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OVERVIEW PAPER ON RESILIENT ECONOMIES AND SOCIETIES

OECD

BETTER POLICIES FOR BETTER LIVES

Overview Paper on
Resilient Economies and Societies

EXECUTIVE SUMMARY

1. The 2008 economic and financial crisis highlighted the importance of strengthening the resilience of our economies, societies and institutions. Resilience is a broad concept, centred on the ability not only to resist and recover from adverse shocks, but also to "bounce back" stronger than before, and to learn from the experience. Resilience is also multidimensional, encompassing a range of interconnected factors and conditions. Strengthening resilience is all the more essential today in the face of increasing policy complexity and interconnectedness, deep-seated demographic and technological trends, and growing environmental pressures, all of which increase the likelihood of some critical event having negative impacts on economic growth and well-being.

2. Being resilient involves understanding the sources of risks and opportunities and learning to cope with uncertainty. There is no single methodological approach for measuring resilience and concrete analysis and recommendations are best developed within specific policy areas. This paper addresses resilience across four broad dimensions covering economic, social, institutional and environmental issues. Each of these dimensions is relevant in its own way and they are all strongly interconnected, reflecting the capacity of individuals, organisations and systems to withstand and recover from shocks.

Resilient Economies

3. Economic resilience encompasses the ability to minimise potential vulnerabilities, to promote more robust and inclusive growth, to enhance the capacity of the macro-economy to withstand shocks and reallocate resources to harness new growth opportunities. A country's resilience to economic shocks is influenced by its overall exposure to global economic developments and the nature, magnitude and direction of these links, including the level of diversification in the scope and geography of its trade and the extent of its external imbalances. The economy's capacity to absorb shocks also depends on the available fiscal space and on the size and effectiveness of automatic stabilizers. The build-up of imbalances at the household or firm level can create economy-wide vulnerabilities. Tax and benefit systems in turn can cushion the impact of market income inequality across households, further boosting economic and social resilience. Likewise, monetary and budgetary policy settings aimed at low and stable inflation and sound public finances can support economic resilience, since low government debt and sustainable fiscal balances provide fiscal space and strengthen a country's resilience against short- and long-term shocks.

4. Resilience and strong growth must be pursued in tandem. To maximise resilience, structural reforms must not only seek to underpin productivity and competitiveness, but also promote greater inclusion and strengthen institutions. One of the main messages of the NAEC Synthesis report [C/MIN(2014)2] is that robust GDP growth does not necessarily signals that an economy is healthy. Underlying risks, such as growing income inequality and deteriorating bank balance sheets are not captured by GDP measures. Policy reforms aimed at boosting economic performance may also have side effects on the economy's overall vulnerability to shocks and/or their propagation. Synergies and trade-offs also need to be taken into account. For example, some growth-enhancing tax and spending reforms, and more importantly, financial and trade openness can increase vulnerability and may therefore have to be flanked by accompanying policies that limit their potential impact on resilience and maximise their potential impact on growth.

5. On the other hand, labour and product market regulations facilitate business creation and support long-term growth, while reducing the overall impact of future shocks by facilitating resource reallocation across the economy. Similarly, policies to support entrepreneurship, as well as investment in knowledge-based capital (KBC), tend to be beneficial for both reliance and inclusive growth. Education and active labour market policies can help mitigate inequality, since their impact on wages and employment reinforce each other.

6. Resilience is also enhanced by new sources of growth, especially if driven by investment in innovation and knowledge-based capital, which have strong spill over benefits. Recent experience suggests that KBC seems to be crisis-resilient, but in turn imposes particular requirements in terms of education, skills and appropriate labour market policies. In emerging economies, the importation and adaptation of technologies can also drive productivity growth. Complementary policies that enable the reallocation of resources – through efficient product, labour, and capital markets, as well as through bankruptcy laws that do not overly penalise failure – can also help promote investments in KBC and innovation. An efficient process of resource reallocation across all sectors of the economy, including in services, is also crucial for strengthening resilience, as well as for unleashing the full dynamism and job-creating potential of young firms. Costly and highly distortive measures that artificially support excess capacity and prevent market mechanisms from functioning to facilitate efficient resource reallocation should be avoided.

7. Labour markets are central to economic and social resilience and to the promotion of inclusive growth. Structural policies and institutions that are conducive to low structural unemployment (i.e. *inter alia* wage-bargaining co-ordination, short-term work schemes, well-balanced labour market protection, regulation and unemployment benefit systems) also favour labour market resilience. Promoting education and skills is also important to develop a workforce better adapted to labour market needs. More broadly, social and activation policies are essential for mitigating the impact of economic downturns and for ensuring that those losing their jobs can return as quickly as possible to work.

8. Beyond the legacy of the crisis, fiscal challenges and risks remain, particularly in the form of rising public pension and health spending as our societies age. Fiscal consolidation is still an important priority, but governments need to favour measures that support growth while preserving an appropriate level of social inclusion, including by promoting reforms that increase the resilience of public finances to shocks. Further pressures might also arise in the education and social sectors, with broad public spending reforms needed, particularly in the health sector.

9. International cooperation on regulatory policy and competition law enforcement can foster sustainable growth and resilience by improving the “rules of the game”. Indeed, as global integration intensifies, the effects of economic shocks will be increasingly shared between trading partners, so increased cooperation can help level the playing field, reduce costs, and improve the management of global risks.

10. Tax reform to reduce Base Erosion and Profit shifting (BEPS) also fosters resilience by diversifying and broadening tax revenue sources. To ensure that these far-reaching reforms are as effective as possible for the largest amount of people, countries should coordinate efforts, since the benefits of global tax coordination are likely to increase with global integration.

Resilient societies

11. A resilient society is one that is able to cope with shocks by adopting a coordinated and coherent set of economic and social policies and practices. Social resilience is also promoted by having institutions deliver services in a way that empowers individuals to cope with change and participate fully in the economy, and by ensuring that institutions can focus their resources on the most vulnerable members of

society. Efficient and effective social policies are fundamental to building social protection systems that enhance economic and social inclusion, all the while strengthening social cohesion.

12. High levels of inequality can be detrimental to social, economic and institutional resilience, as it undermines social cohesion and the sustainability of strong growth while reducing trust and confidence in public institutions. In turn, higher levels of trust are strongly associated with lower levels of income inequality. Indeed, in unequal societies – or in the presence of significant inequalities of opportunity – it might be hard for people to share a sense of common purpose and to trust each other. Resilient societies are not achieved simply by redistribution – though some redistribution is socially and economically desirable and necessary. Rather, an approach that favours empowering people is recommended to ensure that all members of society are equipped with the competences and support necessary to take advantage of the circumstances available to them, and to adapt effectively when these circumstances change. Helping individuals build solid skills through access to high quality, inclusive, and labour-market relevant education, enables them to realise good economic and social outcomes, while building a stronger and more resilient society. Resilience is also enhanced by helping those already in the labour market adapt their skills to changing labour market conditions, and to focus actions on those groups most at risk of suffering long-term exclusion from the labour market.

13. Job quality not only affects individual well-being and that of the households in which they live, but also the level of labour force participation, motivation, and productivity as well as aggregate economic performance. A resilient society can therefore be conceptualised as one in which most people spend most of their working lives in jobs which enhance their quality of life and well-being, with the balance between flexibility and security maintained across different workforce groups.

14. The recent crisis has hit youth harder than any other group, making it more important than ever to give the next generation the best possible start in life. The effectiveness of public investment in human capital is highest when it takes place in early childhood, when it is focused on the most vulnerable population, and when it is maintained throughout childhood. Investments in early education can have an important life-long impact on economic and social well-being. Despite being the most educated generation ever to enter the labour market, young adults now face a higher risk of being unemployed than any other age group in society. The pathways from school to work at the *individual level* suggest that while for most young people unemployment is only a temporary state in the transition from school to work, for others it tends to persist and might lead to long-term exclusion from the labour market.

15. Increased female participation in the labour force can also improve the resilience of households, communities and entire economies to shocks, as well as strengthening the ability of societies to make the most of new opportunities and to innovate. Closing gender pay gaps and ensuring greater participation of women in labour markets, besides being fair and just, is critical to strengthen the resilience of societies.

