ‘middle-income trap’. This is an observed phenomenon whereby countries that have grown to middle-income levels subsequently stagnate and fail

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1 Note on scenarios: the high growth scenario assumes continued rapid economic growth of developing countries and an average annual GDP growth rate of 5.9% in India 2009–50, whereas the lower growth scenario assumes an average annual GDP growth rate of 4.3% in India 2009–50, owing to the materialisation of various risks, such as financial crises or protectionism (see Dadush and Stancil, 2010).
to attain advanced-country status. If the necessary reforms are not implemented, these countries may
reach a point where they are unable to compete with both low-income, low-wage economies in
manufactured exports and advanced economies in high-skill innovations (Kharas and Kohli, 2011). South
Africa and, until recently, Brazil have been cited as prominent examples of countries that have reached
this point (Kohli and Mukherjee, 2011). Nevertheless, Delphi experts judge the risk of China, India or
Brazil falling into the middle-income trap by 2030 to be more moderate than commonly assumed in the
literature; about 40% of respondents gave it a 60–70% likelihood in the third round of the exercise.

Although inequality of economic output between countries is decreasing in GDP terms, a parallel trend
resonates strongly in the literature: individual inequality within countries is rising (Economist, 2012;
OECD, 2011a; Dadush and Dervis, 2013; Fredriksen, 2012). In the literature, the trend of higher
within-country inequality is attributed to globalisation and technological innovation, among others
factors (Dollar, 2002; Morrisson and Murtin, 2011), which benefit the educated and skilled in the rich
world and emerging markets alike. This phenomenon is particularly pronounced in the US and Europe
and is evidenced in the majority of OECD countries. The trend is further evidenced among many
emerging economies (Ortiz and Cummins, 2011; OECD, 2011b), although here the pattern is less
uniform. Income inequality has increased in most Asian countries (Ali, 2007), with India a prominent
example of a country that has become more unequal over time, maintaining levels well above those of
even the most unequal OECD countries across all observed states (Vanneman and Dubey, 2010).
Estimates of inequality in China carry a degree of uncertainty. The 50% rise of inequality between the
1970s and the mid-2000s represented the largest and fastest rise of inequality in history (Economist,
2012) – but this rapid increase has slowed since 2005 and is reported to have recently reversed. The two
regions to have experienced falling inequality worldwide in the past decade are Latin America and Sub-
Saharan Africa, due partly to the implementation of redistributive policies. A majority of Delphi
respondents assumed the trend of increasing inequality within countries in the EU would level off until
2030. About 45% of the participants in round three of the Delphi exercise rated the likelihood that GINI
coefficients in the EU will rise from 30% (current figure) to 50% by 2030 to be low (10 – 20% likelihood).
Fifth, when examining the relation between inequality and the future strength and composition of the global middle class, uncertainty is a key feature. There is the possibility, for instance, that sustained high inequality will prevent wealth from reaching the middle classes in some emerging economies. We know that incomes can grow substantially in the midst of great inequality, and that a country can hold a very large middle class and high levels of inequality simultaneously. Interviewees highlighted cases where a growing middle class is insufficient to reduce levels of poverty substantially. Delphi results were bimodal: 40% of Delphi respondents in round three judged the effect of high income inequality on the strength of the middle class (defined in terms of size, purchasing power and political influence) to be fairly well established in the academic and policy community, rating it at 5 out of 7 on the proposed scale. In contrast, about 30% of respondents rated it 2 out of 7, positing that the link is not very well established. Although economic growth has been found to be a stronger conduit of equality than redistributive policies (Cárdenas, Kharas and Henao, 2011), it is clear that the extent to which emerging economies are able to make targeted investment in education, counter corruption, provide basic safety nets and foster secure labour will impact on future equality. Policy choices, regulations and institutions can have a crucial impact, according to the literature and Delphi exercise results.

Finally, it is often suggested that global middle-class growth will engender the flourishing of democratic and 'self-expression' values. According to a Delphi respondent, it is a well established trend in sociological and political research that support for democratic reform is strongest among the middle classes. Characterised by the ability to live a comfortable life, with healthcare, stable housing, discretionary income, access to tertiary education, and security in employment and retirement (eg Kharas, 2010), the narrative suggests the middle classes have the time and motivation to catalyse significant transformations in a society (Kohli, Szyf and Arnold, 2012). While it is intuitive that there is a relationship between middle-class status and
values, the manner in which values evolve upon entering the middle class in emerging economies has not been detailed with rigour. The Pew survey highlights the difficulties of extrapolating future global trends in the values of the new middle class. In 2030, the new middle class will still be poorer and less educated than the middle classes in Europe or North America, and the extent to which they will come to espouse democratic or self-expression values is likely to differ significantly between countries. Where the middle class may advocate political reform in some cases, it is also possible that it could come to embody conservative values that seek to preserve its own position. A further unknown is the relationship between inequality and values, although a recent study concluded that inequality of gross incomes lacks any empirical association with value change (Corneo, 2011).

The evidence does not oppose the view that the rise of the global middle class will have a positive impact in promoting democratic values and political reform in emerging economies, although, some scholarship has suggested that it may have had a role to play in the democratisation of certain Western states (Rustow, 1970). However, neither is there evidence to carry this assertion forward with confidence, as much of the discourse on the question is still theoretical. There is clearly less certainty around what members of the global middle class will look like – how much they will consume, what they will believe and how they will act – than the fact they will be greater in number.
<table>
<thead>
<tr>
<th>TREND</th>
<th>DRIVERS</th>
<th>INDICATORS</th>
<th>EVIDENCE BASE (0/+/++/+++/)</th>
<th>TIME HORIZON</th>
<th>OUTCOMES FOR THE EU</th>
<th>UNCERTAINTY (Low/Medium/High)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decreasing inequality between countries (including falling poverty rates)</td>
<td>Accelerating economic growth in many low- and middle-income economies; Exogenous shocks such as climate, natural disasters, international conflict</td>
<td>GDP per capita; GINI index; poverty rates</td>
<td>+++</td>
<td>Short-term (5–10 years)</td>
<td>Governance standards in some low- and middle-income countries; international trade and global competitiveness of EU firms EU; shifting focus of EU development objectives and policy</td>
<td>medium</td>
</tr>
<tr>
<td>Rise of a new global middle class</td>
<td>Growth of middle class in Asia as result of economic growth; urbanisation; uptake of higher education; provision of stable and secure jobs</td>
<td>Mean income levels to live on per day; consumer power of the middle class</td>
<td>++</td>
<td>Short- and mid-term up to 2030</td>
<td>Middle-income trap in a number of emerging economies; global resource scarcity and risks to food and energy security; unstable middle class risking fall-back into poverty; new middle class demands increasingly met locally (limiting export opportunities of the EU)</td>
<td>medium</td>
</tr>
<tr>
<td>Decline of the established middle class in high-income economies</td>
<td>Socio-demographics; technological innovations; decline of manufacturing sector; economic crisis</td>
<td>Mean disposable income levels per day; consumer power of the middle class</td>
<td>+++</td>
<td>Short- and mid-term up to 2030</td>
<td>Recurrence of global financial crises;/ consolidation of public finances; job insecurity; quality of democracy and pressure on social safety nets</td>
<td>medium</td>
</tr>
<tr>
<td>Increasing individual inequality within countries</td>
<td>Globalisation, technological innovation, leading to skill-biased advantages in the job market; income inequalities — differences in real wages; informal economy</td>
<td>GINI index; poverty rates; income levels (increasing share of income among the top decile)</td>
<td>++</td>
<td>Short- and mid-term (level off in long term)</td>
<td>Potential decline in social cohesion; barriers to social integration; negative health impacts; sustainability of the welfare state</td>
<td>low</td>
</tr>
<tr>
<td>Value change through middle-class growth</td>
<td>Economic development; less need to worry about sustainable livelihoods; higher education levels</td>
<td>Democratic and self-expression values (World Value Survey); individual liberties</td>
<td>+</td>
<td>Short- and mid-term</td>
<td>Risk of social unrest and protest; corruption; democratic reform</td>
<td>high</td>
</tr>
</tbody>
</table>
2.2. A growing and ageing population

The analysis of qualitative and quantitative data on demographic change helped identify three major trends as particularly relevant.

First, the global demographic profile will be characterised by population growth, led by middle-income and lower-income countries, about which the literature and projections strongly agree. According to various reports, world population will grow to between 8 and 9.6 billion by 2050. Population growth in 2030 is foreseen to exceed 2010 population levels by up to 15% in most world regions across different scenarios, except in the EU-27, where the population in 2030 could be around 2% lower than the 2010 population, according to the UN’s lower variant – see Figure 2.2.1. (EUISS, 2012; Bongaarts and Bulatao, 2000). Most forecasts suggest that overall population growth is likely to be driven by population increases in countries traditionally referred to as the ‘developing world’, namely middle-income and low-income countries, via a process of ‘demographic transition’ (Birks, 2007:39; UN, 2013; Chief of Force Development, 2009).

While population growth could result in a range of impacts, from migration to demand for resources, the literature points to a number of uncertainties about this trend. These are mostly due to variations in the assumptions (fertility, mortality or life expectancy) that underpin population projections. On average, the absolute error in population projections can reach 17% for 30-year projections: forecasters assert that they can only try and define a likely range of uncertainty (Beets, 2010; Lutz, 2007). It could be that the increase in the number of young people in countries with few opportunities for work could generate instability, with unpredictable effects that could spread and influence other areas, such as migration and the economy (African Development Bank, 2011; Bloom, Canning and Sevilla, 2003).
The second major demographic trend analysed in the literature has to do with population ageing, initially in high-income countries and subsequently in the rest of the world, starting with middle-income countries. In the short to mid term, experts posit a greying population in Europe, North America, Eastern Asia and other high-income countries, which will translate into changes in old-age dependency ratios – see Figure 2.2.3. The phenomenon is likely to be revealed in four ways: higher absolute numbers of elderly citizens; longer healthy life expectancy; a larger proportion of the elderly population; and fewer working-age individuals (Bloom et al., 2011; Anderson and Hussey, 2000). The UN projects that in high-income countries, the number of individuals aged 60 and over will rise from 245 million in 2005 to 406 million in 2050: by 2030, one in eight people worldwide will be 65 or over (Chief of Force Development, 2009; Beard et al., 2011). The narrative from the literature indicates that, in the long term, population ageing will affect ‘younger’ regions, with a reduction in the number of ‘youthful’ states where the median age is under 25, such as Latin America and emerging countries, and that by 2050 developing countries will be ageing as fast as those in the West currently are (Jackson et al., 2009; EEA 2011; NIC, 2012). For instance, evidence from the Delphi exercise indicated that the likelihood that fertility rates in middle-income countries (such as Brazil, India, and China) would fall below the replacement rate (2.1 children per woman) by 2030 was fairly high (around 70% in the third round of the Delphi exercise). Yet, there was some disagreement among experts, and about 25% of respondents thought the likelihood was much higher (80–90%). A first milestone for Europe is likely to be reached in the 2020s, when there will be a substantial increase in the proportion of people aged 65 and over; another milestone may take place in 2060 as the old-age dependency ratio reaches levels where there is more than one elderly citizen for every two working-age individuals (Lanzieri, 2011). Table 2.2.1. illustrates the projections for EU countries.
Growing in all countries, in 2030 the dependency ratio is projected to range from approximately 30% in Luxembourg to well above 45% in Germany.

Figure 2.2.2. Median age of the total population in years in 2030 (EU-27 and other world regions)

Table 2.2.1. Old-age dependency ratio (%) in Europe in 1990, 2010, 2030, 2050

<table>
<thead>
<tr>
<th>Country</th>
<th>1990</th>
<th>2010</th>
<th>2030</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU (27 countries)</td>
<td>20.6</td>
<td>25.92</td>
<td>38.33</td>
<td>50.16</td>
</tr>
<tr>
<td>Belgium</td>
<td>22.1</td>
<td>26.03</td>
<td>36.68</td>
<td>42.48</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>19.5</td>
<td>25.44</td>
<td>38.69</td>
<td>56.06</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>19</td>
<td>21.57</td>
<td>34.32</td>
<td>50.14</td>
</tr>
<tr>
<td>Denmark</td>
<td>23.2</td>
<td>24.87</td>
<td>37</td>
<td>41.79</td>
</tr>
<tr>
<td>Germany</td>
<td>22</td>
<td>31.26</td>
<td>47.21</td>
<td>58.11</td>
</tr>
<tr>
<td>Estonia</td>
<td>17.5</td>
<td>25.18</td>
<td>35.83</td>
<td>48.33</td>
</tr>
<tr>
<td>Ireland</td>
<td>18.6</td>
<td>16.82</td>
<td>27.59</td>
<td>39.66</td>
</tr>
<tr>
<td>Greece</td>
<td>20.4</td>
<td>28.41</td>
<td>37.74</td>
<td>57.45</td>
</tr>
<tr>
<td>Spain</td>
<td>20.2</td>
<td>24.69</td>
<td>35.52</td>
<td>56.91</td>
</tr>
<tr>
<td>France</td>
<td>:</td>
<td>25.66</td>
<td>39.06</td>
<td>45.48</td>
</tr>
<tr>
<td>Croatia</td>
<td>:</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>Italy</td>
<td>21.5</td>
<td>30.78</td>
<td>41.14</td>
<td>56.34</td>
</tr>
<tr>
<td>Cyprus</td>
<td>17.2</td>
<td>18.64</td>
<td>30.79</td>
<td>39.82</td>
</tr>
<tr>
<td>Latvia</td>
<td>17.7</td>
<td>25.19</td>
<td>36.17</td>
<td>54.25</td>
</tr>
<tr>
<td>Lithuania</td>
<td>16.2</td>
<td>23.28</td>
<td>35.2</td>
<td>47.25</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>19.3</td>
<td>20.43</td>
<td>29.98</td>
<td>41.94</td>
</tr>
<tr>
<td>Hungary</td>
<td>20</td>
<td>24.2</td>
<td>33.57</td>
<td>50.18</td>
</tr>
<tr>
<td>Malta</td>
<td>15.7</td>
<td>21.26</td>
<td>39.22</td>
<td>46.47</td>
</tr>
<tr>
<td>Netherlands</td>
<td>18.6</td>
<td>22.82</td>
<td>40.25</td>
<td>46.5</td>
</tr>
<tr>
<td>Austria</td>
<td>22.1</td>
<td>26.1</td>
<td>38.83</td>
<td>48.56</td>
</tr>
<tr>
<td>Poland</td>
<td>15.4</td>
<td>18.96</td>
<td>35.24</td>
<td>53</td>
</tr>
<tr>
<td>Portugal</td>
<td>20</td>
<td>26.7</td>
<td>37.85</td>
<td>55.62</td>
</tr>
<tr>
<td>Romania</td>
<td>15.6</td>
<td>21.37</td>
<td>30.23</td>
<td>53.81</td>
</tr>
<tr>
<td>Slovenia</td>
<td>15.5</td>
<td>23.8</td>
<td>38.84</td>
<td>55.05</td>
</tr>
<tr>
<td>Slovakia</td>
<td>16</td>
<td>16.93</td>
<td>31.36</td>
<td>51.38</td>
</tr>
<tr>
<td>Finland</td>
<td>19.8</td>
<td>25.63</td>
<td>42.74</td>
<td>44.86</td>
</tr>
<tr>
<td>Sweden</td>
<td>27.7</td>
<td>27.72</td>
<td>37.21</td>
<td>41.7</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>24.1</td>
<td>24.86</td>
<td>34.83</td>
<td>39.41</td>
</tr>
</tbody>
</table>

Source: Eurostat (2013), Old-age dependency ratio (%), code: tsdde510, and code tsdde511
Population ageing as a trend both worldwide and in Europe is beset with uncertainties that partly relate to the assumptions of the experts making projections. First, experts point out that ageing will not impact all states equally and is not occurring at the same pace. Even within Europe, they suggest that demographic problems may be more acute in Eastern and Northern European states, where demographic growth is negative in biological terms, yet high numbers of citizens migrate to other countries, leaving unfulfilled needs in the sending state. Second, there are key areas of uncertainty among the drivers of population ageing, namely declining fertility levels and longer life expectancy. Declining fertility rates are the result of several combined factors, including economic development and industrialisation (rising wealth, improvements in material conditions, healthcare, lifestyles and wider availability of birth control measures); changes in values (reduced demand for children, shifting priorities); and higher education and employment rates, particularly for women. Yet, little is understood about the extent of the interaction between the factors contributing to declining fertility levels, and these interactions differ between high-income, middle-income and low-income states. Finally, the evidence base on drivers of population ageing is fraught with additional uncertainty as scholars debate the exact impact of these drivers on individual health and overall ageing. The debate revolves chiefly around future trends in fertility rates and life expectancy, although experts are more confident when it comes to discussing the likelihood of increases in life expectancy. Still, data from the interviews prompt caveats about the levels of uncertainty for both these drivers: it was argued that the 2030 horizon is short, and that children born today will not have entered the labour market or affected pension and dependency ratios by then.

**Figure 2.2.3. Old-age dependency ratio 2010–50 (EU-27 and the world)**

![Old-age dependency ratio 2010–50](image)

The literature points to a third trend that is likely to develop in the European Union and other developed economies in the future, namely *transformations in the structure of families and household sizes*. The changing living arrangements of populations, particularly in Europe, are linked to demographic transformations and create some challenges, with unpredictable effects (Billari, 2005; Cohen, 2003). Evidence suggests that a growing proportion of Europeans remain childless, parenthood seems to begin at a later average age, divorce rates are on the rise and marriages appear less stable, while cohabitation without marriage is increasing, along with single-parent households and step-parenting. All these factors are changing the ways in which Europeans live. At the same, OECD and European Commission forecasts converge in projecting that between 2030 and 2100, Europe and OECD states will witness a rise in single-adult households (Lelkes and Zólyomi, 2008), owing partly to an increase in single-parent families, a rising number of childless couples, as well as a decline in average household size (OECD, 2012c). At the same time, the increase in the number of elderly citizens, particularly in Europe and in middle-income countries, may play a role in this change.

Yet, the literature converges in pointing to the unpredictability surrounding the future of family sizes (Billari, 2005; OECD, 2012c). This is due to a complex range of factors that are difficult to predict and include personal choices, shifting values and preferences, and fertility or mortality levels.
<table>
<thead>
<tr>
<th>TREND</th>
<th>DRIVERS</th>
<th>INDICATORS</th>
<th>EVIDENCE BASE (0/+/+;++++)</th>
<th>TIME HORIZON</th>
<th>OUTCOMES FOR THE EU</th>
<th>UNCERTAINTY (Low/Medium/High)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global population growth (driven by middle-income and lower-income countries)</td>
<td>High fertility in developing world; declining mortality (due to medical improvements); empowerment of women and changing values</td>
<td>Fertility rates; life expectancy at birth; “ideal” family size across various countries</td>
<td>+++</td>
<td>Mid-to long-term (10–50 years)</td>
<td>Global strain on natural resources and food supplies; migration flows</td>
<td>low</td>
</tr>
<tr>
<td>Population ageing in high- and middle-income countries</td>
<td>Increased life expectancy; declining fertility (owing to economic, developmental and value-related factors)</td>
<td>Old-age dependency ratio; average life expectancy; healthcare costs as a proportion of GDP</td>
<td>+++</td>
<td>Short-to long-term (5–50 years)</td>
<td>Financing welfare state models with a shrinking workforce; managing healthcare and pension costs; challenges in provision of services (eg care of the elderly)</td>
<td>low</td>
</tr>
<tr>
<td>Changing family structures and sizes in Europe</td>
<td>Increase in number of elderly citizens; increase in single-person and single-parent households; changing family formation patterns (cohabitation, etc.)</td>
<td>Proportion of single-parent households; average household sizes; divorce rates; at-risk-of-poverty rates by household type</td>
<td>++</td>
<td>Short-to mid-term (5–10 years)</td>
<td>Ensuring adequate housing supply; adaptation of family support systems; managing risk of poverty and social exclusion</td>
<td>medium</td>
</tr>
<tr>
<td>A youth bulge in parts of the developing world</td>
<td>Past high-fertility rates in the developing world; improving maternal and neonatal health; improved sanitation; declining under-five mortality; Declining prevalence of infectious diseases</td>
<td>Total fertility rate; birth rate; neonatal/child/under-five mortality rate; proportion of 15–24/total population; number of hospitals per 1000 capita; prevalence rates of infectious diseases (diarrhea, malaria, etc)</td>
<td>+++</td>
<td>Long-term</td>
<td>Effects of population growth on migration flows to the EU; possible societal unrest, or pressure for democratic reform; potential sources of radicalisation</td>
<td>low</td>
</tr>
</tbody>
</table>
2.3. Employment and the changing labour market

Four major trends have been identified with regard to employment and associated labour market developments.

First, *global population growth and population ageing are projected to have a significant impact on the workforce in the future*. The global labour force is forecast to expand over the next decade albeit at a slower rate than currently (International Labour Office, 2012b). Projections about the future global workforce assume further growth to about 3.5–3.6 billion workers by 2030 (United Nations 2010; Dobbs et al., 2012b). India, other South Asian economies and Africa are projected to be the largest suppliers of new workforce in the global market, supplying 60% of new workers in the next two decades (Dobbs et al., 2012b). Europe’s working-age population is projected to remain stable between 2010 and 2020 at about 364 million workers (UN 2010). Longer-term scenarios up to 2030 project that Europe’s working population will shrink by 10%, or nearly 50 million by 2030 (compared with current level). This decline in the working-age population will make it even more important to build an inclusive labour market and to make work sustainable.