16. As the populations of OECD Member countries age, the dependency ratio will change, with smaller working-age populations and the financing of pensions and caring for elderly people becoming increasingly more difficult. To enhance resilience, countries need to identify the challenges and opportunities arising from population ageing, and to address pensions, health and long-term care issues in an effective way. This demographic change will also give rise to new investment opportunities in products, services and medical treatments. Policies that promote inclusive growth can help meet these challenges. Appropriate social protection, health systems, and labour market and migration policies can help reduce inequalities and promote stronger and more balanced growth. Other policies, touching education, regional development, housing, and financial market, can also have an impact on inequality to the extent to which they help different generations participate more fully in labour markets during their active years, and better prepare them for a long healthy life and a decent retirement.

17. Resilient societies are healthy societies: irrespective of where they are on the spectrum between under- and over-nutrition, an unhealthy population can hinder development and create large social and economic costs. Governments need to better understand the driving forces behind current health outcomes in order to identify appropriate policy responses.

18. Societies in developing countries face particular vulnerabilities, and addressing them will be key to improved global resilience. The post-2015 development framework must therefore take into account the importance of strengthening resilience across all layers of society, especially those who are most vulnerable ones. As in developed economies, growth needs to be both socially and environmentally sustainable, and underpinned by effective institutions. A renewed focus on gender equality in the post-2015 framework, taking into account female leadership in developing effective coping strategies, can also improve the resilience of families, communities and societies.

Resilient Institutions

19. Institutions play a key role in strengthening resilience since the impact of any shock depends on a jurisdiction's institutional capacity to respond and rebound from shocks. Open, transparent, and inclusive policy-making processes help to ensure that policies match citizens' needs. Facilitating greater public participation enhances democratic engagement and builds trust in government. Resilient public institutions that are bestowed with citizens' trust are also well placed to promote integrity and, in turn, enhance trust in businesses and private sector institutions.

20. The notion of open government is rapidly transforming the way governments and public institutions work, giving citizens more voice and a greater role in the policy cycle from design to implementation. Openness and transparency are at the heart of resilient societies because they bring citizens and governments closer together. The 2013 Ministerial Council Meeting (MCM) recognised the decline in levels of public trust in government, and encouraged the OECD to explore further, how governments can rebuild trust as an important element of their overall approach to sustaining economic recovery. Stronger trust in government institutions can help boost economic and social policy outcomes. Indeed, trust in government institutions can facilitate economic decisions such as investment, hiring and consumption, which in turn foster stronger economic growth.

21. The effective delivery of public services and strong social institutions serve to reinforce public trust. Ensuring that public services are visibly of high quality and responding to citizens' needs is therefore critical to maintain trust in government and enhance resilience. Regional, city and local authorities are on the front line in these efforts. Trust in government tends to be highest at the local level, where many services are delivered and where the link with government's performance is most direct.

22. Public integrity is also a crucial determinant of trust. The data available suggests a negative link between trust in government - both from the business community and from citizens - and the perception of corruption. Tools and mechanisms aimed at preventing corruption and the fostering of high standards of behaviour helps reinforce the credibility and legitimacy of the decision-making process, safeguard public interest, and restores a sense of fairness in public policy decisions. The biggest challenge to fair and transparent decision-making comes from undue influence, or the perception that undue influence is being exerted, on decision makers. A solid integrity framework to prevent corruption and foster high standards of behaviour is therefore necessary to reinforce the credibility and legitimacy of the actors involved in policy decision-making.

Environmental Resilience

23. The resilience of our economies, societies and institutions cannot be addressed without also considering the resilience of the environmental systems that support them. Strengthening environmental resilience is particularly relevant in the face of increasing evidence of environmental degradation, the over-use of resources, and the potential costs of climate change. OECD work on Green Growth has also highlighted the need to find win-win solutions for growth and for the environment. Indeed, policies that tackle environmental challenges can have beneficial effects on equity, employment and income. The transition to a low-carbon economy can bring increases in employment in some sectors and firms. However, the right policies need to be put in place to harness these synergies, to avoid or address any potential negative effects or trade-offs, and to ensure that improved environmental resilience does not come at economic, social and institutional expense.

24. Climate change poses the most comprehensive global environmental risk. Addressing the main drivers and impacts of climate change should therefore be the cornerstone of any strategy to strengthen global resilience. Indeed, the cost of inaction can be very high: new OECD projections suggest that climate change impacts may lower world GDP in 2060 by between 0.7% and 2.5% in the case of a 1.5°C to 4.5°C increase in average global temperature. The international community has agreed to reduce greenhouse gas emissions so as to hold the increase in global average temperatures below 2°C above pre-industrial levels. Achieving this will require the alignment of policies across a wide range of policy domains – economic, fiscal, investment, energy, trade, competition and environment – to support a comprehensive economic transformation. A joint multi-disciplinary project by the OECD, IEA, NEA and the ITF could help Members identify how this could be achieved.

25. The unsustainable use of natural resources is another major source of concern, as it can negatively affect the availability and quality of factors of production. Air pollution, also poses, serious environmental risks, particularly in big cities and highly populated areas. Aside from adverse health impacts, air pollution causes material damage (e.g. cultural heritage, reduced agricultural yields, polluted freshwater sources and loss of biodiversity). Introducing or better aligning environment-related taxes or charges for environmental damage helps to promote a more efficient use of resources and to cover the cost of providing related services (*e.g.* wastewater treatment). Historically, resource scarcity has been met in part by improved resource productivity resulting from technological innovations, but also from society's capacity to mobilise substitute or exploit alternative resources. However, if new resources cannot be technically or economically brought to market, the resulting bottlenecks can lead to growing competition for resources, sustained pressures on commodity prices and increased commodity price volatility, all of which undermine global economic and social resilience.

26. Countries are confronting a range of global risks with potentially systemic impacts stemming from natural phenomena, pandemics, major accidents, and/or malicious acts. Against a complex backdrop of demographic shifts, technological advances, globalisation and climate change, critical risks may develop quickly and through unforeseen pathways, spreading across communities, and national borders. As a result, governments are confronted with increasing public expectations about the need to maintain safety and security. Communities, citizens and businesses expect governments to be prepared for a wide range of events and to handle them effectively should they arise, preventing the loss of lives and minimising the resulting economic damages.

27. Resilience involves learning to better manage risks, including by developing the capacity to restore core economic and societal functions quickly after a major disaster. This entails identifying priority areas, and establishing clear policy frameworks that create incentives for the private sector, infrastructure operators and society at large to better manage risks. It also means investing in adaptive capacity in crisis management to better prepare for unexpected risks; strengthening early detection and warning systems;

conducting crisis-management exercises, and improving inter-agency co-operation and international co-ordination. The *OECD Recommendations on the Governance of Critical Risks* provides governments with strategic guidance in this regard.

28. This *Overview Paper on Resilient Economies and Societies* highlights some of the factors that drive the resilience of our economies, societies, institutions, and which impact on global environmental resilience; discusses the main short- and long-term challenges faced by governments; and identifies policy recommendations that can help strengthen resilience across all four dimensions. The paper aims to inform Ministers' discussion during the 2014 MCM, including by identifying possible future OECD work to deepen our understanding of some of the issues discussed.

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INTRODUCTION

1. The 2008 economic and financial crisis highlighted the importance of strengthening the resilience of our economies, societies and institutions by enhancing their ability to resist and rebound from adverse shocks. Resilience is a broad concept, encompassing not only preparedness for unforeseeable disruptions and tensions, but also the development of capacities to make the most of positive changes, such as the emergence and diffusion of new technologies. Being resilient involves understanding the sources of risks and opportunities and being better prepared to cope with uncertainty, but also reducing the vulnerability of our economies, societies and institutions to shocks, withstanding them better when they occur, and learning from the experience to be able to "bounce back" stronger than before. Strengthening resilience is all the more essential today in the face of increasing policy complexity and interconnectedness, deep-seated demographic and technological trends, and growing environmental pressures, all of which increase the likelihood of some critical events having strong and direct negative impacts on economic growth and well-being.

2. Resilience is a multidimensional concept encompassing many factors. There is no single established methodological approach for measuring it, although certain steps (e.g., identification, assessment) are common across all dimensions. In addition, resilience is a difficult concept to operationalise, and concrete analysis and recommendations are best developed within a narrower policy scope. This paper addresses resilience across four broad dimensions covering economic, social, institutional and environmental issues. Each of these dimensions is relevant in its own way and they are all strongly interconnected, reflecting the capacity of individuals, organisations and systems, across countries, and within them at different levels of government, to withstand and recover from shocks. These four dimensions of resilience take into account the following elements:

- Economic resilience encompasses the ability to minimise potential vulnerabilities, to promote more robust and inclusive growth, and to enhance the capacity of the economy to withstand shocks and to reallocate resources to new areas of growth. Structural policies play a key role, since sound fundamentals and efforts to maximise productivity and promote social inclusion help allow adverse shocks to be overcome at a lower economic and social cost.

- The resilience of a society depends on the ability of social policies and social networks to help cushion the effects of an economic downturn, and the skills and capacities of people to recover from disruptive events, while strengthening social cohesion, promoting intergenerational solidarity and knowledge sharing, and catalysing positive social change.

- Institutions play a key role in strengthening resilience since the impact of any shock depends on a jurisdiction's institutional capacity to respond, as shaped by structural policies over time. Of particular interest are social protection institutions, since the crisis demonstrated the important role they play in mitigating the effects of economic shocks. Resilient institutions can create and reinforce public trust, which, in turn, enhances the effectiveness and ability of policy makers to launch and implement reforms.

- Strengthening environmental resilience is particularly relevant in the face of increasing evidence of environmental degradation, over-use of resources, and the severe and costly impacts of climate change. Adapting effectively and confronting a number of major events with global systemic impacts (e.g. through *inter alia* mitigation efforts), many related to extreme weather events, will require countries to put into place an appropriate policy mix to deal with a wide range of critical risks with cascading effects. At the same time, aligning policies across sectors to cut greenhouse gas emissions and move towards a low-carbon economy is also necessary to reduce future climate risks.

What drives resilience?

3. An economy's overall resilience is influenced by a large number of factors and conditions, including the degree of cross-border interconnectedness of the financial sector, its integration to Global Value Chains, the prevalence of imbalances at the household or firm level, the fiscal space and structural policy settings, and the ability of the economy to reallocate resources. In some policy areas, there are synergies between the policy objectives of higher resilience and higher shared growth. For instance, labour and product market regulations that facilitate business creation support long-term growth, while also reducing the overall impact of future shocks by facilitating a reallocation of resources across the economy. Similarly, policies to support entrepreneurship as well as investment in knowledge-based capital tend to be beneficial for both reliance and inclusive growth. In other policy areas there are trade-offs. For instance, financial market liberalisation may support long-term growth and resilience through a better diversification of risks and capital allocation, but it might increase a country's vulnerability to shocks.

4. Social resilience can be enhanced by equipping individuals with the necessary competences and support to cope with economic challenges and exploit the economic opportunities they face in life. This is a continuous process, starting with high-quality childcare, followed by access to high quality primary, secondary and tertiary education. Providing a smooth transition from school to the labour market is key also for empowering people, particularly under the current scenario of low growth, growing inequality and high unemployment. Young adults face a higher risk of being unemployed, which discourages them from investing in skills and lowers their expectations about their chances in life. In turn, those that have made the transition from school to work also need pathways that allow them to maintain their skills and to update them in light of changing labour market demands. This is also true for ageing societies, where the elderly face a risk of being excluded from the labour market as a result of outdated skills. Well-designed social protection systems as well as labour market and migration policies are complementary to this effort and also help to improve the resilience of a society by ensuring that everybody benefits from economic growth.

5. In turn, strengthening institutional resilience means facilitating greater citizen participation, building trust in government, and harnessing a better delivery of public services. The focus of our efforts should be on rebuilding public trust, which suffered as a result of the crisis and continues to be impacted by the perceived limited government capacity to respond to the needs of citizens. Improving transparency in the delivery of public services and the broader political process and developing new approaches to interact and empower citizens can also strengthen the resilience of public institutions.

6. None of the above dimensions can be effectively addressed without also taking into account environmental resilience and the negative impact of increasing degradation and over-use of natural resources on growth and well-being. Natural disasters are becoming increasingly complex and costly, underlying the need for governments to raise their countries' resilience to such events. Climate change continues to pose the most comprehensive global environmental risk and OECD work shows that the costs of inaction are substantial and raising. Countries need to adopt the right policy mix across different policy domains (e.g. tax, energy, environment, investment, competition) to ensure they tackle climate change in a way that is consistent with economic prosperity and equity. Effective disaster risk management and risk

financing policies enhance economic and social resilience by reducing the negative impact from natural disasters, facilitating the recovery, and supporting economic competitiveness and more sustainable development. Efforts are centred around national strategies for managing risks, which rely on leadership at the national and local level, and aim to involve all relevant stakeholders.

7. The crisis provided several hard-learned lessons on the relevance of strengthening the resilience of our economies. To assist governments in drawing these lessons, the OECD launched in 2012 the New Approaches to Economic Challenges (NAEC) project, which aims also at catalysing a process of continuous improvement of the Organisation's analytical frameworks and policy advice.

Early findings of the NAEC Synthesis report on resilience

8. The NAEC Synthesis report presents early results on how to build a more solid path towards resilient economic growth and how to make our societies more prosperous (OECD, 2014a).[1] Preliminary findings stress the importance of macroeconomic stability for improving our resilience to large shocks, mainly by strengthening counter cyclicality and sustainability policies; strengthening the responsiveness of public spending, particularly on items like unemployment compensation, welfare benefits and other special programmes for vulnerable groups; reducing public debt levels during expansionary phases; and by selecting the timing and the choice of consolidation instruments to mitigate distributional impacts. The Report also calls for the introduction of adequate regulatory safeguards and greater transparency on government finances, as a way to improve resilience and build public trust.

9. More broadly, NAEC calls for taking into account the increasing interconnectedness and complexity of our economies and society and for better understanding the tensions arising from deep-seated long-term trends in policymaking. This tension has been building up for decades and include: the opening up of trade and capital accounts, which facilitated globalisation; further integration of large and fast-growing emerging markets into the global economy; increasing income inequality and political polarisation; rapid technological change; deepening specialisation and international division of labour; population ageing, migration and other demographic shifts; health concerns, including the risk of pandemics; and environmental challenges, including the impacts of climate change and natural resource constraints (such as water scarcity). The interconnectedness between some of these factors explains why global integration, while remaining an engine of economic growth, also facilitated the propagation of economic shocks.

10. The NAEC Report highlights how analytical approaches prevalent prior to the crisis failed, for the most part, to capture the complexity of the global economy. These approaches were characterised by a silo mentality and the over-reliance on quantitative modelling, which ignored the importance of interactions between policy areas. More importantly, they prioritised efficiency and failed to account for important aspects of well-being, which were later understood to be relevant for enhancing social resilience. Growth was placed above all other measures of progress and considered as an end, rather than a means for improving the well-being of the population. Such a narrow analytical approach also contributed to the underestimation of risks and helped increased the severity of the crisis.

11. Moreover, the crisis showed the relevance of risk and uncertainty in assessing resilience, and the importance of policy frameworks to be flexible and adaptable to shocks. It also ended the previously held belief that advanced economies had achieved sufficient resilience to avoid major systemic crises. If

1 NAEC is part of a broader effort to build an inclusive and sustainable agenda for growth and well-being. The NAEC Interim Report presented at the 2013 MCM outlined 29 specific projects. The NAEC Synthesis report for the 2014 MCM will highlight early findings, as several of the projects are still ongoing. A complete report will be delivered to Ministers at the 2015 MCM.

anything, the crisis highlighted how the exposure of governments to instability from the international financial markets was seriously underestimated. The crisis also revealed a range of weaknesses and imbalances in the financial sector, including *inter alia* flawed incentives across a wide spectrum of financial market participants, insufficient fiscal discipline, and lack of structural reforms in many OECD countries. Resilience was eroded across a broad and interconnected range of policies mostly by the absence of much needed reform, as a result, the negative impact of the crisis was compounded across the product and labour markets. Fragmented regulatory frameworks also facilitated the transmission of the shock and increased the difficulty for authorities to put together an effective policy response.