Demographic change will drive changes in dependency ratios. Dobbs et al. (2012b) estimate that by 2030, there could be 360 million extra elderly individuals worldwide who are not part of the labour force, for example due to early retirement, and 40% of these will be in developed countries and China. These diverging labour force growth patterns are projected to affect the total productivity growth and this, in turn, can shift the balance of global economic power. According to the Delphi expert panel, there is a relatively high likelihood (about 60–80%) of Europe’s political and economic influence on the world stage decreasing as a result of a drop in its working-age population.
The second trend analysed focuses on the changes in labour force participation and growing vulnerabilities in the work place. The International Labour Office (ILO, 2012b:33) analysis shows that global labour force participation rates have been declining for over a decade, with evidence of an accelerated decline since 2007. Experts from the Delphi panel seemed to agree that global labour force participation will decline further by 2030. In the EU, the labour force participation rate for 2030 is projected to be similar as the 1990 rate. The increase of female labour force participation is cancelled out by a drop in male economic activity.

The changes in labour market participation include diverging employment and unemployment trends. It is estimated that developing and emerging economies will recover faster from the current economic crisis than developed countries. Global unemployment predictions (ILO, 2012b; OECD, 2012h) show that job recovery has generally been too weak to allow for a significant fall in unemployment and as a result, a rise in persistent high levels of unemployment is predicted in the short- to mid-term. The risk of unemployment varies between countries, sectors of economy and particular groups of workers. Analysis of unemployment trends show that young, less skilled and older workers have been disproportionately affected by the rise in unemployment. For many older workers, long-term sickness and disability benefit schemes remained potential routes for withdrawal from the labour market. Yet, pension and labour market reforms that tightened these routes to withdrawal had an impact on the overall number of older workers during the current recession. In Europe, the labour force participation and employment rates of older workers have been growing for over a decade, and recent analysis show that older workers have increasingly remained in the labour market (European Commission, 2013a).
At the other end of the spectrum are young workers who have been hit particularly hard by the rise in unemployment during the economic crisis. A particularly pronounced increase in youth unemployment levels and the long-term unemployment rates has been observed in developed economies and the EU (International Labour Office, 2012a). Another difficulty faced by European youth is related to the significant increase in the number of young people not in employment, education or training (NEETs). Unemployed youth and NEETs face multiple disadvantages and are at high risk of marginalisation. Research from the OECD (2012h) shows that the significant risk of prolonged unemployment could lead to labour market withdrawal and growing marginalisation among the jobless, becoming a trap for individuals, in particular young workers at the beginning of their professional life. Long-term unemployment can be also linked to an increase in informal, precarious and vulnerable employment.

The third major trend that resonates strongly in the literature concerns the diverging demand and supply of skills and patterns of employment creation. Dobbs et al. (2012b) estimate a potential surplus of 90–95 million low-skilled workers globally and a potential shortage of high-skilled workers of about 38–40 million by 2020. Analysis show that the difference in employment rates for low- and high-skilled workers will increase in the next 20 years. The Delphi panel experts estimate that this difference in employment rates would be within a range of 30–34 percentage points. They point out that the growing skills mismatch can be attributed to the impact of technology on modes of production and the disappearance of traditional, low-skilled manual jobs.

**Figure 2.3.2. Global labour force participation rate, 1990–2020**

While research shows that a rise in educational attainment increases workers’ skills, thus improving their position in the labour market, workers’ skills are projected to increase at a lower rate than the actual need
for them. Cedefop’s study (2012a) assessing the future skills supply and demand in Europe shows that in the period to 2020, there will be job openings in all types of occupation, but most newly created jobs will be at the higher and lower ends of the job spectrum, possibly bringing a risk of job polarisation. In addition, Cedefop’s study also shows that the rates (probabilities) of becoming or remaining unemployed would also depend on qualification levels, with the less qualified more likely to suffer from unemployment than the higher qualified.

Finally, the working environment will be influenced by technological developments. New modes of production and manufacturing technologies are expected to advance further. They are also projected to facilitate the development of new capabilities and competences but at the same time they can make some jobs redundant (Ouye, 2011). New enabling technologies increase interconnectedness and this, in turn, can change power relations at work. The increasing availability and use of new technologies may influence the organisation of work in companies and can facilitate further spatial and organisational distribution of the workforce. The nature of organisational governance structures may also change and workers may become increasingly mobile and not bound to one physical workplace. Advances in science and technology may also transform jobs themselves and this can have a significant impact on occupational health and safety in the workplace.
<table>
<thead>
<tr>
<th>TREND</th>
<th>DRIVERS</th>
<th>INDICATORS</th>
<th>EVIDENCE BASE (0/+/+++/++++/)</th>
<th>TIME HORIZON</th>
<th>OUTCOMES FOR THE EU</th>
<th>UNCERTAINTY (Low/Medium/High)</th>
</tr>
</thead>
</table>
| Decline in the working-age population in EU and developed countries | Decline in fertility rates and gains in longevity in Europe              | Fertility rates; population growth/decline; (old-age) dependency ratios     | +++                           | Short- and long-term | Potential increase in migration movements and migration pressures on Europe  
Potential shift in the balance of global economic powers with Europe’s decreasing political and economic influence on the world stage                                                                                     | Low                           |
| Growth of the labour force in developing countries                   | High fertility rates in developing countries                              | Fertility rates; population growth/decline; old-age dependency ratios       | +++                           | Short- and long-term | Potential social unrest in developing countries if job creation rate too slow to absorb growing labour force  
Potential increase in migration movements and migration pressures on Europe  
Potential shift in the balance of global economic powers with Europe’s decreasing political and economic influence on the world stage                                                                                     | Low                           |
| Increasing unemployment rates in the EU, in particular youth unemployment rate | Shortfall and slow employment creation                                   | Unemployment rate; youth unemployment rate; NEET rate                      | +++                           | Short- to long-term   | Job creation; mitigating risk of social exclusion and labour market withdrawal of unemployed; increasing employability of unemployed, in particular among young unemployed people  
Potential social unrest if particular workforce groups are disproportionately affected by unemployment                                                                                                                   | Low                           |
<table>
<thead>
<tr>
<th>TREND</th>
<th>DRIVERS</th>
<th>INDICATORS</th>
<th>EVIDENCE BASE (0/+/-/++/+++)</th>
<th>TIME HORIZON</th>
<th>OUTCOMES FOR THE EU</th>
<th>UNCERTAINTY (Low/Medium/High)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shrinking labour force participation in Europe and globally</td>
<td>Shortfall in the global employment creation; disbelief among unemployed (in particular the young and long-term unemployed) that jobs are available resulting in dropping out of the labour market completely; no improvements in working conditions (and in some regions and sectors of economy deterioration in working conditions) discouraging labour market entry</td>
<td>Labour force participation rate; employment and unemployment rates</td>
<td>+++</td>
<td>Short-term (5–10 years)</td>
<td>Diverging labour market trends across sectors of the economy and between workforce groups; unemployment rates; labour force participation rates and withdrawal from labour markets; risk of poverty; vulnerable employment groups; risk of social unrest</td>
<td>medium</td>
</tr>
<tr>
<td>Diverging demand and supply of skills (surplus of low-skilled workers and shortage of medium- and high-skilled workers)</td>
<td>Decline in low-skilled jobs; oversupply of low-skilled workers; increasing demand for high-skilled jobs; insufficient supply of high-skilled workers</td>
<td>Difference in employment rates for low and high-skilled workers; job creation rate</td>
<td>++</td>
<td>Short- and long-term</td>
<td>Differences in labour market outcomes of low- and high-skilled workers; need to increase educational attainment to improve workers’ position in the labour market; low demand for low-skilled workers; skills mismatch; risk of ‘lost generation’</td>
<td>low</td>
</tr>
<tr>
<td>Changing working environment due to ICT developments</td>
<td>Developments in science and technology; ICT advances</td>
<td>New technological capabilities; societal acceptance of new technologies</td>
<td>++</td>
<td>Short- and long-term</td>
<td>Uncertainty about the possibility of a growing divide between technologically advanced economies (and individuals) and countries (and workers) lagging behind in their absorption of new technologies</td>
<td>medium</td>
</tr>
</tbody>
</table>
2.4. Evolving patterns and impacts of migration

Our review identified three main trends in the current form of migration and its likely future impact on societies in the European Union and worldwide.

First, migration will continue to be a complex phenomenon, with a variety of factors influencing people’s decision to migrate (provided their decision is voluntary) and evolving diversity in patterns and types of migration. Over the past 20 years, however, the global share of migrants as a percentage of the total population has held relatively steady at 3.1% (UN Population Division, 2012). The consequences of global migration trends are felt not only by the migrants themselves, but also proximately by their communities of origin and destination. The EU member states form part of a group of developed countries in which migration numbers continued to increase between 1995 and 2008. In fact, over the past decade, new immigrants accounted for 70% of the increase in the labour force in Europe (OECD, 2012e). While there is clearly no single cause that explains why people decide to migrate, authors cite economic, societal and policy factors as the major drivers of migration (Castles and Miller, 2009:30). Given the wide variety of interacting motivations, it comes as no surprise that there is a plethora of migration types by which migrant individuals are categorised. Migration policies are used to bestow accompanying rights, but also to encourage or discourage migration and promote particular integration agendas. The effectiveness of migration policies is debated, however: migration laws may not always have their intended effect, and non-migration policies (employment, social benefits, education) may have just as great an impact on migration. The evidence indicates that the various migration routes are accompanied by different lengths of stay and commitment to migrants’ receiving countries; length and type of stay may also be influenced by the restrictions imposed national policies. Within the EU, for example, there are 28 different policy regimes in place, with varying consequences. Also, some types of migration are intended to be temporary, such as student or circular migration, in which migrants move back and forth between their home and host countries (Düvell, Collyer and de Haas, 2012). The role of networks in encouraging migration is also an important pattern that can spread mobile trajectories through entire families and communities.

A certain level of uncertainty exists around the extent to which technology and globalisation will impact future migration trends. Technology is making it increasingly easy for migrants to travel inexpensively, to learn about available routes, and to stay in touch with family and community members abroad, but the level of use and absorption is difficult to measure. Continuing globalisation is likely to support migration trends as well, as the expansion of media, languages, and businesses facilitates interactions across borders. However, the impact of these trends is not easy to delineate, as both technology and globalisation may also discourage migration by providing sedentary options, such as telecommuting and outsourcing.

Our analysis found that internal migration will continue to be closely related to urbanisation. The long-term trend of urbanisation is expected to continue globally, regardless of countries’ income levels (see Figure 2.4.1). Predictions suggest that by 2020 about half the world’s population will live in cities and over 300 cities in the developing world (middle-income and low-income countries) will have more than 1 million inhabitants (RICS Foundation et al., 2010). Urbanisation is likely to be driven by population momentum, the expansion of urban areas and the arrival of new migrants.
While experts agree that urbanisation will continue to be a major driver of internal migration, there is more debate about its impact on international migration. The Delphi exercise showed strong uncertainty on this issue, with most experts expressing a 50% likelihood that urbanisation will be a driver of international mobility. Current evidence shows examples of cases where greater urbanisation coincided with greater international migration, particularly in some of the emerging economies, such as China. Alternatively, urbanisation may discourage international migration, either by redirecting migration flows or exacerbating unequal social structures.

**Figure 2.4.1. Projected urban population by region, 2050**


The third major trend that resonates strongly in the literature concerns the future attractiveness of the EU as a destination for migrants. There is global evidence that while migration from developing to developed countries remains strong, there are signs that migration to Europe and the United States is decreasing, with uneven reductions across different countries (Development Research Centre on Migration, 2009; OECD, 2011c). Looking ahead, some authors argue that an ageing Europe in need of inward migration to counter the decline in labour force may end up competing for migrants not only with other Western nations, but also with the emerging economies (see Fargues, 2008), although demographic change varies in impact and speed across EU countries. While the match between the stock of migrants in the developing world and Europe may correspond in terms of supply and demand, it is possible that the skills distribution of migrants to Europe may also depend on policy structures, which currently tend to favour high-skilled workers at the risk of excluding low-skilled migrants who will be needed to fill future labour gaps. Also, in looking ahead to future migration flows, it is possible that the current economic recession
could act as a deterrent for the volume and type of migrant flows. Finally, it is worth mentioning that the effects of migration depend largely on migrants’ reception in their receiving country and the ability of migrants and their children to integrate in their new societies. Despite high-profile media coverage of anti-migrant sentiments, data from the Eurobarometer do not show heightened levels of public concern about immigration, even during the recent economic crisis (see Figure 2.4.2). Education has been identified as an important enabler of integration, along with the protection of workers’ rights and the recognition of international credentials, with language acquisition identified as a key component of successful initiatives (de Haas, de Valk and Willekens, 2012; UNDP, 2009). Extending citizenship opportunities, which currently vary widely between member states, would also improve the integration environment by encouraging a sense of belonging through shared political participation and civic identity (Niessen and Huddleston, 2011). Importantly, the integration process must also be extended to migrants’ children, to ensure that second-generation individuals can access opportunities for education, employment and civic engagement (Ziolek-Skrzypczak, 2013).

Assessing the future attractiveness of the EU for migrants is fraught with uncertainty. Several interviewees pointed to the risk that a desirable global migrant elite will react to real or perceived European policy barriers by gravitating towards comparatively welcoming regimes in the US, Canada or Australia. Also, it remains difficult to foresee how the economic crisis will unfold and its long-term implications. The impact of recession has been shown to vary widely between migrant groups and the long-term effects of current financial conditions remain to be seen (Papademetriou et al., 2010).

Figure 2.4.2. Immigration cited as the major national-level concern for EU-27 respondents

![Graph showing the percentage of respondents who listed immigration as the most important problem facing their country over time](source: Percentage of respondents who listed immigration as the most important problem facing their country, based on Eurobarometer poll data (EU 27))
<table>
<thead>
<tr>
<th>TREND</th>
<th>DRIVERS</th>
<th>INDICATORS</th>
<th>EVIDENCE BASE (0/-/+/-/+++/)</th>
<th>TIME HORIZON</th>
<th>OUTCOMES FOR THE EU</th>
<th>UNCERTAINTY (Low/Medium/High)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continued diversity in types and patterns of migration</td>
<td>Personal motivations; social networks; structural factors in both sending and receiving countries (economic opportunities, demography, policies, rights and liberties, integration climate, conflict, environmental conditions, etc)</td>
<td>Migrant status (legal and undocumented)</td>
<td>+++</td>
<td>Short- and long-term</td>
<td>Wide range of migrant types and routes; positively integrating diverse flows in European society?</td>
<td>medium</td>
</tr>
<tr>
<td>Continued urbanisation across the globe</td>
<td>Economic opportunities in cities; modernisation of transport; population growth; ‘annexation’ of rural areas into cities; involuntary conditions (war, environmental conditions, demographic pressure, etc)</td>
<td>Urban population growth; urban population as percentage of overall population</td>
<td>++</td>
<td>Long-term</td>
<td>Impact of migration on Europe’s changing demographic balance; consequences for integration and available labour skills; ‘urban lifestyles’ and diets contributing to global resource scarcity</td>
<td>low</td>
</tr>
<tr>
<td>The attractiveness of migrants’ receiving climates will help determine the future of international migration trends in Europe</td>
<td>Systemic policies (labour, health, etc); openness of migration policies (both real and perceived); integration climate; economic conditions employment opportunities</td>
<td>Migration flows to Europe as opposed to other major destinations (ie US, Canada, Australia), particularly among high-skilled migrants with greater choice</td>
<td>++</td>
<td>Mid- to long-term</td>
<td>Supporting the ‘right’ types of migration; competing with other international destinations, accounting for short- and long-term considerations; skills gap; encouraging integration climates</td>
<td>medium</td>
</tr>
<tr>
<td>TREND</td>
<td>DRIVERS</td>
<td>INDICATORS</td>
<td>EVIDENCE BASE (0/-/+/-/+/-/+)</td>
<td>TIME HORIZON</td>
<td>OUTCOMES FOR THE EU</td>
<td>UNCERTAINTY (Low/Medium/High)</td>
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<tr>
<td>Integration will be increasingly important, both for new migrants and second-generation communities</td>
<td>Attitudes towards migrants; policy structures in receiving country; labour market structure and conditions; education systems; residential distribution of migrants</td>
<td>Unemployment rates, political rights, workforce participation and education levels as compared to native populations</td>
<td>+++</td>
<td>Short- and long-term</td>
<td>Integration and social acceptance of migration; attracting skilled migrants; improving the labour market and education outcomes of migrants and their children; discrimination and aggression against migrants; (perceived) well being and livelihood of deprived neighbourhoods</td>
<td>Low</td>
</tr>
</tbody>
</table>
2.5. Connected societies, empowered individuals?

Trends in connection, education and empowerment are interlaced in multiple ways and act as drivers, multipliers and indicators of progress towards addressing societal challenges. Overall, six major trends are identified in this report.

Our analysis of empowerment encountered first and foremost a problem of definition. While empowerment has frequently been cited as a major future trend, to date, there has been no universally accepted definition of the term, and no succinct way to show its evolution over time. According to the EUISS, the main drivers behind individual empowerment are the global emergence of the middle class, near-universal access to education, the empowering effects of ICT and gender equality (EUISS, 2012). The World Bank takes a more holistic view of individual empowerment, citing major elements including education, healthcare, governance and institutional capacity, general quality of life, access to information and participation and social inclusion. Beyond these observations, our research identified six trends that could have a significant impact on the EU landscape.

First, based on UNDP’s Human Development Index, vast regional disparities in the areas of health, education and living standards can be observed, both across the world and within the EU. States that joined the EU as part of the 2004 and 2007 expansions, as well as several countries in southern Europe, such as Portugal, show levels of human development that are significantly below those of countries displaying the highest values (eg the Nordic countries, Germany and Ireland). It is particularly noteworthy that a disparity in development trends can be observed since the break up of the Soviet Union in the early 1990s, with Eastern European states struggling to meet the high levels of development exhibited by the Western core (UNDP, 2012).

Figure 2.5.1. HDI by EU accession date
The impact of connectedness for societies and individuals that can afford communication technologies is potentially disruptive along dimensions that go beyond what the HDI measures, namely educational access, gender equality, human rights protection and changing patterns of political participation. There are, however, divergent views about the extent of the convergence itself and the positive impact of the technologies on realising a more wealthy, healthy and equal ‘network’ society (Desmoulin-Canselier, 2012; Schummer, 2010). In the long term, fragmentation between countries is likely to persist. Experts consulted for this study suggested that divides are unlikely to be determined by access to the internet. Rather, inequalities are expected in the capacity (literacy, awareness and skills) to reap the benefits of technology. While digital divides have been addressed by targeted policy initiatives around the world, including flagship initiatives such as the Digital Agenda in Europe, the challenge of ensuring that these are kept to a minimum is likely to persist. Finally, technology can act as an accelerator, exacerbating existing inequalities between those who can afford to access it and obtain the skills necessary to benefit from connection, and those from whom it is precluded (van Dijk, 2012). However, because “digital natives”\(^2\) are increasingly socialised in ICT environments, previous income-determined barriers to access to political participation and education could be overcome (see discussion on e-participation and e-learning below). In sum, these inequalities work against democracy and empowerment for some people, while at the same time producing expanded opportunities for political participation and empowering others (Hacker et al., 2009). Furthermore, governments at national and supranational level will have to work on harnessing interconnectedness in addressing societal problems, from access to education to political participation and employment.

Second, as governments increasingly look to alternatives to government-supplied social services and innovative ways to adapt to a changing strategic landscape, social innovation is progressively gaining more weight on policy agendas. While social innovation in itself is not a new phenomenon – at some level all transformative ideas, from Robert Owen’s approach to workers’ welfare to feminism are social innovations – the present turmoil and technological progress offer new opportunities to harness these initiatives to promote social policy goals and ultimately overcome the societal challenges posed by financial and institutional crises (Helliwell et al., 2013).\(^3\) Although there is very scarce empirical evidence on trends in social innovation, several governments and international organisations have started to institutionalise support for social innovation through entities such as the UK’s Office for Civil Society, the Australian Centre for Social Innovation or the EU’s Social Innovation Europe (SIE) initiative. ICTs are a key enabler of social innovation by increasing efficiency and effectiveness. They facilitate better social innovation through greater connectivity, simplicity and convenience. Ultimately, they enable private and public organisations to do more with fewer resources, and so innovate adequately for the post-crisis world. Digital technologies provide opportunities for new types of social innovation through the

\(^2\) A term coined by Marc Prensky (2001) referring to individuals born during or after the general introduction of digital technologies and through interacting with digital technology from an early age, are more familiar with and skilled in using these technologies and services.

\(^3\) Social innovation is defined in this context as new responses to pressing social demands by means that affect the process of social interactions (BEPA 2010)
network effect of collective, dispersed or large-scale intelligence. Wikis are a good example of this potential (Rainie et al., 2012).