12. The NAEC Synthesis report outlines some emerging policy recommendations to build a more solid path for resilient economic growth and well-being, including a call to increase macroeconomic stability and strengthen financial systems; pursue more inclusive growth; address long-term challenges linked to the environment, climate change, and population ageing; rebuild public trust; and strengthen international regulatory co-operation and policy co-ordination, among others. The report also highlights how the Organisation could upgrade its surveillance frameworks and strengthen its capacity to assess the vulnerabilities and resilience of economies against short- and long-term shocks.[2]

13. At the same time, when assessing policies in terms of their impact on resilience, it is also important to analyse how they will interact with long-run underlying trends, such as technological progress and demographic change. The Report *OECD@100: Economic Policies for a Shifting World* provides a framework for such an analysis, identifying some of the key trends that will shape our economies, societies, and institutions over the next 50 years.[3]

Long-term trends shaping resilience

14. OECD analysis shows that overall global growth is likely to slow down, with emerging economies increasingly accounting for a larger share of the world economy. GDP in the OECD and non-OECD G20 economies is likely to slow from 3.4% in 1996-2010 to 2.8% per annum in 2010-60. But, despite this deceleration in growth, economic output is expected to quadruple over the coming 50 years, continuing to lift masses of people out of poverty. On the less positive side, the positive economic expansion would put further pressure on natural resources. Stronger growth in emerging economies in comparison to OECD countries would lead to a major shift of the economic balance. Nonetheless, growth is also expected to slowdown in emerging economies due to less favourable demographics and a gradual exhaustion of the potential for catching up to the living standards of advanced countries.

15. Resilience will be impacted by these deep-seated long-term trends, as developments in demography, technology, skills, and global integration spill over across borders and policy areas, generating tensions, posing additional threats to economic stability, and increasing environmental pressures. Most of these trends pre-date the crisis and actively contributed to the accumulation of imbalances that made the crisis possible. As such, they represent major challenges policymakers need to assess when thinking about how to strengthen the overall resilience of their economies and societies. The following long-term trends are highlighted:

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[2] A new project launched by the Working Party 1 of the Economic Policy Committee (EPC) will explore the factors shaping the economic resilience of countries with the objective of developing a regular surveillance mechanism to identify vulnerabilities and help economies to cope with and adapt to shocks.

[3] As part of the NAEC project, the OECD undertook an analysis of long-term trends and challenges facing economies and societies over the coming decades. See *OECD@100: Policies for a Shifting World* (OECD, 2014b).

- Rapid population ageing might result in a decline in the potential labour force in many countries, which can only partially be offset through increases in labour force participation and employment rates, notably of women and older workers. At the same time, shrinking gaps in per capita income between OECD countries and emerging economies may slow work-related migration towards the OECD area, adding to demographic pressures from ageing in advanced economies.

- Growth will be increasingly driven by knowledge and skills. Future gains in GDP per capita are expected to become more dependent on investments in intangible assets, such as R&D or organisational knowhow. Moreover, the accumulation of skills and, especially, gains in productivity will be increasingly driven by innovation and knowledge-based capital. This growing importance of knowledge-based capital for growth would lead to continued polarisation of wages across the earning distribution, with high-wage workers benefiting more from productivity gains than low-wage workers, especially if technological progress remains biased towards sectors that rely more on skills and technology. Earnings inequalities within countries are therefore likely to continue to increase.

- Global trade integration is expected to continue, though at a slower pace than in the past. The geographical centre of trade will shift further from OECD countries towards emerging economies. By 2060 the share of world trade taking place among OECD countries would be a quarter of its current share, while trade among non-OECD economies is expected to more than double. Global current account imbalances may continue to persist. Moderate fiscal consolidation and a slow pace of structural reforms in OECD countries and social and financial reforms in emerging economies are not likely to be sufficient to absorb growing imbalances.

- The skill composition of emerging economies will gradually converge to that of the OECD. As a result, production structures in emerging economies would increasingly resemble those in OECD countries, with the services share of the economy and trade increasing. Global supply chains will also continue to change the nature of trade. Countries will likely move towards specialising in 'tasks' rather than in goods. This will have implications for the demand of different types of workers and will have an impact on earnings inequalities, likely putting labour market and social institutions under further pressure.

- Fiscal challenges are likely to persist beyond the legacy of the crisis, as a result of slowing fiscal revenue growth due to ageing and mounting spending pressures from pension, education and health. In the absence of reforms, the fiscal adjustment needed to deal with rising public pension and health spending and stabilising gross government debt (at 60% of GDP) until 2060 is estimated to be more than 10% of GDP for almost half of the OECD countries.

- Barring substantial emission reductions, the rising economic damages from environmental degradation due *inter alia* to climate change are likely to hamper growth even before 2060. By 2060, greenhouse gas emissions may have doubled from their 2010 levels, and environmental damages may lower global GDP by approximately 1.5%. Risks of catastrophic environmental events are also likely to rise. More seriously, the increase in the concentration of greenhouse-gases in the atmosphere up to 2060 would lock-in these environmental damages.

16. The interaction between all of these trends remains highly uncertain. But their individual and combined impact will challenge the resilience of our economies and societies in the coming decades. Economic and social policies and institutions have to adapt to these trends, and actions are needed to prevent the build-up of new imbalances and tensions that may destabilise economies in the future.

17. This *Overview Paper on Resilient Economies and Societies* highlights some of the factors that drive the resilience of economies, societies, institutions, as well as global environmental resilience; discusses the main short- and long-term challenges governments face; and identifies policy options and recommendations that can help strengthen resilience across all four dimensions. The Paper reflects existing OECD analysis and work currently being carried out by Committees and highlights areas where further analysis could result in actionable policy proposals. The Report aims to inform Minister's discussion during the 2014 Ministerial Council Meeting (MCM) and to identify possible future OECD work to deepen our understanding of some of these issues.

CHAPTER 1: RESILIENT ECONOMIES: POLICIES FOR MACROECONOMIC STABILITY AND FOR PROMOTING JOB QUALITY AND LABOUR MARKET RESILIENCE

18. The global financial crisis and its lasting social and economic impacts have underscored the importance of making our economies and societies more resilient. While there is no agreed definition of economic resilience, it can be loosely understood as the capacity of an economy to absorb shocks and return quickly to the pre-shock trend growth rate (*i.e.* minimising the cumulative GDP loss relative to potential output) while also minimising the social costs. In addition to GDP, there are other valuable indicators for measuring a country's shock absorption capacity, including measures of local employment, tax revenues, consumer prices and sub-national economic performance.

19. Economic resilience depends hence on the ability of policies to lower the likelihood and size of shocks as well as reducing the country's vulnerability to such shocks. It also involves raising the capacity of the economy to withstand shocks (magnitude of the impact) and reallocate resources to bounce back (speed of return to trend) and even to recover to a level above trend. Economic resilience can also be understood in a wider sense as the ability of an economy to take maximum and fast advantage from emerging opportunities, including from game-changing technologies and innovations, demographic shocks, and other opportunities associated with globalisation.

20. OECD analysis identifies the following as the main drivers of economic resilience:[4]

– A country's vulnerability to shocks depends more and more on its overall exposure to economic developments in other countries and to the global economy as a whole, as well as to the nature, magnitude and direction of these links:

– High degree of cross-border interconnectedness of the financial sector can propagate shocks, along with the relative size of the sector itself, thereby increasing a country's vulnerability to shocks. Similarly, while more open financial markets bring benefits to consumers and firms, for instance, by lowering the cost of capital and spurring innovation, they also increase the vulnerability of a country to foreign financial shocks and banking crises by facilitating the build-up of liabilities in foreign currencies and increasing the exposure to sudden foreign lending stops.

– Integration to global value chains can be a source of resilience by allowing the sharing of the burden of shocks with others, but may also help propagate shocks across countries (OECD, 2013a). For instance, the 2008 crisis was characterised by a synchronised world trade collapse triggered by a sharp decline in the demand for durable goods in advanced economies, which led to a strong contraction of exports in supplying countries.

– Another type of vulnerability is related to the degree of economic specialisation (or lack of diversification). Countries with less diversified domestic production and exports are typically more exposed to adverse external shocks and macroeconomic instability, while geographic trade diversification typically helps to insulate against external shocks.