Figure 2.5.2. Correlation between levels of digitisation and a composite well being proxy indicator

Figure 2.5.2 shows that there is a correlation between levels of digitisation and composite well being proxy indicators, such as the the indices compiled by Gallup or the OECD, although the levels in both also show wide variance across EU member states and between the EU and international counterparts (Katz et al., 2012; Gallup, 2010). In addition, tools such as multi-criteria decisionmaking or social return on

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4 This graph plots a composite digitisation index, represented on the x axis, and is based on six elements and 23 indicators measuring tangible parameters of perceived digitisation metrics, namely ubiquity, affordability, reliability, speed, usability and skill. The sample consists of 150 countries and spans 2004–10. Indicators include measures of mobile cellular and internet access costs adjusted for GDP per capita; investment per telecom subscriber (mobile, fixed and broadband); internet penetration; percentage of individuals using the internet. (For a full list of indicators see Katz et al., 2012, p. 8.) The Gallup thriving index, represented here on the y axis, is a self-reported measurement of well being. Gallup’s thriving, struggling, and suffering indexes measure respondents’ perceptions of where they stand now and in the future. Based on the Cantril Self-Anchoring Striving Scale, Gallup measures life satisfaction by asking respondents to rate their present and future lives on a ladder with steps numbered from zero to 10, where zero indicates the worst possible and 10 the best possible life. Individuals who rate their current lives at 7 or over and their future at 8 or over are considered to be thriving. Individuals are suffering if they report their current and future lives as 4 or lower. All other individuals are considered struggling (Gallup 2010).
investment analysis can allow policymakers to take into account the explicit social innovation aspect of their decisions. However, there is an overall lack of reliable objective indicators for the impact of social innovation and the correspondent impact of technology within social innovations, needs that will have to be addressed by policy planning in the medium to long term (Social Innovation eXchange (SIX) and Young Foundation, 2010).

Third, while the provision of basic human rights has improved, global disparities still remain strikingly high. The access of women and minority groups to education (UNESCO, 2012) and opportunities to participate in the political process (Paxton, Hughes and Green, 2006; World Bank World Development Indicators, 2012) are crucial to the empowerment of individuals and the advancement of society. However, certain regions seem insulated from progress (Reporters Without Borders, 2012). The preservation of local values and traditions seems to prevail over the adoption of Western concepts of equality, although the World Value Survey indicates that there is a strong correlation between mass self-expression values in developed societies and the emergence of grassroots movements and the formation of civil society to fight for these universal human rights (Welzel and Inglehart, 2008). While the protection of human rights across the EU can be considered exemplary by most standards, recent cases must be treated with caution and the emerging issue of internet privacy is increasingly at the heart of the debate about human rights and basic freedoms.

Fourth, despite the sustained pace of growth in connectivity, most platforms remain national or local. The common assumption of technological determinism – that increased global access to information technologies will lead to a diffusion of Western secular values that will gain increasing weight as a result – overlooks the local and national character of online platforms. For instance, Figure 2.5.3. shows that Twitter follower relationships are distributed disproportionately within national borders with respect to a country’s share of the global Twitter population. For example, although the Netherlands makes up only 1.16 per cent of the global Twitterati, Dutch feeds constitute 37.8 per cent of accounts followed. Consequently, the future could be potentially less globalised and more determined by local and national cultures and preferences as opposed to a rising global value system based on the deepening and broadening of global networks.
In addition, countries with value systems that differ from those dominant in Western countries (e.g., Asia, South America) are becoming the dominant nations online and have the greatest numbers of users, despite lower levels of adaptation. This prompts questions about the future balance of cultures on the web (Dutton, Dutta and Law, 2011; Van Oranje-Nassau et al., 2009). The lack of evidence of such a correlation underlines the mixed impact technology trends have on the way people inform themselves and how decisions are made (Cave et al., 2009). Therefore, it is likely that even in projected global progress towards more rational and secular values, connectivity (in the sense of access to internet) is not the foremost driver for the trend, despite being a potentially useful vehicle for enhancing the reach and impact of policies aimed at solving societal problems.

Fifth, the focus on education of policymakers across the world is slowly shifting from basic literacy and access to primary education to more reliable predictors of social inclusion and labour market success, such as vocational training and access to tertiary education. This phenomenon can be observed at the elementary level in particular, where the gap between developed and emerging and developing countries is closing, as recent UNESCO reports have found (UNESCO, 2012). However, people can only be considered truly empowered if increased levels of education can be translated directly into job market benefits.
When considering access to education, we need to pay special attention to gender equality and the difference in opportunities between women and men. Education is at the heart of equal opportunity, enabling women across the world to participate in the labour market and the economy as a whole, as well as to take on leadership roles in society, politics and management. When looking at gender ratios in primary education, virtually all regions seem to converge rapidly on equal enrolment between girls and boys, suggesting basic gender equality. However, further investigation, including breaking down the ratios of college enrolment as well as seats held by women in national parliaments, reveals striking differences between regions with respect to strong predictors of economic and political power. This suggests that gender equality is only prevalent in the developed Western world and has not yet made its way fully into developing societies (World Bank Development Indicators, 2012). While the overall situation seems to be improving regardless of region, a number of differences still remain, as a number of countries struggle with the transition from patriarchal structures to post-industrial societies where traditional gender norms and equality standards are questioned.

Networked technologies are likely to enhance the potential of distance learning in formal and informal settings, presenting a novel form of competition for traditional establishments. Innovation in the delivery of open educational content has been on the rise in recent years, enabled by technological progress in connection speed. Massive open online courses (MOOCs), which first appeared in 2008, are an example of this trend. Although their development is not immune to criticism – these courses are often characterised by very high dropout rates, overly traditional teaching structures and little focus on the progress of individual students – the global reach of these course offerings is a fine illustration of the potential of network technologies for education (Daniel, 2012; Kop, 2011). Similarly, informal education offered through platforms for user-generated content is enabled by technological progress (Facer and Sandford, 2010).
Finally, while technological advances have significantly altered the way people report and absorb information, the impact of this enhanced flow of information remains inherently uncertain. Notably, it will be interesting to see how internet access affects the way in which people participate in society as well as in the political process and how this will change the political landscape. Recently, online movements such as Pirate Parties in many countries have managed to penetrate the political process and influence traditional ways of policy formulation though the power of online ballots and social media pressure. The fact that the internet can serve as an organising tool, bypass the traditional political process and allow people to rally around certain issues marks a paradigm shift in politics and policy. This shift, and societal changes demonstrating declining levels of trust in political institutions (including those in Europe) is likely to represent an important challenge for policymakers wanting to maintain the legitimacy of their institutions. In particular, declining trust in European institutions, including the directly elected
European Parliament, have been reported in countries facing dire financial challenges, for instance the southern European member states.

**Figure 2.5.5. Levels of trust in the European Parliament**

![Levels of trust in the European Parliament](image)

Source: Eurobarometer, 2013

Governments are likely to make increasing use of technology in decisionmaking and the provision of services to citizens, which can potentially increase transparency in government systems around the world. However, trends in censorship and limiting internet use by individuals will continue to be present (Cave et al., 2009; United Nations, 2012; van Oranje-Nassau et al., 2009). E-government is potentially seen as a driver behind transparency trends and can result in reducing corruption in countries that invest in this sector (Bertot, Jaeger and Grimes, 2010). However, regression analyses performed on large country datasets have also suggested that the rule of law and a culture or transparency drive e-government (Ifinedo, 2012; Lee, Chang and Berry, 2011). Widespread availability and growing capacity of ICTs and new media, accompanied by the reduced cost of producing user-generated content, have enabled citizens around the world to engage in public discourse and connect with others to foster societal change. ICTs and new media could also potentially empower minorities and other disadvantaged groups. Although

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5 The United Nations e-government development index (EGDI) is a composite indicator measuring the willingness and capacity of national administrations to use information and communication technology to deliver public services. It is based on a comprehensive survey of the online presence of all 193 member states that assesses the technical features of national web sites as well as e-government policies and strategies applied generally and by specific sectors for delivery of essential services (United Nations, 2012).
grassroots movements make use of online interaction for self-organisation, empirical studies have not found a clear indication of the translation of online participation into offline activism (Christensen, 2011). As extensions of the effects potentially exerted by offline networks, online social networks have been found to be an effective influencing tool for political participation, such as the 2010 elections to the US Congress (Bond, 2012). However, the effect of these tools for mobilising individuals who would not otherwise participate in social movements or traditional political processes is unclear.

Continuing trends in surveillance and data mining by governments and private companies could possibly lead to tension between citizens and governments in the short to medium term. Overall, reaping the potential benefits offered by connectedness for engaging and empowering citizens in the short and medium term hinges on policies that ensure social acceptance, accessibility and the ubiquity of these services.

Another aspect of the interaction of values with the network society is the changing role internet service providers (ISPs)\(^6\) play vis-à-vis the public. Increasingly, these companies are prompted by public opinion to disclose details of their exchanges with governments, for instance by publishing the number of takedown or information requests received and their attitude towards conforming to these requests (Figure 2.5.7.). The growing number of ISPs sharing this information potentially shows the changing role of these private sector companies in social processes, from pure platform providers to fully-fledged political actors. The future role of corporate actors is controversial in enabling democratic movements. Policymakers will have to define their domestic and international strategy to balance the involvement and regulation of these actors with the need to meet large-scale societal challenges and wildcards, such as the formulation of surveillance policies in other states (Anderson, 2012).
Figure 2.5.6. Google user data requests have increased over time

The category includes the following countries, from which Google reported having received requests (not all countries are reported to have filed requests in all years covered): Belgium, Denmark, France, Germany, Hungary, Italy, the Netherlands, Poland, Portugal, Spain and the United Kingdom. The data concern user requests, which may specify any users or accounts used to store or provide information on Google’s services.

Source: Google, 2013
<table>
<thead>
<tr>
<th>TREND</th>
<th>DRIVERS</th>
<th>INDICATORS</th>
<th>EVIDENCE BASE (0/+/+ /++ /+++ /+++)</th>
<th>TIME HORIZON</th>
<th>OUTCOMES FOR THE EU</th>
<th>UNCERTAINTY (Low/Medium/High)</th>
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<tbody>
<tr>
<td>Human development as measured by the Human Development Index is growing over time</td>
<td>Improvements in education, health and wealth</td>
<td>Human Development Index 1990–2010</td>
<td>+++</td>
<td>Medium-to long term</td>
<td>Within the EU, high variation of Human Development across regions, with the newer member states struggling to catch-up to the Western core</td>
<td>low</td>
</tr>
<tr>
<td>Narrowing the gender gap in many parts of the world</td>
<td>Women’s growing involvement in politics; women’s increased; participation in the job market; women’s share in college graduates</td>
<td>World Bank Development indicators 2012: female to male ratio in higher education and elementary school; breakdown of seats held by women in national parliaments</td>
<td>+++</td>
<td>Short-to medium term</td>
<td>Closing the gender pay gap; increasing female labour force participation; Societal conflicts due to changing gender roles; Likely persistence of gender inequalities in developing countries</td>
<td>low</td>
</tr>
<tr>
<td>Diffusion and market penetration of new technologies</td>
<td>Technological progress; acceptance of emerging technologies; business and pricing models; economic climate; regulation</td>
<td>Market penetration rates; global revenues</td>
<td>++</td>
<td>Medium- to Long term</td>
<td>Preserving global competitiveness of EU industry; societal impacts of new technologies (work, health, education, etc)</td>
<td>high</td>
</tr>
<tr>
<td>Continuing growing interconnectedness, but inequalities and fragmentation will persist</td>
<td>Technological progress and growing degree of interconnectedness; rise of the global middle class</td>
<td>Access rates and usage indicators</td>
<td>+++</td>
<td>Long term</td>
<td>Social inequality and unequal access to public services; interconnectedness not harnessed to support facing the EU’s policy challenges; skills mismatch and polarisation of labour market outcomes</td>
<td>low</td>
</tr>
<tr>
<td>TREND</td>
<td>DRIVERS</td>
<td>INDICATORS</td>
<td>EVIDENCE BASE</td>
<td>TIME HORIZON</td>
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<tr>
<td>Social innovation, enabled by ITCs among other factors, will continue to grow in importance for policymaking</td>
<td>Technological progress and growing degree of interconnectedness; fiscal constraint; technological progress</td>
<td>Digitisation indices; UNHDI; wellness indicators; evaluation indicators of individual programmes</td>
<td>+</td>
<td>Medium term</td>
<td>Need for adequate measurements and success indicators; demand for systematic incorporation of SI in the policy toolbox; replacing public sector services with grassroots initiatives</td>
<td>medium</td>
</tr>
<tr>
<td>Online and informal forms of education will have increasing impact on access to education and outcomes</td>
<td>Technological progress and growing degree of interconnectedness; fiscal constraint; limited ability to change educational systems; skills demand; internet generation</td>
<td>Number of students enrolled in traditional and online courses/ MOOCs; educational attainment; number of universities offering online courses; educational reform; unmet demand in labour market for certain skills</td>
<td>++</td>
<td>Medium term</td>
<td>Need to make educational systems responsive to these developments; unmet skills demand</td>
<td>medium</td>
</tr>
<tr>
<td>Improving global human rights situation</td>
<td>Democratisation of developing countries leads to greater respect for human rights; people’s definition of human rights is changing over time; nowadays, privacy on the internet has become a human right</td>
<td>Reporters without Borders: Press Freedom Index 2013; Freedom House; Freedom on the Net 2012</td>
<td>++</td>
<td>Short-to medium-term</td>
<td>Persisting disparities in the enforcement of human rights across the EU</td>
<td>medium</td>
</tr>
<tr>
<td>e-Government and online engagement potentially empower citizens</td>
<td>Technological progress and growing degree of interconnectedness; driven by policy (international benchmarking); demand for services</td>
<td>e-government benchmarking data (EU; UN)</td>
<td>+</td>
<td>Short-to medium-term</td>
<td>Unequal accessibility and ubiquity of services and citizen engagement across MS and between strata of society; responsiveness of the democratic system and process to demand for interaction with citizens</td>
<td>high</td>
</tr>
<tr>
<td>TREND</td>
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<td>INDICATORS</td>
<td>EVIDENCE BASE (0/+/++/+++/)</td>
<td>TIME HORIZON</td>
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<tr>
<td>Grassroots movements and activism dictate policy. Moving from traditional political participation to issue based-participation.</td>
<td>Technological progress and growing degree of interconnectedness Social media platforms such as Twitter present an opportunity to rally around specific issues and push societies closer to a new form of direct democracy</td>
<td>Cases: ACTA and the EU; emergence of political platforms online such as Avanz.org M5S in Italy, Pirate Party, Arab Spring</td>
<td>+</td>
<td>Short-term</td>
<td>Effects of changing levels of citizen involvement and internet entrepreneurs on democratic process Maintaining legitimacy of EU institutions in the face of changing political engagement</td>
<td>high</td>
</tr>
<tr>
<td>Growing surveillance and data mining create tensions between citizens and governments</td>
<td>Technological progress and growing degree of interconnectedness Growing security concerns connected to cyberspace</td>
<td>Government data requests revealed by ISPs; composite indicators such as OpenNet Initiative data; anecdotal evidence; sentiment analysis outputs</td>
<td>+</td>
<td>Short- to medium-term</td>
<td>Social acceptance; social conflicts; wildcards such as internet/surveillance policies of foreign states</td>
<td>high</td>
</tr>
<tr>
<td>Spread of rational-secular value systems will develop independently from interconnectedness</td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td>high</td>
</tr>
<tr>
<td>Access to internet and social media leads to increased political participation</td>
<td>Internet access means increased availability of information on either side of the political spectrum Social media enable like-minded people to exchange their views on certain issues and form movements/voice their opinions</td>
<td>e-government benchmarking data (EU, UN)</td>
<td>+</td>
<td>Short- to medium-term</td>
<td>Unequal accessibility and ubiquity of services and citizen engagement across MS and between strata of society; responsiveness of the democratic system and process to demand for interaction with citizens</td>
<td>high</td>
</tr>
</tbody>
</table>
In addition to reviewing the evidence for the initial themes that the ESPAS pilot study had identified, our literature review sought to uncover potential interactions and cross-cutting issues that affect each of these trends. Typically, drivers are factors exogenous to the system under analysis and beyond the reach of decisionmakers. A cross-cutting driver is so pervasive in nature and influence that it will affect a range of trends across different domains. This chapter illustrates some of the mechanisms of cross-cutting drivers. In most domains examined for the report, these drivers exert a pressure in opposite directions: for instance, while they might point toward growth or convergence in some specific trends, they drive downwards trends or divergence in others. The drivers and their manifold influence across issues illustrate the complexity of the policy environment and their potentially significant impact on the European landscape over the next two decades. These drivers are analysed below.

3.1. People and behaviour: we move in mysterious ways

The notion that individuals are gradually becoming significant drivers of change has been widely reported, particularly in the popular media. In 2006, *Time* magazine elected 'You’ (the individual) as person of the year – before the boom in social media and before the Arab Spring revolts, more recent events that reinforce the perception that people, their beliefs and behaviours may increasingly interact with the international and EU landscape. On the one hand, the use of ICTs for censorship in certain states and declining participation level in Western elections suggests that the keynote of this development is divergence. On the other hand, there is a commonly stated expectation that globalisation acts as an integrative and harmonising force and that we should witness a convergence of values affecting how people think and behave as a result. The emergence of a common ethos would influence some of the themes we discussed earlier, including the identity and values of the middle class, declining fertility levels, the diffusion and the use of technologies and migration flows. Yet, the evidence also points to potential divergence in values, as embodied by grassroots populist movements, online activism focusing on specific causes and political or religious extremisms.

Research suggests that the improvement of standards of living, the spread of new technologies and common perceptions of work-life balance may contribute to driving a potential convergence in values and believes, at least on the surface (Becker and Gregg Lewis, 1974; Jackson et al., 2008). As commonly stated in the media, improved standards of living, measured by the rise of per capita GDP, may lead to the rise of a global middle class and contribute to the harmonisation process of values and beliefs, for instance about democracy, political reform and individual liberties. Yet, there have been only a few instances of
evidence related of the impact of other major changes, such as ICTs, on political engagement in Western democratic societies. The results from our Delphi exercise suggest that support for democratic reform is particularly strong among the middle classes, despite disagreement among experts on the effects of the growth of the middle class on the demand for democratic reform. These observations should encourage any forecasts of the convergence of attitudes to include caveats and plan for alternative scenarios. Another common observation is that the spread of ICTs could affirm the centrality of the people by putting them in direct contact with public decisionmakers. This, in turn, could undermine corruption, increase transparency and improve the effectiveness of policymaking, thanks to e-democracy and e-government platforms. Although such developments have enabled new political vehicles and shaped the political landscape, for instance through grassroots movements, it remains unclear whether the greater availability of information results in a better-informed population or whether the flood of information becomes overwhelming and leads to dilution and manipulation.

The evidence appears to point to specific changes in lifestyles. It has been argued that improvements in living standards and the spread of Western ideals have helped spread Western meat-based diets in other regions, as well as increased demand for energy-using consumer goods, leading to an increase in energy consumption per capita. However, despite some scholarship on the connection between the middle class and democratisation in some Western societies (Rustow, 1970), the evidence of a broader convergence in post-materialist values (such as environmental concerns) remains inconclusive and anecdotal.

Sociologists and economists struggle to account for shifts in individual attitudes towards reproduction and work-life balance (Becker and Gregg Lewis, 1974; Gustafsson and Worku, 2005). Some frame the issue in terms of quality rather than quantity and argue that individualism and independence are affecting cultural attitudes about the desired number of children, and by extension triggering demographic changes. Similarly, they note that a change in values has occurred in countries where the educational attainment of women is on the rise. Increasing educational attainment could lead to greater female participation in the labour market, fewer unwanted births and the postponement of childbearing. In particular, the notion that women may become breadwinners instead of homemakers, and the rise of a dual-earner model may be in the process of transforming the decision to have children. This, in turn, can have lasting consequences on fertility rates as individuals increasingly postpone having children in Western societies (Mills et al., 2011; Van Bavel, 2010; Gustafsson and Worku, 2005). However, no unified theory underpinned by evidence has been able to fully account for this phenomenon, and phenomena such as the postponement of parenthood are not yet well understood.

It is also commonly argued that increased access to similar knowledge and technology, like the growth of Web 2.0, Web 3.0 and ubiquitous computing, can also drive convergence in values. Citizens around the world are exposed to the same ideas, products, tools, communities and trade-offs and, in turn, rethink their relation to concepts such as freedom and privacy, social inclusion and user-friendliness (Tene and Polonetsky, 2012; Andrade, 2011). Yet, despite popular claims, studies have found it difficult to correlate connectedness with the rise of rational-secular values (Cave et al., 2009). Furthermore evidence suggests that there are patterns of persistence of cultural values throughout economic development (Inglehart and Baker 2000).
However, it is uncertain whether sociodemographic developments drive the level of prioritisation of values, and how this will affect the overall value system over time. For instance, will the spread of technology lead to the spread of Western values or will the culture of Latin American and Asian nations, which are increasingly dominant online, be more influential (Dutton, Dutta and Law, 2011; Van Oranje-Nassaau et al., 2009)? There is no comprehensive quantitative evidence verifying either proposition.