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[4] A new project launched by the Working Party 1 of the Economic Policy Committee (EPC) will explore the factors shaping the economic resilience of countries with the long-term objective of developing a regular surveillance mechanism to identify vulnerabilities and help economies to cope with and adapt to shocks.

- The build-up of imbalances at the household or firm level can also create vulnerabilities. For instance, high indebtedness can expose households and firms to funding mismatches as well as solvency problems, but can also impact the whole economy by affecting the banking sector. In such cases, openness can actually help to share the cost of the shock, especially if the country is small.

21. An economy's capacity to absorb shocks depends on the room to stimulate the economy through fiscal policy. The size of the automatic fiscal stabilisers, which is a function of the design of the tax and social protection systems, is crucial in this regard. But the room for manoeuvre of discretionary fiscal policy and the design of specific tax and spending measures are also relevant. The capacity of countries to effectively cushion the recent economic crisis with sufficiently sizeable and sustained stimulus was hindered by the chronic failure to generate fiscal surpluses in good times prior to the crisis.

22. An economy's ability to reallocate resources and bounce back depends also on structural policy settings. For instance, rigid labour market policies, notably stringent employment protection, can amplify the persistence of shocks. On the other hand, active labour market policies can cushion the impact of a shock on the economy by facilitating the retraining of workers and their reallocation to new jobs. Likewise, flexible housing markets can facilitate mobility and boost productivity by allowing workers to move where jobs are. However, housing markets that respond very quickly to increased demand through greater building activity can lead to cyclical swings in economic growth. Finally, less restrictive product market regulations can help the economy recover more quickly by facilitating the reallocation of resources across the economy.

23. It is increasingly recognised that economic growth is important but not sufficient to generate sustained and fairly shared improvements in welfare. With rising inequalities in many countries and the risk that knowledge and skills driven growth widens income gaps further in coming decades, promoting more inclusive growth has become a key policy priority to strengthen economic and social resilience. Moreover, the sharp increase in unemployment and poverty caused by the crisis suggests the importance of going beyond output in measuring economic resilience. In particular employment fluctuations need to be taken into account, since employment is a more critical variable than output given its economic and social consequences.

24. Against this background, this chapter reviews the trade-offs and complementarities that exist across policy areas and the tools that can be used to achieve stronger, resilient and shared growth. These policy options are examined against the long-term trends that will shape our economies and societies going forward. The role of enhanced national and international surveillance of the possible sources of shocks and the efforts to detect early signs of vulnerabilities are also analysed.

25. The remainder of this chapter is structured as follows. **Section 1** looks at the issues of counter-cyclicality and vulnerabilities in policy settings, the need to reform the financial sector, and the synergies and trade-offs between pro-growth and pro-resilient policies. The analysis highlights how growth-enhancing structural reforms can help reduce economic fluctuations and enhance economic resilience, pointing to the importance of preparedness measures for tackling risks and enhancing the responses to potential shocks. **Sections 2 and 3** explore the policy requirements to promote new sources of growth and jobs. More specifically, **Section 2** discusses policies to promote and further develop new sources of growth through innovation, research and technological development, as well as the interplay between jobs and innovation. **Section 3** discusses the expected changes in production and employment patterns and their implication for the future of manufacturing. It reviews the challenge faced by young and expanding firms in driving and adapting to economic transformation. Both sections aim at showing the link between emerging trends in the manufacturing sector and the relevance of new sources of growth in enhancing resilience. **Section 4** discusses policies to raise the resilience of labour markets so that they can adapt to

shocks and are able to make the most of new sources of growth and structural transformation. **Section 5** reviews the best policy options to achieve not only more resilient but also more inclusive growth that delivers broad-based improvements in living standards and outcomes that matter most for people's well-being. **Section 6** discusses structural policy levers that can help achieve an optimal balance between fiscal sustainability and long-term social goals, including tax reforms and public spending reforms in the area of education and health. Finally, **Section 7** reviews the need for increased international regulatory co-operation and policy co-ordination to help address international spill overs in several areas and promote global economic resilience.

1. Promoting economic performance and resilience

26. Economic integration increases stability but, in the long run, also decreases the effectiveness of automatic stabilisers. This increases the relevance of strengthening counter-cyclicality and sustainability of macroeconomic policies as the preferred means to increase the resilience of economies to future shocks, with policy instruments being clearly assigned to specific policy objectives in order to improve the accountability and the efficacy of policy decisions.

27. Policymakers must aim to build adequate safety margins into financial and macroeconomic policies during cyclical upswings to allow space for policy manoeuvre during future crises. Fiscal rules, in particular spending rules and budget balance rules, might play a critical role in avoiding the build-up of debt and creating the conditions for counter-cyclical policies and automatic stabilisers to operate effectively. Combining improved micro-prudential regulation and supervision with the establishment of effective macro-prudential policies to help ensure financial stability. Robust macro-prudential supervision also enhances resilience, as a reduction of the pro-cyclicality of the financial system increases the effectiveness of monetary policymaking. So long as adequate prudential regulatory and supervisory policies are in place, monetary policy should therefore be allowed to continue to focus on price stability, with non-standard instruments being phased out as the recovery firms. Enacting structural reforms can also help strengthen the prospects for long-term growth and enhance resilience to shocks. Structural policies can also enhance resilience by addressing external imbalances, improving the stability of the financial system, and guarding against volatile capital flows.

Inequality and resilience

28. Inequality, resilience and economic growth are inter-linked. High levels of inequality can undermine growth and impact the resilience of societies. While counter-cyclical and sustainable macroeconomic policies are important for increasing the resilience of economies to future shocks, they are not enough on their own. Policymakers also need to address the issue of rising inequality. The crisis highlighted the negative impact that inequality has on long-term economic growth and the risk for political and economic stability. It is now widely recognised that growth-enhancing policies do not necessarily lead to a more even distribution of the benefits of increased prosperity. Greater inequalities and rising relative poverty occurred before the crisis, even during periods of sustained economic growth, which underlines the need to reassess traditional approaches and advance towards an economic model that is both inclusive and sustainable. Stocks of wealth and natural capital need to be considered in exploring policies that help to close the "growth dividend" and effectively reconcile growth, equity and environmental objectives.

29. One of the main messages of the NAEC Synthesis report is that GDP does not necessary signal that an economy is healthy. Underlying risks, such as growing income inequality and deteriorating banks' balance sheets, are not captured by GDP. More broadly resilience and vigorous economic growth cannot be pursued as two independent goals. Policy reforms aimed at boosting economic growth performance may have side effects on an economy's vulnerability to shocks and their propagation, and hence on its resilience. On the one hand, synergies are substantial, as policies to strengthen macroeconomic policy

settings and to make labour and product markets more flexible tend to support long-term growth and resilience. On the other hand, trade-offs need to be taken into account. Some growth-enhancing tax and spending reforms and more importantly financial and trade openness can increase vulnerability and may therefore have to be flanked by accompanying policies that limit their potential impact on resilience and maximise their potential impact on growth (OECD, 2014c, 2014d).

Complementarities between pro-growth policies and resilience

30. Monetary and budgetary policy settings aimed at low and stable inflation and sound public finances can support economic performance while playing a key role in stabilising the economy through counter-cyclical policies. For example, a monetary policy that helps firmly anchor inflation expectations will allow a stronger response to shocks and help guard against deflationary spirals in the wake of large negative shocks. In the same way, low government debt and sustainable fiscal balances provide fiscal policy room to counteract large, adverse shocks and absorb contingent liabilities. In some countries, pre-crisis policies focused too little on reducing debt to prudent levels. This limited the role for countercyclical fiscal policy when the crisis hit and magnified the consolidation challenges later on.