Table 3.1.1. Exemplars of processes driven by individual attitudes, values and behavior

<table>
<thead>
<tr>
<th>AFFECTED THEMATIC AREA</th>
<th>AFFECTED TREND</th>
<th>DRIVING MECHANISM</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Global middle class</td>
<td>Increasing influence of Western consumerism and lifestyle patterns</td>
<td>Attitudes globally affecting the cultural perception of the West</td>
</tr>
<tr>
<td>(Section 2.1.)</td>
<td>Persistence of traditional values</td>
<td>Influence of rational-secular values</td>
</tr>
<tr>
<td>B Growing and ageing population</td>
<td>Declining fertility levels</td>
<td>Shifts in (societal) attitudes towards gender equality, work-life balance and education result in women choosing to have fewer children, later in life</td>
</tr>
<tr>
<td>(Section 2.2.)</td>
<td>Female participation in labour force</td>
<td>Shifts in attitudes towards female employment, education and work-life balance; shift in attitudes towards single bread-earner model</td>
</tr>
<tr>
<td>C Employment</td>
<td>Growing support for democratic reform</td>
<td>The growing middle class increasingly endorses democratic values and media plurality</td>
</tr>
<tr>
<td>(Section 2.3.)</td>
<td>Growing exposure to Western education, growing female educational attainment (primary/secondary schooling)</td>
<td>The growing middle class increasingly values (Western or Western-type) education; changing attitudes towards female schooling enable higher educational attainment for women</td>
</tr>
<tr>
<td>D Connected societies, empowered individuals</td>
<td>Declining political participation in traditional venues</td>
<td>New generations identify less with the entities upon which traditional political organisations are founded</td>
</tr>
<tr>
<td>(Section 2.5.)</td>
<td>Growing popularity of grassroots/populist movements, extremisms (political or religious)</td>
<td>Diverging global attitudes towards a series of issues catalysing grassroots and extremist movements</td>
</tr>
<tr>
<td>E Converging values regarding certain technology-related challenges</td>
<td>Exposure to similar tradeoffs and challenges related to technology</td>
<td>Group identities increasingly based on partial affiliations or specific issues rather than class/party-based politics</td>
</tr>
</tbody>
</table>

3.2. Gender equality: a pervading driver of change?

As a cross-cutting driver, gender is affecting several income groups and societies, particularly insofar as inequality is concerned. While each could be seen as an outcome of other societal developments (eg economic growth, value changes), there are several developments that could be seen as driving closure of the gender gap, for example, women’s growing involvement in politics, increasing educational attainment and labour market participation. Attitudes towards gender equality itself are likely to affect several policy areas in the future, owing to their relation with a variety of unpredictable factors such as fertility levels,
migration flows and individual empowerment. For example, according to the EUISS, gender equality is one of the main drivers behind individual empowerment and the emergence of the global middle class, through the near-universal access to education and the empowering effects of ICT (EUISS, 2012).

Gender may be a driver of inequality in the job market, as the gender pay gap persists (Rubery, Smith and Fagan, 1999). Data also suggest that the skills gap is likely to persist, exposing women to the risk of unemployment. Participation in the job market and the reconciliation of work and family life remains a challenge for women and is likely to drive demographic change. Looking at the intersection between gender and age, we see that gender can also drive levels of social exclusion and poverty in the long run, with women receiving lower pay than men and therefore accumulating less pension entitlement over time. This can translate into a higher risk of poverty for women in older age groups (65 and above) (Fagan et al., 2006) and could lead to further pressure on health and pension systems. These effects are even more pronounced for certain groups, such as female migrants, for example, who are more segregated into a range of low-paying jobs than non-migrant women (Fagan et al., 2006).

Overall, female labour market participation rates in the EU still falls behind that of men. In addition, female employment rates are also lower (see Figure 3.2.1) and more women than men work part-time. These differences magnify as soon as children are factored in (Miani and Hoorens, in press). While research suggests that some of the differences can be explained by female preferences, in terms of the trade-off between family life and a career (eg Reynolds and Johnson, 2012), it is evident that European women still face a career penalty when they become parents (Budig & England, 2001; Correll, Benard, & Paik, 2007).

At the same time, the large-scale entry of women into the labour force can further contribute to raising the opportunity costs of having and raising children. Women prioritise their career and delay childbearing, especially as globalisation increases competition for work and hinders stability (Jackson et al., 2008; Lutz, 2007). Experts claim that the resulting empowerment of women and their growing wealth are likely to lead to changes in values that will affect fertility rates. For instance, as we discussed in Section 3.1, people may favour a new middle-class ethos that emphasises quality rather than quantity and opt for having fewer children, partly owing to their competing desire for consumer goods (Becker and Gregg Lewis, 1974; Birks, 2007; Jackson et al., 2008).

However, gender equality as a driver of change might affect different regions to a different degree. Various indicators suggest that gender equality is prevalent only in developed countries where an increasing number of women are elected to political office (World Bank Development Indicators, 2012). Yet, the picture is more dispersed on a global level, with regions such as the Middle East and Northern Africa lagging behind. In terms of access to education, which is a component of greater equality, the evidence is also mixed. Changing values and policy objectives in several countries have resulted in lower discrepancies between girls and boys in enrolment in primary and secondary education, and in skills, such as literacy. Access to tertiary education shows discrepancies across world regions.
Figure 3.2.1. Employment rate of men and women in member states in 2010 set against the Europe 2020 target of 75%

Source: Eurostat, 2013
Table 3.2.1. Exemplars of processes driven by gender (in)equality

<table>
<thead>
<tr>
<th>AFFECTED THEMATIC AREA</th>
<th>AFFECTED TREND</th>
<th>DRIVING MECHANISM</th>
</tr>
</thead>
<tbody>
<tr>
<td>B Growing and ageing population (Section 2.2.)</td>
<td>Declining fertility levels</td>
<td>Shifts in attitudes towards work-life balance and education result in women choosing to have fewer children, later in life</td>
</tr>
<tr>
<td></td>
<td>Women at higher risk of poverty and social exclusion posing higher pressures on social security systems</td>
<td>As a result of lower earnings and pensions, women may be at higher risk of poverty and social exclusion, in particular in older age groups, relying to a greater extent on social benefits system</td>
</tr>
<tr>
<td></td>
<td>Smaller family sizes</td>
<td>The rise of a global middle class accompanied by a middle-class ethos (including attitudes towards gender equality) promotes values coherent with smaller family sizes</td>
</tr>
<tr>
<td>C Employment (Section 2.3.)</td>
<td>Migrant women often locked in low-level, low-paid positions</td>
<td>Attitudes towards women and female employment continue to perpetuate the gender pay gap and the “glass ceiling”</td>
</tr>
<tr>
<td>E Connected societies, empowered individuals (Section 2.5.)</td>
<td>Growing female educational attainment (primary/secondary schooling) and literacy</td>
<td>Changing attitudes towards female schooling enable higher educational attainment for girls</td>
</tr>
<tr>
<td></td>
<td>Increasing presence of individualism and independence in attitudes</td>
<td>Attitudes towards gender equality (attitude change supposed to accompany the rise of middle class) results in a shift in values</td>
</tr>
<tr>
<td></td>
<td>Increasing access to ICTs by women</td>
<td>Changing attitudes towards gender equality result in better access to e-skills and tools for women</td>
</tr>
<tr>
<td></td>
<td>Increasing representation of women in political bodies</td>
<td>Changing attitudes towards women in political leadership positions result in a growing number of women elected to political office in certain countries</td>
</tr>
<tr>
<td></td>
<td>Increasing female participation in labour force</td>
<td>Shifts in attitudes towards female employment, education and balance of work and private life; shift of attitudes towards single bread-earner model</td>
</tr>
<tr>
<td></td>
<td>Persistent inequalities in the job market regarding employment rates, full-time employment and wages</td>
<td>Women continue to present lower employment rates and greater part-time work than men. Attitudes towards women continue to perpetuate the gender pay gap and the “glass ceiling”</td>
</tr>
</tbody>
</table>

3.3. Birth and death: the drivers of demography

The way in which individuals organise at a societal, community or household level – fragmented along dimensions of gender, age, ethnicity or citizenship – are likely to trigger an evolution in how policies are carried out in the future. Demographic change, which is both a cause and a consequence of these evolving organisations and structures, therefore forms a cross-cutting issue. It is thought to be driven by many actors, including medical progress, sanitation, pandemics or conflict and economic conditions, as well as policy levers (Bongaarts, 2009a; Bongaarts, 2009b). It is often argued that demographic change will trigger changes in societal organisation and structure, such as urbanisation, new family structures, the prevalence of specific diseases, new pressures on social security systems and climate. It is also argued that
the global demographic balance may shift towards Asia and diminish the EU’s role; the high likelihood of a decline in Europe’s global political and economic influence was confirmed by experts during the Delphi exercise. The demographic dividend is likely to drive development in specific countries, fuelling the growth of a global middle class and associated demand for goods (Dobbs et al., 2012a). Yet, the evidence emphasises that high levels of uncertainty characterise forecasts on fertility and, to lesser extent, mortality.

Changes in mortality rates are likely to be a major cross-cutting driver affecting working lives, the use of technology and welfare systems. Improvements in medical and living standards over the past century have led to longer life expectancy and the decline in mortality rates from communicable diseases and epidemics. These improvements are positive, yet mean that, in the mid-term, some countries are likely to be faced with a pensioner bulge; this has fuelled the debate on the sustainability of welfare states. Governments are preparing to manage the impact of ageing populations while seeking to harness benefits associated with them, such as longer participation in the labour market and increased flexibility. The vulnerability of older workers constitutes another driver of change, which could be mitigated by anti-discrimination policies and the evolution of age-management policies. It is often assumed that ageing will entail a shift in consumption patterns (e.g., housing, energy and technology) and overall societal attitudes – since data suggest that elderly populations tend to be prone to risk-averse (Jackson et al., 2008).

Some uncertainty revolves around projecting population size. Expert assumptions on future population were divided during the Delphi exercise: while some hold that life expectancy will continue to increase steadily, others point to the fact that past data are not a suitable basis for projections. This is due to the fact that current generations are less healthy than older generations, partly owing to rising levels of obesity. As a result, mortality patterns may change significantly, limiting the ability of past health data to predict future mortality trends. Despite popular assumptions that improvements in medical technology could have a positive impact on the health of populations, there was disagreement between experts whether such technologies will only manage diseases rather than cure them, thus weakening the health of the elderly. The extent to which old-age morbidity is clustered within certain stages of an individual’s life form the crux of the debate (Przywara, 2010). It is possible, for instance, that the increase in non-communicable diseases among current younger generations, owing to changes in lifestyle and food consumption, could profoundly reshape budgets by creating strain on welfare and healthcare expenditure. The challenge of non-communicable diseases is likely to become more acute in developing economies, where the adoption of Western lifestyles may lead to increased prevalence of diabetes and other non-communicable diseases, while the burden of infectious diseases is likely to remain significant in these countries (European Commission, 2009b). Some experts point to the increase in the prevalence of diabetes in people aged 65 and over as the most important demographic change. Tellingly, by 2030, four out of five leading countries in terms of diabetes prevalence will be from the developing world (India, China, Indonesia and Pakistan); the fifth is the United States (Wild et al., 2004; Finkelstein et al., 2012). More broadly, the WHO (2004:22) states that ‘ageing of populations in low- and middle-income countries will result in significantly increasing total deaths due to most non-communicable diseases over the next 25 years’.

Cancer rates in developing countries are also projected to rise due to the widespread adoption of Western lifestyles (Asma et al., 2003; Jemal, Center and DeSantis, 2010). Some attribute the obesity pandemic in China to major changes in the food supply and a reduction in physical activity: it is estimated that average
weight of the Chinese population is probably increasing by an average 0.5 kg per year, and by 2 kg in extreme cases (James, 2008). Experts note that the obesity pandemic is the result of an ‘obesogenic toxic environment’, and that obesity is a socioeconomic issue resulting from unwanted consequences of policies affecting food supply and food quality as well as urban conditions for remaining active (Wanless, 2002). Recent studies have found that a rise in body mass index (BMI) – compared to no change from current levels – could reduce life expectancy by one fifth (for men) and by as much as a third (for women) by the middle of the 21st century (McPherson, Marsh and Brown, 2007). There is some evidence to suggest a reduction in GDP as a result of vascular diseases (Mukherjee and Patil, 2011) and a significant rise in the medical cost for treating preventable, obesity-related diseases (Wang, McPherson et al., 2011).

Other scenarios expect longer working lives, allaying concerns about the sustainability of welfare models. Yet the evidence suggests high levels of unpredictability in delineating the impact of such changes.

Figure 3.2.2. Variations in male and female life expectancy at birth: projections for selected EU countries (2010, 2030, 2050)

Changes in fertility levels have been another major factor influencing the age structure of populations. To a large extent, fertility choices depend on individuals’ personal reproductive ideals. It is often argued that women’s increasing educational attainment and economic activity help explain the postponement of
childbearing (Gustafsson and Worku, 2005; Sobotka, 2004; van Bavel, 2010). Although female labour market participation and enrolment rates in higher education are projected to rise over the coming years, and governments have tried to implement reconciliation policies and benefits, scholarly evidence indicates that the impact of policy as a driver of fertility change is low. Despite claims from recent research that fertility levels in developed countries may increase, expert opinion from the Delphi exercise is that it is unlikely that the level of fertility reversal would significantly transform the overall age structure of Western populations. If this were the case, the impacts of such changes would be felt after 2030. The long-term entry of additional workers on the labour market would affect the ratio of workers to retired citizens, and ultimately levels of public expenditure. Yet such scenarios are deemed unlikely, given the magnitude of the change that would needed for dependency ratios to evolve significantly. Popular media often relay claims that migration into ageing countries may influence fertility trends. Yet the evidence suggests that the higher fertility rates of migrants tend to become comparable to those of native populations within a generation following migration. In short, the impact of demographic change as a cross-cutting driver will be far-reaching across several areas in all types of countries, but its premises are sometimes debated.
Table 3.3.1. Exemplars of processes driven by demographic change

<table>
<thead>
<tr>
<th>AFFECTED THEMATIC AREA</th>
<th>AFFECTED TREND</th>
<th>DRIVING MECHANISM</th>
</tr>
</thead>
<tbody>
<tr>
<td>B Growing and ageing population (Section 2.2.)</td>
<td>Growing costs to the welfare state, in particular health, long-term care and pensions</td>
<td>Declining mortality rates and increasing longevity results in = rising demand for social services and pension payments; rising prevalence of non-communicable diseases</td>
</tr>
<tr>
<td></td>
<td>New family structures</td>
<td>Increased divorce rates and cohabitation rates; attitudes towards non-traditional living arrangements and erosion of traditional family values</td>
</tr>
<tr>
<td></td>
<td>Increasing incidence of non-communicable diseases</td>
<td>With the growth of older population cohorts lifestyle changes and advances in medical technology, the incidence of diseases linked to old age also increases</td>
</tr>
<tr>
<td>C Employment (Section 2.3.)</td>
<td>Longer working lives:</td>
<td>With rising life expectancy and extended working lives, there is a pressure on labour markets and welfare systems</td>
</tr>
<tr>
<td></td>
<td>Growing female participation in the labour market</td>
<td>Having fewer children later in life facilitates female participation in the labour market</td>
</tr>
<tr>
<td></td>
<td>Increasing vulnerability of older workers</td>
<td>The skills divide between younger and older workers might increase; potential facilitators include development of age-management policies and anti-discrimination policies</td>
</tr>
<tr>
<td>D Migration (Section 2.4.)</td>
<td>Migration flows increasingly directed towards ageing countries</td>
<td>Labour markets of countries with older populations have a higher demand for incoming migrants, due to the need to replace retiring workers and the growing demand for health and care services workers creating jobs in sectors where migrants are often employed</td>
</tr>
<tr>
<td>E Connected societies, empowered individuals (Section 2.5.)</td>
<td>Increasing female participation in tertiary education</td>
<td>Postponing childbearing allows for increased participation in higher education</td>
</tr>
</tbody>
</table>

### 3.4. Urbanisation: bigger, better, faster – dirtier, unhealthier, lonelier

As we suggested in section 2.4., populations are becoming increasingly urban. It is argued that the new middle classes are increasingly residing in a large pool of emerging cities that will represent half of global GDP growth and a quarter of the world’s population by 2025.

This phenomenon is therefore not merely an issue of migration. This new organisation results from natural population growth (or population momentum) – the primary driver – as well as migration and the growth of actual cities that are annexing what used to be considered rural villages and turning them into peri-urban areas (Thomas, 2008; Chen, Valente and Zlotnik, 1998). Although correlations exist between urbanisation levels and declines in fertility, the evidence cannot account for the specific link, and only assumes that the phenomenon is driven by individuals seeking new economic and educational opportunities in cities. At the same time, as some Delphi experts suggest, the related increase in costs associated with densely populated areas transforms the opportunity cost of having children. The resulting change in values may therefore explain, as a mechanism, this decline in fertility, though the evidence remains very unclear. In high-income countries and regions like Europe, where parenthood tends to start
later, transformations in living arrangements within families and changes in the traditional household model have been observed. This is due to rising divorce rates, increasing non-marital cohabitation, single-parent households and step-parenting combined with less stable marriages, all of which are transforming the way Europeans live (Billari, 2005).

Urbanisation is expected to continue in the future and may lead to increased migration of educated and skilled workers who are attracted by the city infrastructure. Their move can also be enabled by access to material resources and social networks, including greater access to the internet. Urbanisation is expected to form part of the demographic dividend, with younger people moving to cities to look for opportunities. This is likely to contribute to the growth of the global middle class in developing countries, provided the opportunities are there. Cases where the demographic dividend does not materialise are characterised by unrest (African Development Bank, 2011; Bloom, Canning and Sevilla, 2003).

In addition, urbanisation and population growth are likely to lead to growing demand for natural resources and strain on other resources, in particular food, water and energy (NIC, 2012; Jiang and Hardee, 2010). However, there is much uncertainty around the extent to which human activity affects climate change. While the science of climate change is relatively undisputed, the timescale and severity of climate change, as well as its long-term physical and socioeconomic impacts, are difficult to model accurately (IPCC, 2007). Emissions are driven by global population growth and increase with urbanisation levels and the rapid industrialisation of developing economies (Thomas, 2008; EUISS, 2012; NIC, 2012). Middle- and lower-income countries may experience the environmental effects of demographic change as they seek to provide employment opportunities for their youthful populations. As these states become wealthier, it is possible that growing motorisation in middle-income countries such as China may contribute to further CO₂ emissions and impact global climate change (Gordon and Zhang, 2011; Ministry of Defence, 2010).

Similarly, climate change could contribute even more to migration movements and environmental conflict, notably by limiting the amount of agricultural land in specific regions, or by interacting with other factors to cause migration flows in certain areas to rise (Barnett, 2003). This will accelerate urbanisation, although the specific way in which this mechanism operates is unclear.
Table 3.4.1. Exemplars of processes driven by urbanisation

<table>
<thead>
<tr>
<th>AFFECTED THEMATIC AREA</th>
<th>AFFECTED TREND</th>
<th>DRIVING MECHANISM</th>
</tr>
</thead>
<tbody>
<tr>
<td>B Growing and ageing population (Section 2.2.)</td>
<td>Declining fertility and smaller family sizes</td>
<td>Urban populations increasingly seek opportunities for employment and education resulting in decisions to postpone and/or have fewer children; higher costs of living raise the opportunity cost of raising children in urban areas</td>
</tr>
<tr>
<td></td>
<td>Strain on natural resources</td>
<td>Urban areas have higher demands for natural resources and energy</td>
</tr>
<tr>
<td></td>
<td>Effect on climate change</td>
<td>Urban populations have a larger environmental footprint</td>
</tr>
<tr>
<td>C Migration (Section 2.4.)</td>
<td>Urban areas are increasingly the target of migration flows</td>
<td>Migrants look for areas with better labour market prospects and infrastructure</td>
</tr>
<tr>
<td></td>
<td>Growth of migration flows</td>
<td>Urbanisation increases the motivation of individuals (especially the young and educated) to migrate towards cities</td>
</tr>
<tr>
<td>E Connected societies, empowered individuals (Section 2.5.)</td>
<td>Convergence of global values</td>
<td>Decline of traditional rural culture and increased prevalence of urban lifestyles; might lead to a convergence of global (urban) values</td>
</tr>
</tbody>
</table>

3.5. Technology and media: enabling growth, facilitating inequality?

It is tempting to overstate the influence of technological change on the evolving landscape of the European Union in the long and short term. Yet, technological change is possible only to the extent that individuals and societies understand, accept and absorb technology, or contribute to its development in a variety of ways (ITU, 2011; World Bank, 2012; OECD, 2012a; Perez, 2010). Without this human factor, which ranges from tolerance to adherence, technological change in itself would be close to irrelevant, as past human fears and rejections of new technologies – especially during periods of industrial revolution – suggest. However, the benefit of technological change should be weighed carefully, since the phenomenon is both an enabler and a facilitator of greater ambitions and an accelerator of inequalities between the high- and low-skilled (see Cave et al., 2009; Facer and Sandford, 2012). To this extent, technological change is perhaps one of the most illustrative examples of a cross-cutting issue with uncertain consequences, as it impacts labour, economic growth and other technologies, sometimes in two-way relationships. For instance, in the relationship between labour markets and technology creation, does the latter enable the former or vice versa? The impact of technology on issues ranging from education to skills or demand for political change will depend to a large extent to the adoption of technology. This is likely to be a major driver for change, insofar as future inequalities are projected to revolve around the ability to reap the benefit of technological change for capacity building (in terms of skills, literacy, etc).

It is often argued that technology has driven social innovation and has allowed individuals and institutions to be increasingly connected and efficient – with equal or fewer resources and remaining user-
friendly – in an increasingly complex world in which resources have become scarcer. As a result of this interaction, technological change is said to have contributed to the empowerment of individuals, in particular by helping fulfil their demands for education and information. While some studies indicate a positive relationship between internet penetration and democracy, the evidence shows that its influence is not uniform, which has led experts to conclude that the internet is just one of several drivers of democratic change (Howard, 2010). Experts consulted in the Delphi exercise conducted for this study suggested that divides are unlikely to be determined by access to the internet, although the question arose whether it will still be possible for governments to restrict citizens’ access to the internet in 2030 and its impact on the relationship between governments and citizens.

Diffusion of ICTs and new media are often linked to changes in the relationship between citizens and government. For example, e-government is seen as a driver behind transparency trends, potentially affecting levels of corruption (Bertot, Jaeger and Grimes, 2010). However, evidence suggests that the converse applies and that the (country-specific) rule of law and transparency drive e-government (Ifinedo, 2012; Lee, Chang and Berry, 2011). Governments can use social media for improved interaction with citizens but also for surveillance purposes and an increase in nuanced forms of societal control (Open Network Initiative, 2010; Freedom House, 2012; Bitso, Fourie and Bothma, 2012). At the same time, the evidence suggests that online activism does not necessarily lead to an increase in offline action. Some argue that online activism could turn into ‘slacktivism’ or ‘clicktivism’ (Morozov, 2009; Shulman, 2009; Christiansen, 2012), which instead of achieving political goals serves to satisfy the feel-good factor of participants and could steer them away from more ‘effective forms of participation in the activist repertoire’ (Putnam, 2000).

Evidence points towards further potential negative effects of technological change. It can be a driver of inequality and labour market distortions, especially at the domestic level, because it appears to benefit the skilled, technology-oriented and educated workforce far more than others, and exacerbates labour market imbalances and the growing mismatch between the demand and supply of workers with specific capabilities (OECD 2011c). In addition, at the international level, it has allowed greater outsourcing and greater economies in human input, accelerating the polarisation of the labour market between high- and low-skilled workforces. Taken together, these effects are likely to be self-reinforcing by making low-skilled workers, who are unlikely to have the ability to update their skills, ever weaker, and putting high-skilled workers – whose ability to adapt to new technologies and to seize new economic opportunities to innovate is presumably greater – in an ever-more favourable position on the labour market. Technological change may also influence migration flows (by making means of transport more accessible and reducing distances) and policies, which will focus more on the issue of human resources management. Furthermore, technology creation also impacts on global migration, both as a result of the formation of hi-tech clusters (for instance in Silicon Valley) and as a result of the outsourcing of production and manufacturing of technological devices, often into less-developed countries (Bresahan and Gambardella, 2010).

7 In this report the term ‘social innovation’ is used in the sense of new responses to pressing social demands by means which affect the process of social interactions (BEPA 2010).
In addition, the evidence appears to suggest that it may hinder the development of poorer countries that do not have access to a sufficiently large pool of skilled workers.

To conclude, the evidence examined across the themes analysed in this report points to the ambiguous part played by information technology, in contrast perhaps to pessimistic or optimistic analyses. The evidence and analysis of current trends point to great uncertainty: this is due to the wide-ranging impact of technological change on society and the economy, but also to numerous factors involved in the production of this change.

Table 3.5.1. Exemplars of processes driven by technology and media

<table>
<thead>
<tr>
<th>AFFECTED THEMATIC AREA</th>
<th>AFFECTED TENDENCY</th>
<th>DRIVING MECHANISM</th>
</tr>
</thead>
<tbody>
<tr>
<td>B Growing and ageing population (Section 2.2.)</td>
<td>Increasing longevity and better care for old people</td>
<td>Advances in NBIC technologies help address health challenges and offer technological support to long-term care</td>
</tr>
<tr>
<td>C Employment (Section 2.3.)</td>
<td>Increasing skills gap (within workplace and between countries)</td>
<td>As e-skills become more relevant in the labour force, the digitally literate are increasingly able to update their skills while others are left behind</td>
</tr>
<tr>
<td></td>
<td>Digital natives transform the skill sets in the labour force</td>
<td>Young digital native workers increasingly enter the workforce</td>
</tr>
<tr>
<td></td>
<td>Work-life balance challenged by technology</td>
<td>ICTs make remote working possible 24/7</td>
</tr>
<tr>
<td></td>
<td>New forms of working</td>
<td>ICTs and new configurations of the supply chain make it possible for companies to exploit telework and global outsourcing to a new extent</td>
</tr>
<tr>
<td>D Migration (Section 2.4.)</td>
<td>Increasing migration</td>
<td>Possibility to acquire information; possibility to keep in touch with family members and social networks in the country of origin</td>
</tr>
<tr>
<td></td>
<td>Decreasing migration</td>
<td>Virtual outsourcing and remote working might replace the need for workers to relocate in certain industries</td>
</tr>
<tr>
<td>E Connected societies, empowered individuals (Section 2.5.)</td>
<td>Persisting digital divides within and across countries</td>
<td>Inequalities are determined by access to and ability to use technology; while gaps regarding old technologies can close, new ones open with new technologies</td>
</tr>
<tr>
<td></td>
<td>Technology increasingly becomes a tool for individual empowerment</td>
<td>Connected technologies enable individuals to access education and give new potential opportunities for self-expression and network building</td>
</tr>
<tr>
<td></td>
<td>New forms of political participation and policymaking</td>
<td>Crowdsourcing, e-services, big-data-based open policymaking and social networks may change the way the public sphere works and interacts with citizens</td>
</tr>
</tbody>
</table>
3.6. Economic recovery: from double-dip recession towards sustained slow growth?

In this period of economic crisis, tensions and distortions, it is often suggested that while short-term measures can alleviate the worst effects of the downturn, economic growth will be the long-term solution to many of the issues currently faced by both developed and emerging countries. As a result, several factors will interact with economic growth to play a significant role in enabling – or hindering – economic recovery. In the longer run, the key question lies in determining the possible transformative effects of economic growth, or lack of it, on the EU landscape.

The role and transformative effects of economic growth as a driver can be described using various examples highlighted in this report. The rise of the global middle class has been widely associated with economic growth at international level. For example, the high growth rates of China and India in particular have played an important role in producing the middle-income bulge in the developing world as a whole (Ravallion, 2009). The flourishing of the middle class in emerging economies has been described as a foremost outcome of economic growth, rather than an input to it (Birdsall, 2010); together the two are expected to form a virtuous circle. However, the possibility of a recurrence (or persistence) of a global financial crises and the potential for sustained slow growth can act as a driver that negatively affects progress in reducing poverty. Excluding China, which largely influences the rise of a new global middle class, as outlined above, the absolute number of people in poverty actually rose over the last decade in the developing world (Kapsos and Bourmpoula, 2013) and with decelerating economic growth in China the trend is likely to slow down there as well.

Furthermore, newly created middle-class demand could drive a future shift in the economic centre of gravity to Asia (Kharas, 2010). However Delphi expert opinion was divided with regard to this long-term shift of economic centre of gravity.

Economic growth is also often cited as the key driver for lifting a large number of people out of poverty, increasing demand for educational services and accelerating its diffusion. In Latin America, for example, economic growth has been found to be the most powerful force in driving the size of the middle class, of an order of magnitude larger than redistribution (Cárdenas, Kharas and Henao, 2011).

As a driver, economic growth is linked to educational transformation and the related topic of technology adaptation. Increasing demand for educational services driven by economic development is a fundamental premise for transformations in education. Even more than liberalisation, the most important driver for technology adoption has been found to be the general level of economic development of a country (Robison and Crenshaw, 2010; Drori and Jang, 2003; Pick and Azari, 2008).
Table 3.6.1. Exemplars of processes driven by economic recovery

<table>
<thead>
<tr>
<th>AFFECTED THEMATIC AREA</th>
<th>AFFECTED TREND</th>
<th>DRIVING MECHANISM</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Global middle class</td>
<td>Growth of middle class</td>
<td>Economic growth trickles down to the lower levels of society, resulting in the growth of middle classes</td>
</tr>
<tr>
<td>(Section 2.1.)</td>
<td>Shifts of centres of influence to Asia</td>
<td>Faster-growing countries located on the Asian continent</td>
</tr>
<tr>
<td>B Growing and ageing population (Section 2.2.)</td>
<td>Growing demand for resources</td>
<td>Economic growth creates higher demand for natural resources</td>
</tr>
<tr>
<td>C Employment (Section 2.3.)</td>
<td>Decreasing demand for low-skilled work</td>
<td>Development of the knowledge economy; outsourcing and decline of manufacturing</td>
</tr>
<tr>
<td>D Migration (Section 2.4.)</td>
<td>Migration flows towards more wealthy countries</td>
<td>Economic and labour market disparities determine the direction and structure of migration flows</td>
</tr>
<tr>
<td>E: Connected societies, empowered individuals (Section 2.5.)</td>
<td>Rising educational offer</td>
<td>New middle classes create demand for education</td>
</tr>
<tr>
<td></td>
<td>Growing demand for technology</td>
<td>New middle classes create demand for technology</td>
</tr>
</tbody>
</table>

3.7. Barriers to connectedness: wired but disconnected?

There is evidence that the financial crisis has led to a slowdown of globalisation, connectedness and economic integration. According to the DHL Global Connectedness Index 2012, the global connectedness of the world today is than it was in 2007 and still has to reach pre-crisis levels, with capital connectedness declining and service trades remaining stagnant since 2007 (Ghemawat and Altman, 2012). There is additional evidence that suggests that financial deepening (the expansion of financial markets and banking systems) and globalisation (as measured by financial integration and cross-border capital flows) have stalled as a result of the crisis (McKinsey Global Institute, 2013).

Proponents of the view that the effects of the economic slowdown on globalisation is only short- to medium-term and will not last, suggest that a deeper trend, perhaps transcending the effects of the financial crisis, is that the world has gone from ‘connected to hyperconnected’ within the last decade (IMF, 2013). Merchandise trade, for example, has recovered since 2009 and information flows still continue to grow (Ghemawat and Altman, 2012). In addition, new financial developments and trends could correct the financial deepening and globalisation slowdown observed since 2008. For example ‘south-south’ foreign investments between emerging economies have already increased, amounting to $1.9 trillion in 2011 (McKinsey Global Institute, 2013).

However, it is worthwhile to note that from a historical standpoint, nothing suggests that globalisation is a one-way phenomenon (Ferguson, 2005). Some have pointed to the deep, long-term effects of the most recent financial crisis with prolonged and far-reaching geopolitical consequences, less coordination between states, regional fragmentation and the international system failing to respond effectively to the crisis (Altman, 2009; Warsh and Davis, 2012). While discounted by many, this alternative path for globalisation – ie retreat –is plausible.
A retreat or reset of globalisation in the light of the current crisis could also affect the levels and direction of migration flows. Expert interviewees pointed out strong correlations between economic conditions and immigration levels. In looking ahead to the volume and type of future migration flows, it is possible that the current economic recession could act as a deterrent. A slow-down in international capital flows as a lingering effect of the financial crisis (McKinsey Global Institute, 2013:1) may be mirrored by a corresponding decrease in human capital (Goldin, Cameron and Balarajan, 2011:111). Although migration will continue, the attractiveness of individual European countries may wax or wane, with varying regional impacts, depending on abilities of different nations to offer employment opportunities and on political pressures driving restrictive migration policies. More broadly, the extent to which the governments of host countries can actually influence migration flows and avoid long-term unintended social and economic consequences is largely uncertain.

The extent to which cultural differences will contribute to create barriers to connectedness is still uncertain. On the one hand, it is noteworthy that the information and communications revolution may only have limited effects in terms of preventing a retreat of globalisation, as language remains the primary driver of social networks (on Twitter, for instance). On the other hand, proficiency in English is fast becoming an essential skill for people across the globe, even in regions where languages such as French (including North-Africa) have long been predominant (Euromonitor International, 2012). This provides the option of convergence of attitudes and on-going globalisation of values (Constant and Tien, 2010). However, regional resistance to such overarching trends is also conceivable under the pressure of nationalistic sentiments and the willingness to preserve traditional cultures and beliefs (Sathyamurthy, 1998).

The related discourse on the potential of technology, levels of global connectivity and value systems entails arguments about technological determinism, implying that increased global access to information technologies will drive a diffusion of Western secular (as opposed to traditional) values. However, as outlined above, as countries with different values systems (e.g Asian, South-American countries) become the dominant nations online and there is a lack of correlation between levels of connectivity and rational-secular values, it is likely that even in projected global progress towards more rational and secular values, connectivity is not the foremost driver for the trend.
Table 3.7.1. Exemplars of processes driven by connectedness or lack thereof

<table>
<thead>
<tr>
<th>AFFECTED THEMATIC AREA</th>
<th>AFFECTED TRENDS</th>
<th>DRIVING MECHANISM</th>
</tr>
</thead>
<tbody>
<tr>
<td>D Migration</td>
<td>Decreasing migration flows</td>
<td>Prolonged crisis and retreat of globalisation discourages migration</td>
</tr>
<tr>
<td>E Connected societies, empowered individuals</td>
<td>Global convergence of values</td>
<td>Increased access to predominately Anglo-Saxon tertiary educational institutes potentially leads to adoption of more traditionally Western values</td>
</tr>
<tr>
<td></td>
<td>Persistence of different value systems; limited convergence towards rational-secular values</td>
<td>Connectivity appears not to be correlated to rational-secular values</td>
</tr>
<tr>
<td></td>
<td>Social networks remain structured along national lines</td>
<td>Geographical relevance and language continues to be important online</td>
</tr>
</tbody>
</table>
Chapter 4. What does this mean for the EU?

The trends that our analysis has uncovered and documented could shape the European Union’s strategic landscape through multiple direct and indirect channels, with implications for member states and European institutions. In this chapter, we explore potential consequences of these trends for the EU.

4.1. Vulnerability will vary and may increase for certain groups in the EU population

The impacts of the financial crisis and austerity measures are likely to dominate the social and employment situation in the EU over the coming years. Most economic forecasts now predict sluggish economic growth for the EU and the eurozone in particular. Income inequality is likely to increase and various vulnerable groups will be affected disproportionately. Despite this pessimistic short-term picture, it is important to look beyond the horizon of the crisis years. However, there is reason to believe that the EU is entering an era of long-term slow economic growth and that the crisis will have lasting impacts for particular groups.

4.1.1. The youth population will be disproportionately impacted by the economic crisis

DG ECFIN (2013) expects a further deterioration of the European labour-market situation in the near term, given the typically lagged response of employment to GDP. The trend of rising long-term unemployment and an increasing mismatch of supply and demand of skills in the labour market bode ill for employment prospects over the next few years.

Youth unemployment has been disproportionately affected by the economic crisis (e.g., Choudhry et al., 2012). The proportion of jobless 15–24-year-olds increased 46.5% between 2008 and 2011 (ILO 2012a) and the prospects for young Europeans remain bleak for at least another few years, according to the latest Global Employment Trends Youth report (ILO 2013a). In Spain and Greece, more than every second young person is unemployed. These unprecedented youth unemployment rates could have far-reaching consequences for Europe: many have pointed to the potential creation of a ‘lost generation’. The impact of current conditions may have a long-term impact. Empirical evidence from past crises suggests that early-career spells of unemployment (e.g., Stevenson 1978; Becker and Hills 1980) or even graduating in times of crisis (e.g., Oyer 2006; Oreopoulos et al., 2006; Kahn 2010) may have lasting effects on young people’s careers and salaries.

Analysis of the long-term effects of the crisis on economic growth and related underemployment or unemployment levels is inconclusive. The ILO projects a global increase in unemployment (ILO, 2012b),
which could lead to labour force withdrawal and increased marginalisation among the jobless (OECD, 2012e). However, the OECD is more optimistic about long-term labour market developments, projecting long-term growth to 2060 (OECD, 2012h). In addition, the long-term effects of lasting unemployment are still uncertain.

In addition to economic impact, high levels of youth and structural unemployment may also lead to psychological impacts, such as the widespread deterioration of human capital, discouragement and labour market withdrawal. At the societal level, unemployment and underemployment can damage productivity and growth and lead to distrust of political and economic systems. Although young people are typically more resilient than other demographics and tend to have few dependents, those suffering prolonged unemployment often see their self-confidence and skills eroded and lose their attachment to the labour force (Dao and Loungani, 2010).

4.1.2. Technological developments will contribute to long-term economic trends

In considering the long-term economic future beyond the next five to ten years, it is important to look beyond dire reports skewed by the pessimism of the crisis. The 1980s were similarly characterised by high youth unemployment, societal unrest and street protests. But by the mid- to late-1990s, prospects for young people in the labour market had to some extent recovered (Bell and Blanchflower, 2011).

There are several indications of prospects for long-term growth on the demand side of the labour market. A number of publications underline the job-creating power of new technologies. Results from McKinsey’s global survey of small- and medium-sized enterprises (SMEs), for instance, suggest that the internet has created 2.6 jobs for every one lost (Pélissié du Rausas et al., 2011). However, many of the new jobs in the internet sector represent displaced employment. Even if matched by job creation, job destruction can lead to labour insecurity and displaced workers have difficulty fully replacing previous earnings and tenure (Rosenblum et al., 2010).

Long-term modelling studies suggest that after an initial displacement of jobs, net employment will recover. As new technologies mature, their adoption will be driven more by quality improvements than cost savings (Hoorens et al., 2012). Moreover, efficiency of the labour market is likely to improve as well, as a result of labour force networking, improved job search and better matching of workers to jobs (Goyal, 2011; Kalleberg, 2006; Caliendo et al., 2010). New technologies may also contribute to a trend in off-shoring jobs, which could generate considerable job opportunities for workers in China, India and the Central and Eastern European member states of the EU (Freeman, 2007). Although the number of jobs that have been off-shored to date appears rather modest, potential future effects seem much more substantial (D’Amuri and Peri, 2011; Gál, 2010; Marin, 2010).

4.1.3. There is a widening gap between incomes of low- and high-skilled workers

In recent years the trend of rising unemployment has been accompanied by growing income inequality within member states. Different groups have been affected unequally by unemployment and underemployment (International Labour Office, 2012b; OECD, 2012h). Not only have lower- and middle-income earners suffered more from unemployment, they have also been hit disproportionately by the policy responses to the crisis. As one interviewee put it, complex austerity measures, many of which
involve the rationing of social transfers, have ‘made the effect on the poorer much greater than the effect on the richer’. On the other hand, earnings gains from productivity growth have also been heavily concentrated among high-income workers and families.

In the longer term, the supply-side of the labour market is likely to be affected by a projected surplus of low-skilled workers. Dobbs et al. (2012b) expect a potential impact on long-term and permanent joblessness: young people without post-secondary training will face difficulties entering the job market, whereas older workers might not qualify for new jobs that are being created.

The ultimate consequence of a large number of unused low-skilled labour may be a polarisation of incomes between high- and low-income workers (International Labour Office, 2012b). In recent years, high-skilled workers remained in high demand in the EU and experienced increases in their salaries. At the same time, the role of low- and medium-skill labour declined and has led to a widening gap between the incomes of higher-skilled workers and those with lower skills. A number of potentially disruptive technologies – cloud computing, mobile technologies, Internet of Things – are likely to have a considerable impact on the demand for low-skilled labour in the EU.

With the rising demand for knowledge and skilled workers and a decreasing need for unskilled labour, income inequality is projected to expand over the coming decades. It is estimated that young and female workers and workers aged 55 and over will be hardest hit by the growing mismatch between worker skills and jobs. In the long-term, it can potentially lead to unemployment among young and older workers, and low female employment rates (Manyika et al., 2012). If left unaddressed, a skills mismatch could also contribute to the rise of a ‘lost generation’ (c.f. Section 4.1.1), leading to a possible increase in public sector spending, social tensions and political and economic distrusts in governments (Dobbs et al., 2012b).

Skilled labour is likely to enjoy the opposite trend as a global shortage of medium- and high-skilled workers is projected over the next few decades. Some important and upcoming industries, such as mobile or green technologies, with highly specialised specific skills in IT, science, engineering and technology might be particularly affected (Ouye, 2011). But softer sectors such as health, mental and social care may also face shortages of specific skills. Developed economies largely relying on skilled workers might offset the smaller workforce and smaller numbers of skilled workers by making use of longer working lives and skilled migration. An undersupply of skilled workers in developing economies may slow down these countries’ expansion into higher value-added industries and hinder productivity gains that are increasingly important to their growth (Dobbs et al., 2012b; International Labour Organisation, 2013). The literature and interviewees point to the importance of investing in vocational education and apprenticeships to acquire these skills on-the-job.

4.1.4. Single-adult households are more vulnerable to poverty and marginalisation

Emerging trends such as divorce, later parenting and cohabitation without marriage are changing traditional household and family structures. While forecasting these trends is difficult, evidence hints that living arrangements have some (albeit small) impact on income inequality in Europe (Jäntti, 1997; OECD, 2011a; Harkness, 2010). This is due to the projected increase in the proportion of households that face higher risks of poverty, such as single-adult (particularly elderly) and single-parent households.
An increase in single-person households could impact overall poverty levels in the EU, since the income pooling that enables two-parent families to respond to income shocks is not available (OECD, 2011b; Peichl, Pestel, and Schneider, 2010). Single-adult households are often composed of young unemployed individuals or the non-working elderly, both of whom face higher risks of poverty (Lelkes and Zólyomi, 2008). Women feel these impacts disproportionately, as they are overrepresented among both single-parent households (in several European states, more than 80% of all single-parent households are headed by women) and single-adult households (elderly women are more likely to live alone than elderly men) (Fagan et al., 2006).

Single-parent households struggling with economic conditions may also impact long-term outcomes for children. Child poverty has been associated with one-parent households (often headed by women) in which there is limited income available to support the child (Jäntti, and Bradbury, 1999). Evidence indicates that for a number of reasons, including lower brain stimulation, children born into disadvantaged families may be inadequately prepared for school. This situation in turn leads to low educational attainment, which reduces future employment prospects and leads disadvantaged children to become disadvantaged adults with lower income and skills levels, who contribute to repeating the cycle of disadvantage when they become parents themselves (d’Addio 2007; Feinstein 2003).