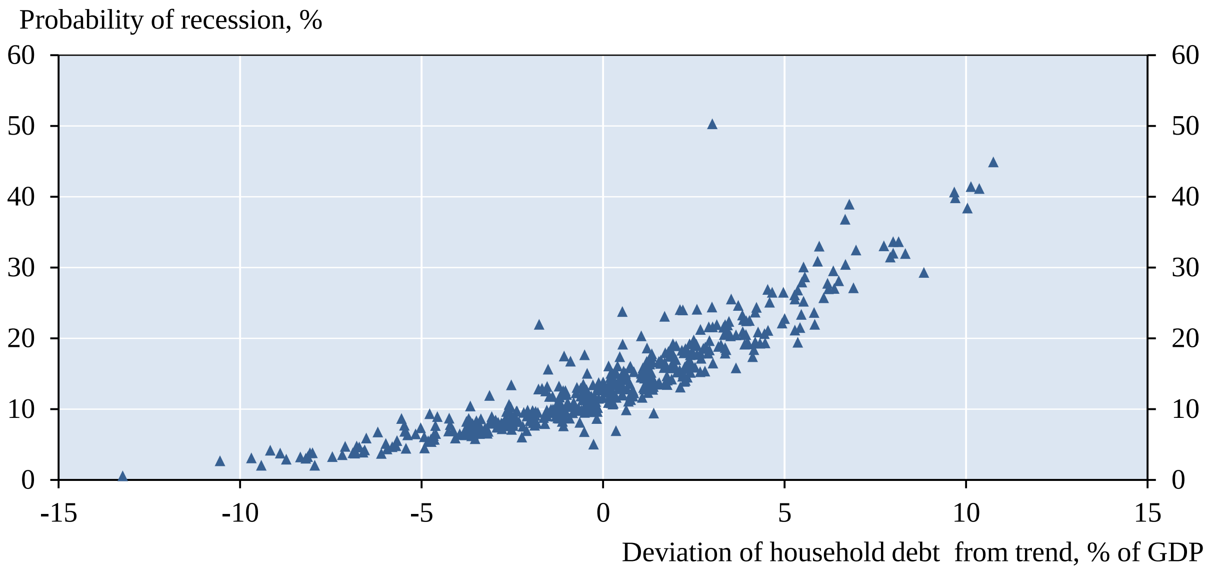
31. Similarly, labour and product market regulations that facilitate business creation, rapid expansion of successful firms and allocation of inputs to their most productive uses support long-term growth while also reducing the overall impact of shocks by facilitating resource reallocation across the economy. In particular stringent product market regulations (PMR) tend to hinder efficient resource reallocation, prolong the survival of inefficient firms and raise the costs of inputs for innovative firms. On the other hand, evidence on the magnifying impact of lenient regulation on the initial impact of a shock is mixed, and recent work tends to show no initial magnifying impact during the recent crisis (OECD, 2014c).

32. Labour market policies that promote employment and growth, such as active labour market policies, can also help limit the persistence of unemployment and, hence, enhance resilience. Additionally, coordinated wage bargaining institutions are important to counter the effects of changes in macroeconomic conditions. By increasing the responsiveness of real wages and hours worked, they may reduce the need to adjust employment and support competitiveness. Likewise, policies that encourage direct investment and facilitate long-term financing enhance resilience.

Potential policy trade-offs

33. Growth-enhancing tax reforms and spending reforms may reduce the size of the automatic fiscal stabilisers. Moreover, financial deregulation and increased openness may support long-term growth and resilience through a better diversification of risks and allocation of capital, but also increase vulnerability to shocks and the way they propagate. For instance, deep and liberalised mortgage markets increase the risk of harmful macroeconomic shocks through asset price build-ups by allowing households and firms to take on more debt than otherwise prudent, which in turn increases the probability of a large shock occurring. Empirical analysis shows how the probability of recession increases once debt rises above trend (Figure 1).

Figure 1. The probability of a recession rises when household debt is above trend



Note: The triangles show for OECD countries the predicted probability of a recession occurring in the following year over the period from 1980 at the earliest to 2010. Household debt is measured as a per cent of potential GDP. When the debt measure is zero, household debt is at the trend value. The probabilities are based on an estimated probit model.

Source: Sutherland and Hoeller (2012).

34. The benefits of financial development for long-term growth can only be fully reaped if associated with strong micro- and macro- prudential regulation that reduces the potential pro-cyclical effect of the financial system and the risk of financial shocks (Figure 1). Despite reform efforts to make the sector more resilient and lower the risk of future crisis, reforms remain incomplete.

35. Many OECD countries have started to implement structural bank reforms like separation of investment from retail banking to deal with the too-big-to-fail issue and interconnectedness of the financial sector. But so far, various national approaches have been proceeding in a fragmented and sometimes inconsistent way. Other structural policies, including policies that support foreign direct investment and hence contribute to diversification, long-term financing and stability, can also reduce risks associated with financial sector development and enhance resilience.

36. Trade liberalisation can bring benefits,[5] but in a globalised world, more and more dominated by fragmented production and global value chains (GVCs), openness to trade is both a possible buffer and a growing source of shock propagation. The specialisation of firms in specific stages of production has increased dependencies among economies. Job creation has for instance become increasingly determined by a country's ability to access foreign markets. For instance in 2008, 20% to 45% of business sector jobs in most European economies were sustained by final consumers in foreign markets.

37. Nonetheless GVCs have shown a certain degree of resilience to shocks. While firms reduced trade volumes considerably during the crisis, complete breakdowns of supply chains were rare. In the wake

5 Gradually removing tariffs, regulatory barriers in services and agricultural support, as well as reducing transaction costs on goods could increase global trade and GDP. Relative to the status quo, scenarios of regional or partial multilateral liberalisation could raise trade between 4% and 15% and GDP by 0.6% and 2.8% by 2060 (OECD, 2014e).

of the 2011 earthquake and tsunami in Japan, several GVCs actually broke down, but in most cases, companies were able to shift to other suppliers (albeit at higher cost), so that the GVCs breakdowns did not cause any major disruptions to production (OECD, 2013a).

38. To make the most of GVCs in terms of growth, employment and resilience, appropriate framework policies are needed to help economies adjust to the structural change implied by trade integration. These include improvements in regulatory quality and in infrastructure, improvements in credit access and labour and product market regulations that ease the reallocation of firms and workers across industries. In contrast, selected industrial policies based on tariffs may be counter-productive, as in an integrated supply chain, imposing tariffs at one stage of the chain affects the whole chain of suppliers through backward and forward linkages thus magnifying the effect of tariffs, and reducing exports of downstream industries. Work continues in these areas in particular on policies that can help countries at different stages of development participate in, and benefit from, global value chains.

39. As the discussion has highlighted, when designing policies and policy packages to foster growth and/or resilience it is important to keep in mind the policy complementarities and trade-offs with respect to the other policy objective. The next subsection will focus on a policy area that has the potential to deliver important synergies in terms of the growth and resilience objectives, namely policies that foster growth in innovation and knowledge sectors.

2. Promoting and further developing new sources of growth

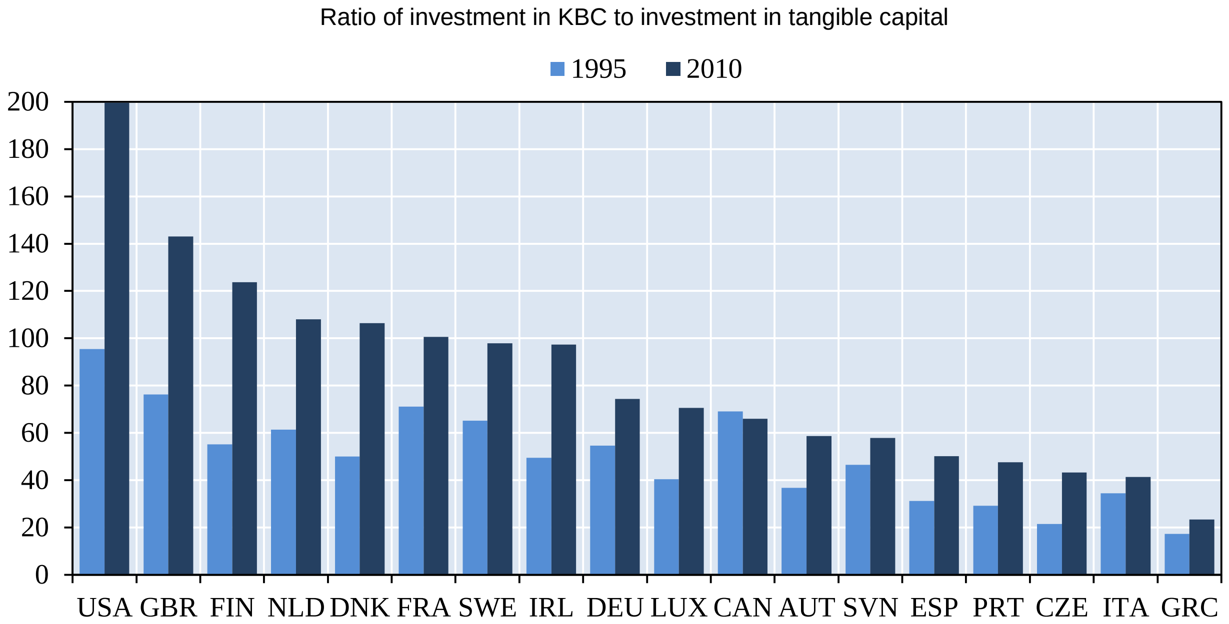
40. Resilience will benefit from new and diverse sources of growth, especially if driven by investment in innovation and in knowledge-based capital (KBC), that have strong spill over benefits across the economy. However making the most of these new sources of growth requires a comprehensive policy package, with sufficient investment in basic research, and policies to foster innovation, improve the protection of intellectual property rights and draw the benefits of big data. It also requires efficient labour, product and financial markets so that resources can flow to innovative firms, as well as effective social and skills policies to enable displaced workers to find new jobs. The following sections show the link between emerging trends in the manufacturing sector and the relevance of new sources of growth to enhancing resilience.

The role of innovation, science and technology in enhancing resilience

41. Innovation, science and technology have become major potential sources of growth with strong spill-over benefits across the economy, thereby enhancing overall economic resilience. Investments in KBC such as research and development (R&D), software, organisational know-how, and intellectual property, are now a key driver of productivity and account for a growing share of capital (Figure 2). Information and communications technologies (ICT), notably the Internet, smart phones and big data continue to transform the economy. In some countries, investment in KBC accounts for over 25% of labour productivity growth.

42. Business investment in knowledge-based capital has been increasing in many OECD countries faster than investment in physical capital such as machinery and equipment (Figure 2), and is growing rapidly in many emerging economies. During the global economic crisis, business investment in knowledge-based capital declined by less and was hence more resilient than investment in physical capital. New OECD estimates show that between 13 and 28% of the workforce is now involved in the generation of KBC, demonstrating the importance of skills as the major contributor to productivity in the future (OECD, 2013b).

Figure 2. Investment in KBC relative to tangible capital



Note: The estimates refer to the market sector and include each type of KBC outlined in Table 1 and mineral exploration. Data for Canada refer to 1998 and 2008. Data for Korea and Japan refer to 1995 and 2008. Data for Greece refer to 1995 and 2009.

Source: Corrado *et al.* (2012) and OECD (2013b).

43. Following the economic crisis, most OECD governments have reinforced their commitment to policies to support innovation, even if public budgets for R&D have been under pressure. Public programmes for innovation are being streamlined and consolidated in many countries, often linked to stronger policy evaluation, and greater use is being made of public procurement and public-private partnerships to leverage innovation in the private sector. Policies to strengthen the commercialisation of public research and enhance excellence in public research have also become increasingly relevant to promoting innovation and, in turn, the resilience of economies (OECD, 2014t).

Making the most of Knowledge Based Capital

44. Increased investment in knowledge-based capital – which is increasingly important as a crisis-resilient sector – requires new policy frameworks. Policies that enable reallocation of resources – through efficient product, labour, and capital markets, as well as bankruptcy laws that do not overly penalise failure – are critical to offer cost effective approaches to promoting an expansion of KBC (OECD, 2013c). The OECD is analysing policies that will allow countries to seize the benefits from KBC.[6]

45. Well-defined and high-quality intellectual property rights (IPRs) support the development of knowledge markets, promote knowledge diffusion via the public disclosure of ideas and provide firms with the incentive to innovate. On the other hand, the strategic use that companies make of IPRs needs to be coupled with pro-competition policies and efficient judicial systems to ensure an appropriate balance between the incentives to innovate and the diffusion of knowledge.

[6] This work focuses on measurement, tax policy, "big data" and intellectual property rights.

46. The convergence of technological, social and economic trends is generating large streams of data, commonly referred to as “big data”. Creating economic value from these “new assets” is at the forefront of business innovation, enabling better decision-making and analysis and facilitating data-driven automation. Big data can help foster innovation to address social challenges – for example in the areas of health and disaster response. Unleashing the potential of big-data requires sound frameworks that encourage investments in reliable and competitive information and communication infrastructures. Likewise, ensuring trust in the data-driven economy is crucial and requires strong policies and frameworks for privacy protection, security and consumer empowerment.

Minimising the short-term potentially negative effects on innovation and employment

47. Due to growing investment in KBC and continued structural change linked to the ongoing diffusion of ICT throughout the economy, the impact of innovation on jobs is a concern in many countries, especially as policy makers seek to address unemployment. Past experience suggests that technological change does not adversely affect aggregate employment in the long term. Improvements in productivity due to innovation contribute to output growth, which tends to offset the reduction in labour needed to produce each unit of output.

48. Technological change and the move towards a KBC-based economy affect certain groups of workers and reward specific skills. But it is not just an occupation’s skill level that determines whether it can be replaced by technology, other factors matter as well. For instance, high-skill jobs can be displaced if they involve routine tasks, and some low-skill jobs (*e.g.* janitorial services) involve non-routine tasks that will be hard to replace by machines. At the same time, technological change is increasing the number of non-routine tasks that can be performed by machines and software. Adjusting to a KBC-based economy therefore requires investment in education and skills, and appropriate labour market and social policies.

3. Coping with changes in production and employment demand patterns

49. The increasing importance of KBC and the continued international specialisation of economies due to GVCs will lead to significant changes in the composition of production and employment. Product and labour market regulation will play a key role in supporting the adaptation of economies to these changes, and in turn their resilience.

Building on synergies between the different sectors

50. The relative resilience of countries with strong and internationalised manufacturing sectors compared with countries with a strong (financial) services sector has revived the debate on the merits of manufacturing. Governments are exploring how to foster a productive manufacturing sector and enable a new industrial revolution. Further technological advancements in ICT (for example, 3D printing, machine-to-machine communication and other advanced manufacturing technologies) are expected to lead to further digitalisation of manufacturing over time. New and converging technologies such as industrial biotechnology and nanotechnology will further change the nature of manufacturing and related services and affect the location of production in global value chains.

51. However, policies should adopt an integrated view on manufacturing and services, reflecting their interconnected nature. Services represent a high and increasing share of manufacturing value added. Furthermore, as services are still – at least for now – less susceptible to being relocated abroad, turning innovation and knowledge into jobs is more likely to occur in services than in manufacturing. At the same time, a sound manufacturing sector can help underpin job creation in services due to their close interaction and the need for co-location.

52. The debate on the role of different sectors in the economy, and manufacturing in particular, has also led to a renewed focus on "industrial" policies. However, past experiences shows that support for single firms and national champions, state subsidies, tariff protection, etc. are costly and highly distortive to national and international competition. Drawing on the lessons of these experiences, several OECD countries are currently applying a different and less interventionist approach, which involves greater emphasis on networks, improved co-ordination, and the development of strategic partnerships with business to help address some of these challenges (*e.g.* as regards to regulation).

53. A related issue is how to deal with excess capacity in some globalized industries, such as steel and ship-building, where trade protection, restrictions, and subsidies that support the emergence of new capacity, might prevent market mechanisms from functioning effectively to allow closures to occur when necessary and thus keep overall productivity and profitability low. This hampers efficient resource reallocation across the economy and thwarts our efforts to strengthen economic resilience.