4.1.5. Economic unrest could eventually lead to societal unrest

The uneven impact of the economic crisis across European society may contribute to continued social unrest. The 2013 Human Development Report confirms that mass protests, especially by educated people, tend to erupt when bleak prospects for economic opportunities lower the opportunity cost of engaging in political activity. A study by Curci et al. (2012) similarly shows that diverging employment trends and slow recovery from the crisis increase the risk of social unrest. This situation is evident in the EU, as a report by the European Commission (2011a) shows that many EU member states have already experienced polarisation of incomes and increased risks of long-term exclusion from the labour market, resulting in rising inequalities and poverty levels. Findings from interviews and the literature suggest that these conditions form a fertile breeding ground for societal unrest in the short to medium term.

Public dissent may be largely associated with a disempowered youth generation. European countries, particularly those hit hardest by the crisis, have seen recent protest movements primarily driven by young people. Along with Bloom (2012), many have noted that there is a real risk these trends could lead to a disheartened generation, disconnected from established institutions. Delphi respondents similarly highlighted that higher structural youth unemployment in EU countries may lead to a higher incidence of societal unrest. Experts agreed that the estimated likelihood was above 50%, with an estimated 70% likelihood on average overall, despite disagreement among participants. This was further supported in the findings from interviews, with one interviewee describing the situation of a ‘generation of people growing up without the experience of work, which cannot be sustained’ because it will lead to disaffection and the
questioning of political establishments. These developments are worrying for the EU as they threaten the Union’s foundations of growth, equality and social inclusion. However, historical precedents suggest that periods characterised by public dissatisfaction, institutional mistrust and mass protests have been relatively short-lived.

In addition to unrest or dissatisfaction, there are potential negative externalities to these trends. Although the evidence is not conclusive, empirical research suggests that unemployment rates tend to correlate with crime rates (for example, Fougère et al., 2009; Philips and Land, 2012; Saridakis and Spengler, 2012), particularly for property crime. However, contrary to popular belief, there is no comprehensive evidence for a link between collective or individual poverty and terrorism or radicalisation (Maleckova, 2005). Veldhuis and Staun (2009) note that ‘the demographic profiles of radical Muslims in the Western world show that they are generally not poor, religiously fanatic, or desperate due to suffering from extreme poverty, political oppression, or other deprived circumstances’.

4.1.6. Worker mobility will both contribute to employment dynamics and react to recession conditions

Migration may offer opportunities for individuals who decide to move to another member state but it will also have economic benefits at societal level. Authors cite more efficient labour markets that equalise labour surpluses and gaps by allowing workers to move freely. For mobility of workers within Europe, intra-EU remittances sent to citizens of the countries severely impacted by the crisis may ‘bring extra capital into the country’ (Benton and Petrovic, 2013:18). The negative aspects of intra-EU mobility may be similar to the downsides of general circular migration, including potential ‘brain drain’ instead of ‘brain circulation’ and ‘shortages caused by large outflows of workers from certain sectors’ (Benton and Petrovic, 2013:18). It is also important to note that mass migration may create ‘trapped populations’ (those who cannot afford to move or are generally unable to move), which could be left behind.

As well as offering both outlets and inflows of labour across the full skills range, migration patterns may also be redirected or redefined as the result of changing demographic conditions and economic circumstances. As elaborated earlier in this report, reduced movement of international capital may be paralleled by a reduction in human capital (Goldin, Cameron and Balarajan, 2011:111). Although migration will continue, the attractiveness of individual European countries and accompanying regional impacts may vary depending on factors such as employment opportunities and societal attitudes.

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8 Similarly, recent social unrest in North Africa and the Middle East has been linked with a youth bulge, high youth unemployment levels and social dissatisfaction with the political and economic systems (International Labour Office, 2012b). These factors may also have contributed to the dissatisfaction with autocratic regimes in the Arab region.

9 In poorer parts of the world the situation may be different. For example, Sozer and Sever (2012) showed that unemployment (together with seniority in the organisation) is significantly correlated with the involvement of Turkish Hizbullah members in violent acts.
The economic impact of migration trends on the EU will also be shaped through the direction of policy, both regional and of individual member states. Looking ahead, Collett’s (2013:1) conclusion rings true that ‘European governments will need to articulate a new vision for immigration that speaks to a rapidly changing global environment, not least in demographic and economic terms’. With the economic crisis, there are signs that some countries may tighten immigration policies, thus negatively impacting legal migration and stimulating illegal migration (Development Research Centre on Migration, 2009; Papademetriou and Terrazas, 2009). However, the extent to which government policies in the receiving country can influence migration is limited – and can often have an unintended effect (see de Haas, 2011a). Nevertheless, different policies will have some influence over the skill levels of migrants and the outcomes that migration has on European society. Expert interviewees pointed out the value of crafting better immigration laws to facilitate the workers who will be needed ‘right across the skill spectrum’, supporting low -skilled workers and allowing legal migrants more flexibility in changing employers or location.

4.1.7. As migrants diversify European communities, the success of cultural integration will help determine societal responses

Migration increases diversification of European communities, posing new challenges to definitions of national cultural identity in many member states. The reception migrants receive is strongly linked to the ‘difference’ they are perceived to introduce. According to the European Quality of Life Survey, people’s perception of tension between racial and ethnic groups links to their views on immigration (Eurofound, 2012:142). Authors also point out that religious factors are often used to categorise migrants and have become a strong part of the integration debate and a ‘racialisation of ethnic difference’ (Mudde, 2012:10; Castles, 2010).

The ability of member states to integrate migrants into their new societies plays an important role in supporting cohesion through the diversification process. According to the European Quality of Life Survey, ‘people tend not to perceive tension if they also tend to agree that immigrants are integrated, are not a burden on welfare system and do not pose a threat to their culture’ (Eurofound, 2012:142). An emphasis on migrants’ integration may be especially important in the current climate of economic crisis, as some scholars report that in times of crisis there is increased risk of hostility towards migrants from the native populations.

Adapting to this concentrated heterogeneity and effectively managing its implications for integration is a continuing task for both European societies and policymakers. Policy responses have a role to play in encouraging positive integration. Castles and Miller classify policy options in the following way:

At one extreme, openness to settlement, granting of citizenship and gradual acceptance of cultural diversity may allow the formation of ethnic communities, which are seen as part of multicultural societies. At the other extreme, denial of the reality of settlement, refusal of citizenship and rights to settlers, and rejection of cultural diversity may lead to formation of ethnic minorities, whose presence is widely regarded as undesirable and divisive (2009:34).

The impact of migration trends on Europe may at least be informed by the direction of policy responses that set a tone of inclusion or exclusion. Improving paths to citizenship is one important step to encourage migrants’ political participation, legal rights and civic integration (Niessen, 2011). Expert
interviews also emphasised the role of education in enabling integration and the importance of facilitating language skills and providing family support. Interviewees also suggested broadening citizenship regimes to aid the inclusion of migrants in their new society.

Regardless of integration initiatives, however, the relationship between migration and urbanisation will continue to pose new local challenges to community and identity throughout Europe. Diversification of neighbourhoods and the globalisation of major cities are becoming increasingly prominent trends. This movement poses new challenges to traditional conceptions of European identity. In the Netherlands, for example, there has been a public backlash against migrant diversity in the past decade, with a movement towards ‘culturalised citizenship’ that links Dutchness to a set of sociocultural norms and practices. This virulent debate on Dutch identity obscures a more divided society, which is substantially split between those who see migration as a threat to national identity and those who see multicultural society as beneficial (Kremer 2013). Policymakers will need to craft more nuanced responses to address this range of public opinion.

4.2. The emergence of a new socio-economic order will have consequences for consumption, mobility and values

Demographic trends change the size and structure of populations. Population growth affects the potential size of global consumer markets while changes in age or income composition will also have an effect on consumption patterns. The EU may face a number of challenges and opportunities as a consequence of these trends.

4.2.1. Population growth and changing consumption patterns will put a strain on food, water and energy resources

Natural resources will face increasing strain from population growth and changing consumption patterns in the years ahead. It is expected that, compared to current levels, global demand for food will rise by 35% by 2030 and by 70% by 2050 respectively (NIC, 2012; Alexandratos and Bruinsma 2010). Changing consumption patterns associated with economic development, particularly in developing countries, will also contribute to this trend. As one interviewee pointed out, the growth of the middle class is correlated with a shift in consumption patterns towards a more protein-heavy diet that introduces greater strain on resources.

Although there appears to be agreement on the fact that, theoretically, the natural resource base will be sufficient to feed the world’s population over the next two or three decades – which means predictions of global food scarcity should be treated with caution – uncertainty remains as to the conditions within which high-enough production levels could be reached (FAO, 2009; Lee et al., 2012). Africa will be particularly in need of agricultural and rural reforms, as the continent’s soils may not be fertile enough to reach the same levels of productivity as industrialised countries. This, according to one of the interviewees, could give the EU a competitive edge, if it steps in to alleviate supply shortages. The challenge will be to pursue this opportunity for EU food exporters without contributing to inequality, poverty or malnutrition abroad.
Water resources will also come under strain in many areas. Trend reports (e.g., NIC 2012; Ministry of Defence 2010) project that by 2040 between a third and half of the world population will live in an area of water stress. This is especially the case in Africa, where increased population and rising levels of urbanisation will lead to growing demand for natural resources. This may be exacerbated by the impact of climate change, particularly in arid regions where water availability is already limited.

The negative consequences of climate change will also have a potential impact on food and energy resources (Birks, 2007; NIC, 2012). As documented previously, climate change, a phenomenon driven by demographic change and rising consumption levels, could persist as middle- and lower-income countries continue to develop and contribute to the increase in CO₂ emissions. While impacts on the EU will probably not be felt before 2030, EU countries may experience long-term effects on crop yields and overall agricultural productivity, migration, infectious diseases, flood risk or vulnerability to extreme weather conditions. However, the specific impacts of climate change remain heavily debated and so are still difficult to foresee.

In managing its energy consumption, the EU may face a challenge in balancing population demand and environmental commitments. Globally, demand for energy is predicted to increase by 50% over the next 20 years (NIC, 2012). It is also possible that age will come to play a growing part in the demand for energy, as well as household size – the projected rise in single-adult households in Europe and worldwide may drive energy consumption (European Commission, 2011b). It has been suggested that growing consumption in the developing world will force the EU to reduce its growth in terms of energy, greenhouse gases and consumption of natural resources in order to maintain its environmental commitments. Engaging in non-growth or even a decrease in growth in these areas would be likely to affect the daily life of European citizens. This could in turn generate a redefinition of wellbeing and living standards in Europe that in worst-case scenarios could be met with large-scale public backlash.

As these trends will probably further intensify global competition for natural resources, they will increase the importance of the EU’s energy, water and food security policy, challenging Europe to reduce dependency on third countries and offering opportunities for new innovations on the global market. At the same time, experts suggest that the EU will need to respond to pressures from an increasingly multipolar global stage, particularly regarding international issues such as climate change.

4.2.2. A growing consumer base may expand markets for European products

While global population growth will affect the level of consumption, a changing population structure will be likely to change consumption patterns as well. As many consumer preferences are age-specific, an ageing population may offer new opportunities as well in particular markets, notably in the fields of healthcare, ICT, robotics, nutrition, tourism and others.¹⁰ Other markets, for instance those targeting young people, will see their traditional consumer base shrink. These trends will offer challenges and

opportunities for European businesses and subsequently affect employment opportunities. Börsch-Supan (2003) estimated that employment in the health sector will increase by around 6% between 2010 and 2030, and fall by around 5% in the transport sector.

In addition to changing population size and structures, previous chapters also signalled shifts in their socio-economic make-up. The emergence of this new middle class could have an economic impact on the European Union’s businesses and broader economies. Uncertainty around the actual identity, behaviour and beliefs of the global middle class notwithstanding, its mere emergence and existence could impact the EU’s strategic landscape at the economic, strategic and political level.

Consumption patterns are likely to evolve as discretionary spending increases, although how is still uncertain. Market opportunities for European businesses could expand. However, these developments may not necessarily be linear, nor lead to a convergence of consumption patterns. This suggests that identifying domestic subtleties (even for basic products such as cars and consumer durables) in specific economies (even within emerging economies themselves) may be all the more crucial in order to maintain or gain shares in these new markets. Several interviewees expect that in low- and middle-income countries demand from the new middle class may largely be met locally, leaving limited export opportunities for the EU. Others suggested that countries such as Bangladesh or India may rely less on Europe and more on China as the latter becomes more economically significant.

Several interviewees concurred with the findings of a McKinsey study on capturing the world’s emerging middle class, which suggests that companies looking to penetrate new markets are likely to find strong local competitors in countries such as China. In addition, it also finds that some consumer needs and tastes are firmly local, meaning that awareness of local realities is likely to have a fundamental influence on the success and competitiveness of European businesses (Court and Narasimhan, 2010). Indeed, given the diverging patterns of inequality in emerging economies (Asia vs. Latin America and Africa) and the uncertain relationship between preferences and income, these new markets come with a wide set of open questions. Awareness of this uncertainty and the ability to account for it could provide European businesses with an edge in global competition.

**4.2.3. The impact of mobility will depend on the diverse nature of migrants and migratory flows**

As the rise in global population contributes to continued migrant flows in Europe, impacts for the EU will be varied. Some of our interviewees expressed the view that European states differ in desirability for migrants, depending on such considerations as employment opportunities, welfare systems and language. Additionally, the range of types of migration and migrant backgrounds makes it difficult to tease out concrete impacts for Europe with any predictive certainty. These impacts will be felt from a number of migration strands, driven by motives ranging from fleeing persecution to seeking economic opportunity. Often these factors will be intertwined, such as in ‘chain migration’, the widely observed phenomenon in which ‘for every migrant who moves for economic reasons, others (such as family members) are “pulled” along for other reasons’ (Goldin, Cameron and Balarajan, 2011:106). Even for those migrants intending to be temporary residents in Europe, such as those engaged in circular migration, it is likely that some will decide to settle permanently in their European host countries (Wichramasekara, 2011: 9). For instance,
past cases of guest worker migration, which promoted temporary forms of labour migration from 1945 to 1973, have resulted in permanent settlements (Castles and Miller, 2009).

Gauging the impacts of migration is also challenging as both location and intensity of migration flows will depend on fluctuating factors such as economic conditions and proximate conflicts. Within the EU, for example, there has been a reported increase in the numbers of workers from other EU countries severely impacted by the financial crisis, in particular from Greece, Spain, Italy and Ireland. As the Delphi expert discussion noted, the impacts of this intra-EU migration may be both positive and negative: migrant workers may be able to send money home and reduce labour pressures in their native country, but they may also create dependency on remittances and lower the intellectual and human capital in their country of origin.

4.2.4. The changing socioeconomic structure could empower coordination and mobilisation

Finally, the emergence of a new middle class will mean that the West will no longer be the principal host of middle classes across the globe, potentially leading to further blurring of notions of the Western world. This new global middle class will present both opportunities and challenges for the EU. As it increases its discretionary spending, it could be more inclined to pay attention to broader and more international political issues. Uncertainty remains around the value and belief systems of this class but common interests in some key causes, such as climate change and natural resources, appear more pressing than others. This could create greater opportunities to mobilise resources and support for common causes. On the other hand, if this new middle class emerges in a more unequal landscape, it could also contribute to increased inequality and exacerbate domestic tensions. This will require increased scrutiny as the current socio-economic balance bears no real resemblance to past configurations.

Overall, the rise of a new middle class could shape the global demand for governance and for domestic and international public policies in a potentially unprecedented way, opening up opportunities for coordination – though, again, the causes likely to gain the support of the middle classes, if any, remain uncertain. If there is an effective overall convergence of values and viewpoints worldwide, this could mean that Europeans will have greater resources to mobilise in order to reach international objectives on issues such as climate change, or proliferation of human rights. Alternatively, if such a convergence does not materialise, the impact of a vocal middle class might be far less beneficial for European countries that will need to deal with viewpoints that might not have been strongly expressed in the past.

As an alternative trend, interviewees suggest that there is a risk of a hollowing out of the industrialised middle class in the EU and other developed regions – in other words, a decline in the share of the people defined as middle class as their purchasing power declines compared to the upper echelons of society. One interviewee suggested that in today’s austerity context, with its eroding welfare systems and increasing competition for wages in the global labour market, this could have implications for the political stability of some countries.
4.3. The EU will need to adapt to a new demographic and economic reality

Changes in the structure and size of populations will have significant socioeconomic impacts. Trends such as population ageing and migration will interact to shape Europe’s demographic landscape and its associated economic status. Alongside the effects on public spending and revenues (discussed below), changing population size and structure may have economic implications that affect economic growth, domestic savings, investment, consumption, labour markets and intergenerational transfers, among other areas (D’Addio and d’Ercole 2005; United Nations 2007).11

4.3.1. Economic output may decline as populations age

Experts identify a range of negative impacts of ageing on economic growth. First, they point to the reduction in income per capita occurring due to a fall in levels of labour supply per capita in high-income countries where the population is ageing (Bloom, Canning and Sevilla, 2003; Coleman 2007). Second, they point to slower population growth, resulting in lower growth in the labour force (United Nations Department of Economic and Social Affairs, 2007), which in turn affects the pace of economic growth. Third, the rising dependency ratios associated with population ageing may affect and diminish the growth rate of GDP per worker (Prskawetz et al., 2007). Ultimately, these combined factors could lead to lower overall economic growth. However, some experts maintain that the effect of ageing will represent only modest declines in economic growth in OECD states, and some impediments to growth in non-OECD states (Bloom, Canning and Fink, 2011).

Stagnating economic output and GDP per capita may have a depressing impact on net wages for working-age populations and subsequently on living standards, which may impact workers nearing retirement in particular. The magnitude of these consequences are dependent on policy choices that will affect income replacement rates (the extent to which retirement pensions relate to earnings during an individual’s working life). It is estimated that income replacement rates will decrease by 5% or 10% in most EU member states between 2010 and 2050 for a man retiring at the age of 65 after having worked for 40 years (Social Protection Committee and EC DG EMPL, 2012).

An ageing workforce presents both strengths and weaknesses. An older workforce may be less able to learn and adapt to changes in innovation and technology (D’Addio and d’Ercole 2005). On the other hand, some suggest that the strengths of older workers, particularly related to their experience and risk-aversion, present advantages that should be reaped. For example, older workers appear to fare better than younger workers after a work injury; their relative advantage may be primarily due to longer workplace attachment and higher job satisfaction (Pransky et al., 2005).

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11 Hoorens et al. (2011: 92) discuss a number of ways in which these economic impacts can occur.
4.3.2. Migration flows have the potential to contribute to a rebalancing of demographic shifts

It has been shown that population ageing can lead to a shortage of young skilled workers (McDonald 2007). In the context of Europe’s changing demographic profiles, migration could potentially help allay concerns about gaps in the job market caused by a declining workforce in the EU, where certain sectors will compete fiercely to recruit individuals (Chief of Force Development, 2009). Labour migration may be controversial in a climate where unemployment rates are high and anti-migration sentiments are increasingly voiced in public debate. But immigration may offer an effective, efficient and swift means of recruiting labour to fill specific gaps in the labour market (House of Lords, 2012), particularly in sectors requiring scarce technical skills and those facing an exodus of older workers entering retirement. Some authors conclude that by 2030, Europe, the Middle East and Northern Africa (MENA) may have an ‘ideal demographic match’ where ‘the MENA countries have a large supply of young, active workers, and the Europe has a shortage of the youthful, skilled or unskilled labour it needs to sustain its economic competitiveness’ (Fargues, 2008:2).

However, there is a potential dark side to these developments as well. If the patterns of educational attainment and job creation do not change in many developing countries, the surplus of low-skilled workers may slow down economic advancement and trap millions of workers in subsistence agriculture and urban poverty (Dobbs et al., 2012a).

For the EU, researchers doubt labour migration should be considered as a silver bullet for solving demographic problems (Fargues, 2008; Grant et al., 2004). Expert opinion in the Delphi was strongly divided on the likelihood that demographic pressure from population growth in lower-income countries will increase migration to the EU. We report on specific trends emerging from the evidence on migration and the labour market in other sections of this report.

4.3.3. Europe is likely to face higher costs of long-term care and healthcare

The WHO (2004) predicts that the four leading causes of death globally in 2030 will be ischaemic heart disease, cerebrovascular disease (strokes), chronic obstructive pulmonary disease (caused by tobacco smoking) and lower respiratory infections (such as pneumonia). Ischaemic heart disease, often associated with smoking and the consumption of fatty foods, is the single most common cause of death in the EU (Backhaus et al., 2012). Despite some experts forecasting a 50% decline in ischaemic heart disease rates in certain EU states by 2030, the absolute number of deaths from this cause may continue to increase owing to population ageing (Amiri, Janssen and Kunst, 2011). Cancer rates in developing countries are also projected to rise owing to the widespread adoption of unhealthy Western lifestyles (Asma et al., 2003; Jemal, Center and DeSantis, 2010).

The global obesity pandemic will continue to exacerbate a number of detrimental health conditions, contributing generally to rising healthcare costs. Experts note that the obesity pandemic is the result of an ‘obesogenic toxic environment’, and that obesity is a socioeconomic issue resulting from unwanted consequences of policies affecting food supply and food quality, as well as the influence of urban conditions on physical activity (Wanless, 2002). Some evidence suggests that a GDP loss of $84 billion
across 23 countries could occur as a result of vascular diseases between 2006 and 2015 only (Mukherjee and Patil, 2011).

The rising proportion of the elderly population in the EU is likely to drive demand for healthcare services and to increase strain on pensions if the decrease in the domestic workforce is left unchecked. Experts point out that the main factor driving healthcare expenditure is the health status of individuals, not their age in itself. Current data suggest that the elderly are healthier than ever (Bijak et al., 2007). However, if patterns of diseases remain constant, but longevity improves as deaths due to degenerative diseases are reduced through medical advances, long-term care and healthcare expenditures could increase sharply. The consequences of advances in biomedical technology may be positive when they lead to longer healthier lives. However, as one interviewee suggested, with people living longer, the age window where frailty is very high is also likely to increase.

The prevalence of Alzheimer’s disease, for instance, may increase significantly. It is expected that, worldwide, the incidence of dementia will increase by 400% over the next 20 years, and the evidence points to a link between obesity and the risk of dementia (Whitmer et al., 2005). A recent RAND study showed that by 2040 the total costs of dementia in the United States will have soared to between $379 billion and $511 billion as measured in today’s prices, up from between $159 and $215 billion in 2010 (Hurd et al., 2013). The need for personal care in the late stages of the disease may put increasing strain on the healthcare systems of EU countries where the disease is on the rise. There is also a two-decade time lag between medical innovation and the impact of treatments (notably in mental health research), which may in turn affect the number of dependent elderly even if advances were to be made (Buxton et al., 2008).
The costs associated with these trends will pose specific challenges for European healthcare systems. As depicted in Figure 4.2.1, public expenditure on healthcare in the EU is projected to grow considerably in most EU member states (IMF 2010). Given the pressure on governments to reduce public spending in
the current financial climate, the founding principles of many healthcare systems in Europe – equity of access, comprehensiveness and social solidarity – may be at stake in the short term.

4.3.4. Pressure on pensions systems will have intergenerational impact

The growing number of elderly citizens aged 65 and over in Europe is likely to put additional strain on pension systems and pensions-related expenditures and to challenge the solvency of publicly funded pay-as-you-go (PAYG) pension systems as a result. If left unchanged, pension contributions are projected to decline as a consequence of a shrinking work force, while at the same time total pensions expenditure is increasing due to a growing number of pensioners. In order to maintain sustainability of these systems, therefore, either the contributions need to increase or the benefits need to be rationed.

Retirement ages have remained more or less unchanged in the EU from the early days of the European social model through to the end of the twentieth century. In that same period, however, life expectancy in the EU increased by more than 15 years. More recently, several member states have adjusted their statutory retirement age or have committed to doing so in the future. But as Figure 4.2.2. shows, life expectancy is still projected to rise more quickly than the average age of exit from the labour market.

Figure 4.2.2. Average labour market exit age and life expectancy

Note: The average effective exit age calculation for 2020 and 2060 is based on the reference age group 50–70 and on information about pension reforms in EU member states available in 2012.

Source: DG ECFIN (2012)
Some experts point out that the fiscal consequences of population ageing may trigger intergenerational conflicts owing to changes in patterns of resource distribution. An increasing share of government revenue going to the elderly would be likely to reduce the amount of support available for the working-age population, especially if policymakers feel growing pressure from an ageing electorate to maintain current levels of welfare provision for the elderly (Bijak et al., 2007; Kenworthy, 2009).

Aside from the need to reform pension systems, which will inevitably require increasing pension contributions and/or reducing pension benefits, in the longer term policymakers will be faced with an elderly population that is increasingly at risk of poverty. Groups with certain socioeconomic characteristics may be particularly vulnerable. Interviewees, for instance, mentioned that there is a large cohort of ageing migrants in the EU for whom integration into care systems may be particularly difficult due to language barriers and lack of social networks.

Finally, values may change as a result of population ageing, with risk-aversion and reduced flexibility tending to develop with older age (Jackson et al., 2008). For the EU, this means that as democratic electorates age, there may be associated shifts in voter preferences. As voter turnout also tends to be positively correlated with age, we can expect an increasing overrepresentation of older voters in national and EU elections (Goerres, 2007).

4.3.5. Future challenges present an opportunity for innovative grassroots alternatives to public service provision

New media and technologies offer a range of opportunities for small- and large-scale initiatives by non-state actors. Aside from the need to increase retirement ages and link these to (healthy) life expectancy, third and informal sectors may be required to take responsibility for welfare retrenchment and social care provision. Growing social needs present potential opportunities for innovative grassroots initiatives that do not require traditional public-sector intervention. Several interviewees suggested that, if managed and monitored well, social innovation initiatives could help address a number of pressing societal challenges, for example, those related to care of children or the elderly or unemployment, particularly in times of austerity.

The balance between the role of informal networks and the voluntary sector is likely to vary across Europe, between urban and rural areas and between member states (ie Southern European member states tend to have stronger family structures). Where innovative non-state solutions are adopted, these highly connected societies composed of empowered communities might rely less on an omnipresent state, particularly given the current austerity context. Paradoxically, though, if such a trend of connected communities were to materialise, technologies would occupy an increasingly central part in societies, making them ubiquitous utilities and potentially requiring additional state regulations as a result. This trend could therefore require a shift of policy resources and priorities on the part of the state.

More broadly, innovation in public service provision could give states the opportunity to redesign their mission and remain effective at a lower cost. E-government services, for example, can make significant cost and efficiency gains possible in the public sector while offering new channels of communication with citizens. If this trend materialises, it may provide member states with increased leverage to deal with current fiscal difficulties and, in certain cases, lack of citizen support.
4.3.6. **Labour markets will need to adapt to integrate women and older workers better**

In aiming to raise European employment levels to 75% of 20–64 year-olds by 2020, the Europe 2020 strategy seeks to increase participation in the labour force of groups that are currently underrepresented. For instance, female employment in most member states remains well below the 75% target. When part-time employment and actual hours worked are taken into consideration, women remain considerably underrepresented. Although female labour force participation has increased in recent years, it is doubtful whether this pace can continue (see, for example, Euwals et al., 2007). Across the EU, mothers are even less likely to be employed than women without children (Miani and Hoorens, in press) and the opportunities for men and women to reconcile work and family life will have to improve considerably to facilitate reaching the employment targets for these groups.

A shrinking and ageing workforce will also have considerable consequences on the composition of EU labour markets and, by extension, employment policy. Active ageing is often seen as a necessary paradigm to adapt to the new demographic realities. The European Commission (2011a) postulates that older people should be encouraged and helped to remain active longer.

However, current strategies of encouraging women, older workers and skilled migrants to enter or remain in the EU labour force seem at odds with short-term pressures on the labour market. However, Bijak et al. (2007) assume that, in the long term, female economic activity will increase considerably, especially for those of childbearing age. For older age groups, Bijak et al. (2007) expect that employment trends will continue throughout the present decade; rapid changes in older-age employment are not expected until around 2030.

4.4. **There are increasing but potentially uneven opportunities for individual empowerment**

In our analysis, we have used the human development index (HDI) as a proxy for individual empowerment, suggesting we can observe a persistent and long-term trend towards global improvement. While some regions are catching up, the EU and North America are still expected to lead the HDI table in the coming decades. There is still considerable discrepancy between EU member states, but the member states that joined in the 2004 and 2007 accession waves are slowly closing the gap with the EU-15.\(^{12}\) However, the HDI tells only part of the story. While the prospects for some specific groups are relatively bleak in the short to medium term, we conclude that there are several technological trends that present opportunities for EU citizens to gain control over their own destiny. However, there are risks that these opportunities may not be equally accessible to all citizens.

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\(^{12}\) EU member states prior to the 2004 accession wave: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom.
4.4.1. **Reaping the benefits of new technologies requires a long-term strategy**

People today are better connected than ever before. Access to mobile and fast internet services have transformed the way we do business, stay in touch with friends and family, search for and purchase goods and services and participate in society. Emerging technologies, such the Internet of Things, cloud computing, 3D printing and NBIC (nano-, bio-, info- and cogno-technologies) are expected to transform further our personal and professional lives, as well as societies and economies as a whole. Ultimately, the development of these technologies can make a positive contribution to meeting social challenges, for instance by revolutionising the nature of work and changing structural relationships between labour and capital. At the same time, technologies also introduce new threats, such as internet-enabled cyber crime, which pose a continuing challenge.

New technologies empower emerging economies to compete at a global level and developing economies to leapfrog through relatively cheap and quick deployment. The EU is leading the world in terms of internet penetration. However, it has not been at the forefront of developing and capturing the benefits of the ICT and internet economy, and is lagging behind the US, Korea or Japan (Van Ark et al., 2003; Van Reenen et al., 2008, Hoorens et al., 2012). Other emerging technologies may offer niche opportunities for the EU, if it is able to invest and deploy innovation in these areas.

The exact nature and extent of technology-enabled societal transformations remains largely speculative. Uncertainties surround the actual extent of diffusion and convergence, environmental and health impacts and the social acceptance of several of these technologies. For example, American and European consumers have seemingly reacted very differently to genetically modified (GM) crops. Despite being relatively uninformed about biotechnology, consumers in the EU appear to have initially high levels of aversion to GM food (Lusk 2011). On the other hand, there were few analysts who predicted the mass penetration of social network use to more 1.73 billion users in 2013 (eMarketer, 2013) – one in four individuals worldwide – within the timespan of less than a decade.

Even if the EU is not able to improve its global competitiveness by diffusion of technology-driven innovation, technological benefits to consumers and society could be substantial. There is a risk, however, that not all citizens, communities or member states will benefit equally. Despite anticipated convergence, our analysis suggests that some digital divide within and between countries is likely to remain unless sufficiently addressed by formal and informal education systems.

4.4.2. **New education developments can help empower individuals with skills and knowledge**

Equal access to education has been considered one of the foremost determinants of social mobility. Level of education is positively correlated with outcomes later in life such as probability of employment, income level and social inclusion. While there is nearly universal access to primary and secondary education in the EU, the global rise in literacy rates and education levels will continue to be instrumental in economic and human development in other parts of the world.

Investing in education pays off: earnings are positively correlated with formal educational achievement (see for example Card 1999). Mass enrolment in education – 63% in tertiary education in the EU – has not been uniformly effective, however. Premiums paid to college graduates have dropped since the 1970s
as there have been decreasing returns to scale: an increase in the number of highly educated people has kept the relative earnings range among the educational attainment levels rather narrow (Card and DiNardo, 2002). There is a risk that this may lead to either a race to the bottom or a race to the top, both of which the EU should try to avoid. At one extreme, continued cuts in education funding and budgets may cause (higher) education institutes to compete on price against minimum quality standards. At the other extreme, quality degrees may only be accessible to those students who can afford to pay tuition fees at a select group of elite institutions. The latter is undesirable as high levels of inequality in educational attainment are associated with higher income inequality (Rodríguez-Pose and Tselios, 2006).

Trends in technology and informal systems have improved the accessibility of education. Online courses and distance learning will reduce the need to be physically located near the education institution, offering low-cost opportunities for high-quality education to students in developing countries or remote areas. These mechanisms could help specific countries increase their tertiary education attainment rates and overcome differences between regions and member states, which continue to be considerable. Remote learning processes are not beyond criticism and their potential impact is debated; however, recent reports (Economist 2013) suggest that a revolution in teaching and learning methods, monitoring performance and providing access is looming for the education sector.

4.4.3. Connectedness may empower both individuals and state actors

Despite the uncertainties surrounding technology diffusion and impacts, it seems clear that in a world that is increasingly using non-physical communication and borderless interaction, classical boundaries between citizens and their governments will become increasingly blurred. Opportunities such as big data analytics, sensors and social networking may help satisfy the demand for openness, transparency, accountability and collaboration between citizens and within communities, thereby improving citizen empowerment. In the aftermath of the Arab revolutions, the emergence of grassroots movements in the United States and Europe and the emergence of a global middle class, the notion that individuals are becoming increasingly empowered is not only intellectually attractive but also extremely intuitive. However, given the methodological difficulties in measuring and monitoring, individual empowerment remains a complex phenomenon the actual impact of which is uncertain.

Furthermore, it could be misleading to assume that more interaction or transparency leads to more democracy and freedom. For instance, while individual empowerment may have been a driver of political changes in the Arab world in recent years, the actual outcomes remain largely undetermined. Ubiquitous online presence and increasingly intelligent and analytical tools will also enable state actors to monitor or profile their citizens. Other recent controversies over NSA’s PRISM programme have shown that these methods are not restricted to non-democratic regimes. The growing technical capabilities of surveillance methods are likely to continue to put pressure on the balance between security and privacy. Furthermore, the salience of the responsibility of private actors, such as internet service providers (ISPs), in supporting or opposing these trends is growing.

Individual empowerment could therefore mean that small changes driven by individuals can have a potentially game-changing impact, although the actual nature of this process may be undetermined for some time. In addition, while celebrated as a clear symbol of human rights advancement, individual
empowerment could also help ill-intentioned groups achieve their goals, especially if their objective is as simple as to provoke terror or create mass confusion in civilian populations. Within the European Union, empowerment could also reinforce more narrow interests driven by economic and/or political and identity motives.

4.4.4. Online political engagement: activism or slacktivism?

Recent developments have shown that a variety of trends, from the emergence of grassroots movements to internet penetration, have the potential to contribute to political discourse. Interviewees point to the opportunities that social media platforms present to rally around specific issues and push societies closer to a new form of more direct democracy. Activists are able to gain access to large audiences offering considerable exposure to their campaigns (Beckett and Fenyoe, 2012).

The five-star movement in Italy (MS5) and Pirate Parties are some obvious examples of successful transitions of internet activism into real-life politics. These newly emerging political parties may represent a future trend in voting, and potentially contribute to reversing the trend of decreasing voting turnouts (Campante et al., 2013). Thus far these grassroots movements have been able to mobilise supporters primarily on the basis of a limited set of specialised concerns. They seem to appeal to subgroups in the electorate that have been previously underrepresented in the voting turnout. Whether this can be attributed to the ability of new media to reach underrepresented groups or due to the changing, perhaps more populist, character of the political debate is unclear. Irrespective of the role of social media, it may be that grassroots movements and civil society are slowly replacing traditional forms of democracy and pushing systems towards direct participation that is largely issue-based (Norris and Curtice, 2006).

It has become much easier for individuals to consume political news, engage with policymakers, interact with like-minded people and even to take part in the political process. The ability of citizens to understand and process this new kind of information will be a major driver of individual empowerment. This trend will continue to coexist with another, the decline in trust in political institutions, including those at the European level – a challenge that will have to be addressed to preserve the legitimacy of these institutions.

Whether these phenomena will lead to a mass interest in politics or will be used by an organised few remains to be seen. Even if only a relatively small subsection of the electorate profits from these opportunities, there is evidence that they may have real impact. The recent policy debate over a global anti-counterfeiting agreement (ACTA), and its subsequent rejection by the European Parliament, can be viewed as a case of organised interests using social media and online petitions to directly influence policymaking (Matthews, 2012).

It is not unlikely that member states and the EU will increasingly experience the consequences of these trends. Small, new grassroots movements centred around specific themes or target groups – whose momentum may be facilitated by social or other non-traditional media – can gain access to the political mainstream and will perhaps go as quickly as they come. On the one hand, they could have a disturbing and polarising effect on the democratic process and exacerbate decision apathy and political deadlock; on the other, they could discourage complacency among mainstream parties and occasionally force them to recalibrate their strategies and programmes. If anything, these trends offer citizens an expanded range of
possibilities to exert political influence. An interviewee noted that large online communities and interactions have the potential to trigger and shape significant changes in the way future societies will function. If a large number of people can simultaneously voice opinions on major or minor societal issues, it could herald the transition towards new dynamically participative governance models.
In its next institutional cycle (2014–19), the EU could face a set of challenges stemming from the societal trends that our study has sought to identify and document. These trends could profoundly shape the EU landscape in this coming institutional cycle and beyond, to 2030: their consequences, documented in the previous chapter, are far-reaching and could be the source of disruptive periods.

The significance of these trends could require the EU to persist in its efforts continuously to adapt its policies and approaches so as to tailor them better to strategic realities. This is particularly true of trends displaying relatively low uncertainty and/or low complexity: their mechanisms are well understood, as are the consequences and challenges they set. In some cases, where there is more uncertainty, the challenge of adaptation is even more crucial, as it could require greater efforts from EU policymakers in terms of the flexibility to meet more surprising trajectories.

But at the same time, the EU should also acknowledge that it may not always be able to anticipate, let alone predict, changes in these realities, given the complexity and the uncertainty of some of these trends. This complexity and uncertainty could require EU policymakers to face more disruptive periods. As well as adaptive policymaking, greater resilience could help the EU face these disruptive periods better, no matter how or why they materialise in the future.

Our analysis has uncovered and documented a non-exhaustive selection of 33 key trends within the initial five broad themes. We assess the evidence and the degree of uncertainty of each of these trends and map them accordingly in Table 5.1. This assessment could inform debates about what could constitute more adaptive policy approaches and what could increase the overall resilience of the institution. In this concluding chapter, we begin by suggesting how our analysis could help policymakers tailor existing EU strategies – Europe 2020 and its Flagship initiatives in particular – to the future landscape. We then look at how our research can help EU policymakers contain the institution’s vulnerabilities.
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<td></td>
<td>E Narrowing of the gender gap</td>
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<td></td>
<td>E Human development as measured by HDI continues to grow</td>
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<td></td>
<td>C Decline in the working-age population in Europe and developed countries</td>
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<tr>
<td></td>
<td>C Growth of the labour force in developing countries</td>
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<tr>
<td></td>
<td>C Increasing unemployment rates in the EU, in particular youth unemployment rates</td>
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<td></td>
<td>D Integration of first- and second-generation migrants increasingly important for</td>
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<tr>
<td></td>
<td>society and communities</td>
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<tr>
<td>Medium uncertainty</td>
<td>A Decreasing inequality between countries</td>
<td>A Rise of a new global middle class</td>
<td>E Social innovation, enabled by ICTs among other factors, will continue to grow in importance for policymaking</td>
</tr>
<tr>
<td></td>
<td>A Decline of the established middle class in high-income economies</td>
<td>B Changing family structures and sizes in Europe</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C Shrinking labour force participation (EU and globally)</td>
<td>C Changing working environment due to ICT developments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D Continued diversity in types/patterns of migration</td>
<td>D Attractiveness of migrants’ receiving climate impacts on migration trends</td>
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</tr>
<tr>
<td></td>
<td>E New online and informal forms of education, teaching and learning</td>
<td>E Growing surveillance and data mining create tensions between citizens and governments</td>
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<tr>
<td></td>
<td></td>
<td>E Improving global human rights situation</td>
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<tr>
<td>High uncertainty</td>
<td>EVIDENCE LEVEL +++</td>
<td>EVIDENCE LEVEL ++</td>
<td>EVIDENCE LEVEL +</td>
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<td></td>
<td>E Government and online engagement potentially empower citizens</td>
<td>E Diffusion and market penetration of new technologies</td>
<td>A Value change through middle-class growth</td>
</tr>
<tr>
<td></td>
<td>E Access to internet and social media leads to increased political participation</td>
<td>E Grassroots movements and activism dictate policy</td>
<td>E Growing surveillance and data mining create tensions between citizens and governments</td>
</tr>
<tr>
<td></td>
<td>E Moving from traditional political participation to issue-based participation</td>
<td>E Spread of rational-secular value systems will develop independently from interconnectedness</td>
<td></td>
</tr>
</tbody>
</table>

Note: A: Global middle class; B: Growing and ageing population; C: Employment and changing labour markets; D: Evolving patterns and impacts of migration; E: Connectivity & empowerment
5.1. Addressing salient challenges by adapting existing EU strategies and policies

In 2014, a new EU Parliament will be elected and the next European Commission is set to take office. Both institutions will face the delicate task of adapting the EU’s current strategy to these challenges. In particular, it could seek to develop a successor for the Europe 2020 strategy and tailor it to the new strategic environment that these trends and challenges could entail. It could therefore be worthwhile to consider what these trends and challenges could represent for the institution by 2030.

Our research has shown that among all the trends we have discussed, some appear far less uncertain than others. The future challenges that they set are therefore relatively straightforward to understand and can be directly accounted for in the successor to the Europe 2020 strategy. They are summarised in Table 5.1.1.

Table 5.1.1. Eleven policy challenges we know will be salient

<table>
<thead>
<tr>
<th>1 INVESTING IN CITIZENS</th>
<th>Equipping EU citizens with the tools to seize opportunities as they come along and protecting the most vulnerable citizens against misfortune</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Addressing the increasing risk of vulnerable employment, NEETs and growing inequalities between middle-/high- and lower-income groups</td>
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<tr>
<td>• Managing the consequences of stagnating economic growth for wellbeing and poverty</td>
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<tr>
<td>• Addressing inequalities in access to technologies and technology-based services between different population groups</td>
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<tr>
<td>• Completing the gender gap bridge</td>
<td></td>
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<tr>
<td>• Improving education and labour market outcomes for (first-and-second-generation) migrants</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2 PREPARING FOR A NEW GROWTH PARADIGM</th>
<th>Enabling citizens and businesses to reap economic opportunities and compete globally</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Addressing the shortage of workers with specialised STEM skills; e-skills and skills in softer sectors such as health, social and mental care</td>
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<tr>
<td>• Matching the migrant skills to labour market demand</td>
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</tr>
<tr>
<td>• Bridging the digital divide between member states</td>
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<tr>
<td>• Improving the innovative capacity of SMEs</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>3 REINVENTING GOVERNMENT</th>
<th>Recalibrating the public sector machinery and services to accommodate the realities of the 21st century</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Mitigating the increasing pressure on the affordability of welfare systems, particularly health and pensions</td>
<td></td>
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<tr>
<td>• Addressing a declining institutional legitimacy and mitigating its consequences</td>
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*Science, technology, engineering and mathematics*
Spotlight 1: Break the cycle of inequality by investing in human capital

The challenge that cuts across many of the areas we analysed is the increasing level of inequality between EU citizens. The evidence suggests that the gap between rich and poor in the EU has widened in recent crisis years. As austerity packages tend to disproportionately affect lower incomes and exacerbate the gap, the expectation is that inequality will further increase in the coming years. Not only would this represent a break in trend in the EU — income inequality, for instance, has declined in most member states in recent decades — it is also at odds with one of the foundations of the Union: inclusive growth.

Income inequality is only one of the dimensions of a growing inequality in the EU. The interaction of a multitude of such dimensions, such as the widening skills gap, digital divide and unequal benefits of new technologies, could lead to a vicious cycle for vulnerable groups, such as young people, the older poor, low-skilled workers, migrants and their children. A divide in education, skills, employment or access to technology could mean that these groups face difficulties accessing education or (public) services and risk becoming trapped in poverty and social exclusion. At the same time, the affordability of safety nets for those who drop out of the labour market, because they are older, disabled, ill or care for others, is increasingly challenged. If there is one challenge the EU should single out in the next institutional cycle, our analysis suggests it should be breaking this cycle.

Investing in human capital will help equipping citizens with the skills that are in demand on the labour market: investing in formal education, vocational training and lifelong learning, and efforts to harmonise labour standards. Children at risk can be targeted by early childhood education and care (ECEC), part of a broader strategy to foster the development of vulnerable children and effective in tackling disadvantage. The sooner children receive high-quality ECEC, the higher the returns on investment for society as a whole (Walker et al., 2011; Allen, 2011; Kilburn and Karoly, 2008; Melhuish, 2004).

Experts suggest that the looming challenge of a lost generation should be tackled by investing in the human capital of young people who are currently not in employment, education or training (NEETs). Investing in lifelong learning, vocational training and apprenticeships will help this generation to acquire specialised science, technology, engineering and mathematics (STEM) skills that are required in some important upcoming industries (eg mobile, internet or green technologies and services) or softer skills needed in sectors such as health, mental and social care.

The Europe 2020 strategy has developed the agenda for new skills and jobs, which aims to contribute to smart, sustainable and inclusive growth, notably by emphasising education and training. It also highlights the need for new forms of work-life balance as well as policies focusing on active ageing to increase gender equality and labour market participation in Europe. While the strategy is there, the political attention seems to have been focused on fighting the debt crisis by reducing expenditure.

A follow-on strategy could consider focusing on a number of additional dimensions and more precise indicators related to work and education, broken down by specific skills or target groups in the labour force, the development of human capital and new opportunities offered by an evolving workplace and new forms of education.

The challenges listed in Table 5.1.1. stem from a set of relatively stable trends, typically characterised by a slow pace of change, the mechanisms and the potential outcomes of which are well understood. An example, discussed below, includes demographic changes and their consequences for the welfare state and labour markets. In considering these, policy challenges tend to emerge with a higher degree of clarity. The available policy options and their intended and potential unintended effects have been reported elaborately. However, the adoption of policy options, their specification and implementation may still be
heavily debated. Their desirability will depend on the trade-offs between long-term and short-term costs and benefits as well as political priorities.

<table>
<thead>
<tr>
<th>Spotlight 2: Adjusting European welfare systems to an ageing population</th>
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<tbody>
<tr>
<td>The options for tackling the economic consequences of an ageing population and a shrinking work force have been well documented. Welfare systems systems, including healthcare and pensions, will need to be reformed and labour markets made more flexible.</td>
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<tr>
<td>Options include those implemented in some member states that have already reformed their pension systems, including Germany, Finland, Portugal and Sweden. They have introduced so-called reduction coefficients into the specification that determines the amount of pension benefits. Such coefficients reduce the size of the pension benefit depending on the magnitude of demographic developments. In addition, several countries — including Spain, Italy, Greece and the Netherlands — have introduced a link between retirement ages and life expectancy in their pension system legislation.</td>
</tr>
<tr>
<td>In the short-term, member states will also need to take difficult decisions about the cost-effectiveness of new medical treatments. While in the long run, they will need to find ways to re-set their healthcare systems on a firm financial foundation, while at the same time addressing the unintended consequences for low-income households. A shift from a focus on treatment to prevention could lead to important benefits of public health and subsequent cost-savings. The EU may have a coordinating role in facilitating this reform. Aside from facilitating mutual learning between member states and sharing best practices, the internal market may be important in reducing transaction costs borne by systemic differences between member states.</td>
</tr>
<tr>
<td>Other elements of the social safety net — unemployment and disability insurance, healthcare (see above), childcare, social housing, etc — may need to be rationed as well. It will be impossible and probably undesirable to streamline employment protection in the EU, but there will be a need to balance the flexibility and nimbleness of labour markets with an inclusive safety net reducing risk of poverty and social exclusion. As EU welfare regimes have different starting points and reform is not coherent between member states, welfare state arrangements vary considerably within the EU. Interviewees suggest that there is a potential risk of welfare tourism in Europe, which would be an unintended consequence of an internal labour market with different national conditions.</td>
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<tr>
<td>While these approaches are feasible options to improve the sustainability of welfare systems, they require tough decisions surrounded by a great deal of political controversy. Their implementation requires the political will and courage to trade off a long-term perspective against potential electoral punishment. The nature and specification of these long-term policy measures will also be steered by the prevalent political colour and corresponding priorities, such as income security versus labour market flexibility.</td>
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</table>

The Europe 2020 strategy sets out a range of initiatives designed to strengthen the EU after the crisis by designing a coordinated response across the institution (European Commission, 2010b). The strategy focuses on three pillars for growth, namely smart growth through innovation, education and investment in ICTs; sustainable growth, to be achieved via resource efficiency and competitiveness; and inclusive growth, aiming to modernise labour markets and to skill up the EU workforce while fighting inequality and lifting millions out of poverty.

Many of the objectives included in Europe 2020 overlap with policy challenges explored in this work, such as the focus on tackling early school leaving or fighting poverty and the objectives under Flagship initiatives such as Youth on the Move, New Skills for New Jobs, the Digital Agenda for Europe and the Innovation Union. In fact, our analysis has confirmed the significance of these objectives and their
associated targets. Our analysis also suggests some other dimensions that the EU could include in its future strategy, in particular, a measure of the digital divide, and a measure of inequality across the EU and within member states.

**Spotlight 3: Removing the barriers to competitiveness and growing beyond GDP**

The long-term GDP growth prospects for the EU are relatively bleak compared to some of its global competitors. Among other weaknesses, Europe has shown insufficient investment in human capital and research, a limited ability to transition from an imitation-based economy to an innovation-based economy and excessive reliance on established firms in traditional industries (Darvas et al., 2013). According to a McKinsey Global Institute study (Manyika and Roxburgh, 2011), 21% of GDP growth years 2006-11 was internet-related. But there are hardly any European companies that play a role in this global internet industry. Despite having among the highest rates of broadband penetration in the world, the EU has not been able to reap the benefits of the global internet economy.

These weaknesses have been well-documented and there is no lack of good advice. Many suggest it is crucial to both take steps to support R&D in emerging technologies and ensure that European SMEs are prepared and willing to take advantage of the opportunities offered by new high-tech markets, tools and networks. Many recommendations emphasise the role of education as a crucial driver for the knowledge economy. Overall, our analysis suggests that the challenge for EU is to enable educational reform - while maintaining quality — to respond to these developments, meet skills needs in the labour market and address the needs of digitally native students. At the same time, the EU should aim to improve the international competitiveness and attractiveness of its own educational systems. While the Europe 2020 targets for reducing early school leaving and completion rates of tertiary education are considered good starting points, several interviewees suggest that incentivising innovation in higher education and focusing on the quality and effectiveness of teachers and teaching methods should be among the top priorities for the EU in the coming years.

The ambition for the EU in the Lisbon Strategy of becoming the most competitive economy in the world has been abandoned years ago. But there are plenty of unique features to Europe’s industries, R&D systems, human capital and societies that can be globally competitive. Moreover, while GDP growth prospects are modest, slow growth in economic production does not necessarily make it an unattractive place to live. Therefore, many have suggested the time is ripe for “a new growth paradigm”: to shift emphasis from measuring economic production to measuring people’s well-being. The Stiglitz Commission (Stiglitz, Sen and Fitoussi 2008) has provided a detailed set of socio-economic reflections and the OECD (2012) is following up these recommendations with a proposed set of indicators.
<table>
<thead>
<tr>
<th>EU POLICY CHALLENGES THAT WE KNOW WILL BE SALIENT</th>
<th>NON-EXHAUSTIVE MENU OF POTENTIAL POLICY OPTIONS</th>
</tr>
</thead>
</table>
| Addressing the increasing risk of vulnerable employment, NEETs and growing inequalities between middle-/high- and lower-income groups | • Invest in lifelong learning, vocational training and apprenticeships  
• Invest in early childhood education and care intervention policies  
• Safeguard a social safety net for the most vulnerable groups  
• Invest in improving working conditions across jobs of different skills levels  
• Encourage early intervention in youth at risk of early school leaving  
• Employ active employment and reintegration strategies  
• Readjust housing strategies to improve accessibility and affordability  
• Motivate innovation in higher education to improve quality and effectiveness of teaching methods  
• … |
| Managing the consequences of stagnating economic growth for well being and poverty | • Safeguard a social safety net for the most vulnerable groups  
• Invest in effective early interventions preventing/addressing (child) poverty and social exclusion  
• … |
| Addressing inequalities in access to technologies and technology-based services between different population groups | • Invest in lifelong learning, particularly of e-skills and digital literacy to empower marginalised groups  
• Invest in infrastructure to allow wider access to technologies and technology-based services  
• … |
| Completing the gender gap bridge | • Improve the compatibility between work and family life, through investment in child and elderly care services  
• Leave provisions with job security, flexible working arrangements  
• Increase the attractiveness of science, technology, engineering, and mathematics (STEM) degrees for women  
• … |
| Improving education and labour market outcomes for (first- and second-generation) migrants | • Invest in effective early childhood intervention in deprived neighbourhoods  
• Encourage anonymous online (first stage) job application (to avoid name discrimination)  
• Improve targeted educational support, including language training  
• Improve civic participation of migrant communities to involve them in the political dialogue  
• Expand opportunities for civic participation and citizenship  
• Invest in integration programmes  
• … |
<table>
<thead>
<tr>
<th>EU POLICY CHALLENGES THAT WE KNOW WILL BE SALIENT</th>
<th>NON-EXHAUSTIVE MENU OF POTENTIAL POLICY OPTIONS</th>
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</thead>
</table>
| Addressing the shortage of workers with specialised skills in IT, science, engineering and technology and in softer sectors such as health, social and mental care | • Expand and implement the EU Blue Card system  
• Invest in vocational training and apprenticeships  
• Make changes to formal education and schooling  
• Better coordinate recognition and transferability of qualifications and skills between member states and third countries  
• Better integration of women into the labour force by improving the reconciliation between work, family life and care responsibilities (care of children and the elderly)  
• Increase the attractiveness of science, technology, engineering, and mathematics (STEM) degrees, particularly for women  
• Actively recruit (using incentives) potential high-skilled immigrants in third countries  
• … |
| Matching migrant skills to labour market demand | • Expand and implement the EU Blue Card system  
• Reduce the barriers to labour mobility in the internal market  
• Coordinate better recognition and compatibility of qualifications and skills between member states and third countries  
• Increase attractiveness of Europe as a migration destination country (for migrants with skills in highest demand)  
• … |
| Bridging the digital divide between member states | • Invest in high-speed internet access for all Europeans  
• Stimulate business models (eg cloud computing) that improve access to new technologies  
• Improve and extend the openness of the digital single market to ensure universal access to digital goods and services (eg net neutrality rules, increasing customer mobility, etc)  
• Leverage and stimulate social innovation initiatives (eg open source initiatives)  
• Invest in adequate cyber security measures to increase consumer and supplier confidence in digital markets  
• Invest in effective and efficient cross-border public services to citizens  
• Create responsive IPR, privacy and anti-discrimination laws to prevent online abuses  
• Establish active measures to guard against cyber crime  
• …  
• Improve access to financial capital and allow risk-taking  
• Dedicate resources for economic recovery to start-ups  
• Provide R&D funding for emerging technologies  
• Reduce the barriers to the single market  
• Facilitate network technologies and platforms that enhance the diffusion of innovations  
• Adopt SME-friendly procurement rules and guidelines  
• … |
<p>| Improving the innovative capacity of SMEs |  |</p>
<table>
<thead>
<tr>
<th>EU POLICY CHALLENGES THAT WE KNOW WILL BE SALIENT</th>
<th>NON-EXHAUSTIVE MENU OF POTENTIAL POLICY OPTIONS</th>
</tr>
</thead>
</table>
| Mitigating the increasing pressure on the affordability of welfare systems, particularly health and pensions | • Link retirement ages to (healthy) life expectancy  
• Ration pensions benefits and increasing contributions  
• Expand the opportunities for employment beyond retirement age and reduce early retirement  
• Provide opportunities for part-time working and partial pension  
• Link pension benefits to the magnitude of demographic developments  
• Increase employment rates of older workers  
• Change perceptions towards older people (attitudinal change) so that they are seen not as a burden but as contributors to society (older volunteers, child- and elderly-caregivers)  
• Stimulate and leverage social innovation initiatives to provide cost-effective alternatives to publicly provided social services  
• Invest in value-for-money healthcare prevention and healthy lifestyle programmes (smoking, drinking, physical exercise, diet, etc)  
• Reduce healthcare transaction costs due to systemic differences between member states  
• … |
| Addressing the consequences of a declining institutional legitimacy | • Leverage the opportunities for transparency of public sector information (PSI) and accountability offered by big data and open source initiatives  
• Reap benefits of ubiquitous computing and social networks for interaction and consultation with stakeholders and electorate  
• Increase the accountability of EU decisionmakers (ie European Commission) to European citizens’ representatives (ie European Parliament)  
• Forge stronger international ties to enable trust and improve ability to respond to global issues through coordinated efforts  
• … |
5.2. Challenges that are harder to specify

Another subset of these trends offers similar challenges but is characterised either by lower levels of evidence or higher uncertainty. The actual path that the trend will take and/or the way it will materialise are harder to grasp as a result. In this case, policy challenges and options will be harder to formulate accurately and clearly today.

**Spotlight 4: The economic consequences of a rising global middle class**

The rise of a global middle class is indicative of trends with relatively high uncertainty. It is intuitive and widely discussed but the reality of the phenomenon is not clear-cut. What will this rise entail for the EU? Could it mean more markets and more opportunities for growth? Or conversely, will the rise of new economic powers with the ability to dominate their own local markets challenge traditional firms in their historical markets? The possibility that this new middle class will have far fewer resources compared to the traditional Western middle class cannot be excluded, thus shrinking the opportunities it will represent for the EU.

A well-chosen set of indicators and signposts is especially crucial in this case in order to monitor these trends over time and to get a better grasp of their impact on the future of the EU landscape. The size and make-up of this global middle class, as well as its taste and preferences, could be indicative of the implications of its rise for traditional market leaders, including those in Europe. Similarly, the ability of rising economies to cater to these preferences and produce their own corporate giants will be indicative of the scope of the challenge the EU and its economies are facing. But this logic also hinges on the nature of globalisation and the nature of growth in the future, which may emerge as different from current realities.

If there is no real convergence of tastes and preferences; if European companies face greater competition on these local markets or have trouble accessing them; or if growth prospects are not as promising, the European Union could face a far more complex challenge consisting of reinventing a growth model on the basis of its immediate neighbourhood rather than on a global scale. This could mean putting the emphasis more on R&D and innovation. Depending on what the signposts indicate and on the path that actually materialises, the sets of options that EU policymakers can choose from will differ.

As explained in Chapter 4, the rise of this global middle class may also increase the pressure on natural resources and accelerate the process of climate change as new consumers and polluters emerge. In turn, this could lead to greater pressures on EU suppliers, for example, in terms of availability and costs of transport. The importance of a resource-efficient EU is discussed in the Europe 2020 strategy, which notes that large savings could be realised in the field of energy. Yet, growing demand for energy from within and outside Europe could create additional economic tensions through indirect channels that could be monitored by similar signposting.

The Europe 2020 strategy specifies a set of indicators to monitor progress towards its key targets. This is particularly helpful for those policy challenges that are well understood and for which options are available. For trends that are subject to some uncertainty and/or complexity, however, the targets may not be obvious. The direction, patterns, magnitude and impacts of labour mobility and migration, for instance, are to some degree still unclear. Decisionmakers would therefore be advised not to gamble for one of the potential future trajectories. Rather, decisions should be tested on their robustness. In other words: rather than selecting the policy that optimises positive impacts in one scenario (eg a scenario with the EU as a net receiver of migrants), robust policies perform reasonably effectively in a multitude of
future plausible futures (eg EU as both a net receiver and net sender). Such policies should not only be robust, but should also be adaptable, in case unexpected trends materialise.

For a subsequent strategy, we would again recommend using a indicator-based approach. Besides using indicators to formulate targets, they can usefully be incorporated as signposts to monitor trends, drivers and potential outcomes as part of a follow-up strategy. An indicator-based approach could support EU policymakers in pursuing adaptive policymaking approaches by increasing their awareness of how the reality on the ground is materialising and whether or not it justifies a change in policy.

5.3. Building institutional resilience

Some of the trends we have uncovered are characterised by high uncertainty and a low level of evidence. By 2030 these trends could constitute the most erratic and unpredictable elements of the strategic environment. They could be the source of profound, disruptive moments for the EU as by definition they are much harder to monitor, because their underlying mechanisms and their actual implications are much more poorly understood.

In order to prepare better for these, the EU could consider an introspective approach that would allow it to contain some of its most significant vulnerabilities regardless of the scenarios – again, unpredictable due to their very nature – in which these could become threats to the institution. This could require the EU to revisit, redefine, tailor or confirm its fundamental values and model in the light of the deep, structural changes occurring at the global level. This would help the EU build its own institutional resilience.

**Spotlight 5: Grassroots movements, long-term trend or noise?**

The image of protests in the United States, across the European Union and elsewhere (eg Brasil, Middle East, Turkey) in recent years is striking not only because of their recurrence and the significant number of people involved, but also because of the variety of the sources of discontent driving people onto the streets.

Ranging from economic issues, such as austerity policies, to opposition to societal changes, such as same-sex marriage, the complexity of this discontent results from the multiple stakeholders and the unclear or varied motives of the opposition. This makes dealing with these issues all the more challenging. In addition, possible outcomes can range from the status quo to a real pressure on the societal pact, that is, from no impact whatsoever to a complete questioning of the current order, with multiple possibilities in between.

There are no clear-cut approaches to consider and deal with these trends. Any effort to design a long-term strategy to address such poorly understood phenomena is at best speculative and not grounded in evidence. The number of drivers affecting the outcomes is too high to monitor and there is a great number of potential trajectories for these outcomes. Such trends could require EU policymakers to address questions such as, what potential EU vulnerabilities could materialise in a disruptive period resulting from this trend, regardless of what is driving it?

In particular, will the EU be ready to face, take advantage of or hedge against deeply game-changing phenomena? Addressing this question entails tackling the issue of EU resilience rather than finding indicators. To this extent, policymakers could consider building on previous efforts of the Europe 2020 strategy by considering another set of trends that is far more uncertain and complex because of underlying
mechanisms that are harder to grasp, either because they are driven by multiple elements or because the single element driving them is in itself highly uncertain.

As mentioned above, the economic climate has contributed to creating high levels of socioeconomic polarisation and imbalances in the European Union, potentially weakening the social pact within the region (Andor, 2013). More broadly, the debate over the EU’s institutional legitimacy suggests that the European ideal on which the EU was founded may be weaker basis than it was. Reinventing the purpose – and perhaps the social purpose – of the EU would contain the potential negative effects of this legitimacy crisis, no matter how this crisis materialises in the future.

Ultimately, this reinvention effort will be part of the EU’s broader adaptation strategy. But the push for this adaptation should not only come from past, known, and well-understood trends which are never indicative of disruptive changes or of uncharted waters ahead. Though they may be extremely conscious of current realities and trends, EU policymakers are unlikely to be able to develop an infinitely flexible model. Their ability to remain innovative and to continue broadening their horizons constitutes the best complementary policy insurance against radical and unforeseen shifts.


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Appendix A: Experts consulted

Throughout the project, the team has engaged with a number of experts, through interviews, via the Delphi ExpertLens online exercise and during an expert seminar in Brussels. This annex lists the individuals who have accepted to be named in the report.

List of experts interviewed as part of the study:

Julius op de Beke European Commission, DG Employment, Social Affairs and Inclusion, Belgium
Jakub Bijak University of Southampton, United Kingdom
David Bloom Harvard University, United States
Jean-Claude Burgelman European Commission, DG Research and Innovation, Belgium
Robin Chater Federation of European Employers (FedEE), United Kingdom
Nathalie Chun African Development Bank, Côte d’Ivoire
Cornelia Daheim Z-Punkt, The Foresight Company, Germany
Nicole Dewandre European Commission, DG Communications Networks, Content and Technology, Belgium
Senior policymaker European Commission, DG Education and Culture, Belgium
Nicola Düll Economix Research and Consulting, Germany
Colette Fagan University of Manchester, United Kingdom
Hein de Haas University of Oxford, United Kingdom
Tom Jenkins The European Trade Union Confederation (ETUC), Belgium
Eva Jespersen United Nations Development Programme (UNDP), United States
Pawel Kaczmarsczyk University of Warsaw, Poland
Allan Larsson Lund University, Sweden
Gerd Leonard The Futures Agency, Switzerland
John Martin  
OECD, France

Douglas Massey  
Princeton University, United States

Branko Milanovic  
World Bank, United States

Gianluca Misuraca  
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