Supporting young businesses in economic transformation and resilience

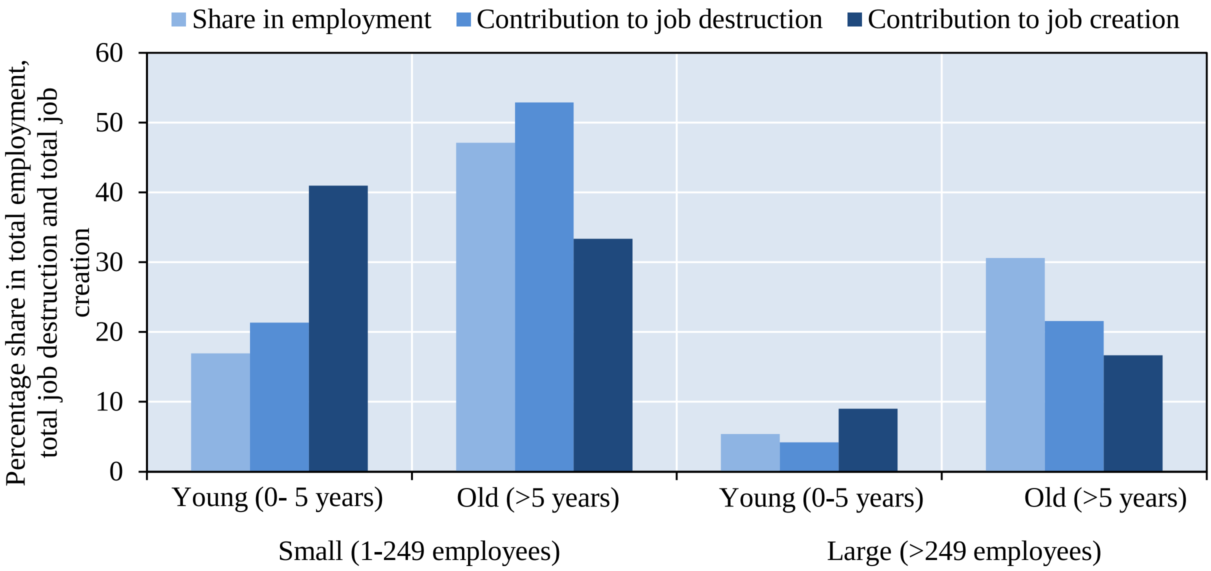
54. Young firms can be an important driver of economic transformation and resilience, provided the right framework policies are in place. OECD analysis shows that it is primarily young firms (not all of them SMEs) that contribute to net job creation (Figure 3). While not all young firms expand, the employment gains in those that grow are larger than the employment losses in those that shrink or close down. Moreover, the contribution of young firms to net job creation remained positive during the crisis, contributing to resilience.

55. An efficient process of resource reallocation within an economy, where new firms can enter the market, experiment with new ideas and business models and thrive if successful, is therefore crucial for job creation and productivity growth. Experimentation may be particularly important in a time of extensive technological change, when the success of new business models, technologies and applications often only becomes apparent through testing in the market. Policies that affect the scope for experimentation include barriers to entry (*e.g.* administrative regulation), barriers to growth (*e.g.* size-specific regulations) and barriers to the exit or failure of firms (*e.g.* penalising bankruptcy legislation). Bankruptcy legislation that does not excessively penalise business failure can also promote the flow of resources to more innovative firms. Judicial systems matter as well, with capital and labour flowing more readily to patenting firms in countries with efficient intellectual protection systems. But there are also policies (*e.g.* poorly designed R&D tax credits and specific regulations) that tend to favour incumbents and multi-national enterprises (MNEs) over young firms.[7]

[7] OECD work on business dynamics and the role of young firms is continuing and will focus on greater industry-level detail as well as firms' contribution to productivity growth.

Figure 3. Young firms contribute disproportionately to job creation

Employment, Job Creation and Job Destruction by Firm Age and Size



Note: See Criscuolo *et al.* (2014) for notes and further detail.

Source: OECD DynEmp database.

56. Because of their size, SMEs face specific challenges. The regulatory environment often imposes undue burdens on SMEs and entrepreneurs through high and regressive compliance costs. Entrepreneurship skills are also a challenge for SMEs, calling for a scaling up of entrepreneurship education in schools, vocational education and universities, placing emphasis on strategic skills for growth-oriented entrepreneurship, and introducing interactive teaching methods that incorporate practical experience.

57. Financial systems also matter for the development of young firms that often face difficulties in getting access to finance. Financial systems play an important role in helping credit-constrained firms to implement and commercialise new ideas, raising the returns to innovation. Similarly, resources flow more freely to young patenting firms in countries with more developed markets for seed and early stage venture capital. Policies to support financing for such firms should focus on leveraging – and not on replacing – private funding, and should take the full range of policies affecting financing into account. The temporary measures adopted in the wake of the 2008/09 financial crisis need to be scaled-back once the market recovers, whilst maintaining the flexibility of public financial institutions to intervene again when necessary. Moreover, evaluation of policies is critical, to ensure they are meeting their goals and are efficient.

4. Promoting resilient labour markets

58. Labour markets are at the centre of economic and social resilience and the promotion of inclusive growth. Labour markets are considered resilient if they can weather economic downturns with limited social costs. Overall structural policies and institutions that are considered as conducive to low structural unemployment (*i.e.* wage-bargaining co-ordination, short-term working schemes, less stringent labour market protection) appear to also favour labour market resilience. Countries with low levels of structural unemployment also tended to experience less of an increase in joblessness during previous economic downturns. This implies that many of the recommendations in *the Reassessed OECD Jobs Strategy*

(OECD, 2006a) for achieving good structural labour market outcomes are also likely to contribute to labour market resilience by enabling economies to adapt to shocks, to make the most of new sources of growth and to cope with structural transformation challenges.

59. Co-ordinated or highly centralised wage-bargaining institutions promote low structural unemployment and mitigate the direct impact of shocks on employment. By increasing the responsiveness of real wages and/or working hours to changes in macroeconomic conditions, co-ordinated bargaining institutions may reduce the need to adjust employment in response to negative output shocks. Moreover, such institutions may also be more likely to take account of any negative employment externalities that may be associated with collective wage bargaining.

60. Short-time work schemes (STW) can also play an important role in making the labour market more resilient. The role of these public schemes, intended to preserve jobs at firms experiencing temporarily low demand by encouraging work-sharing, while at the same time providing income support to workers whose hours are reduced, was amply used during the crisis. Many OECD countries encouraged the use of STW, either by establishing new schemes or by promoting the use of existing ones. These efforts helped preserve jobs of workers on permanent contracts, particularly in Germany, Italy and Japan. The contribution to STW schemes to resilience is however likely to be considerably more positive if their use is limited to economic downturns. A way to ensure that take-up does not persist for too long in a recovery is to require firms to participate in the cost of STW schemes, to limit the maximum duration of STW schemes and to require workers to search for a job whilst on STW.

61. Employment protection legislation (EPL) has also a major role to play in enhancing resilience. Many lessons can be drawn from countries that have liberalised temporary contracts in an attempt to make their economy more flexible, while maintaining protection of permanent workers. These policies have in general resulted in weaker structural labour market outcomes and lower labour market resilience. First, if stringent employment protection on regular, open-ended contracts coexists with relatively easy access to fixed-term contracts, firms tend to increase reliance on fixed-term contracts rather than permanent ones – due to the smaller cost involved with the termination of the employment relationship at the end of a fixed-term contract – and use these contracts as a buffer in times of crisis. Second, while in most OECD countries, EPL for regular contracts has been designed to protect regular jobs and increase job stability, by imposing costs on the firm's ability to adjust its workforce, overly stringent regulation on dismissals may maintain inefficient jobs and, indirectly, reduce job creation because of the risk of having to downsize later. Firms react to stringent EPL by reducing both hiring and firing and by hampering the reallocation of labour resources.[8] Stringent dismissal regulations hence slow down adjustment to negative economic shocks even if they reduce its employment impact in the early stage of a downturn by inducing labour hoarding.

62. The resilience of labour markets also depends on skill policies. Social and activation policies are essential for mitigating the social impact of economic downturns and ensuring that job losers return as quickly as possible to work given the available number of jobs. Promoting education and developing skills are important to develop a workforce adapted to labour market needs.

63. Skill policies are also important to address longer-term challenges associated with technological change. In particular, policymakers need to ensure that people get equipped with the right skills needed to benefit from growing job opportunities in knowledge-intensive services. And efficient labour markets need to ensure that the skills are deployed productively. More generally ensuring the adaptability of the

8 See OECD (2013a) for a review of empirical studies.

individuals and institutions to these long-term trends and adjustment needs and their ability to cope with other potential sources of shocks is essential for economic efficiency and labour market resilience.

5. Achieving resilience, promoting inclusive growth

64. One of the main lessons of the crisis is that growth is a means to achieve higher living standards for all and not an end in itself. Policy mixes must combine support to growth with the delivery of broad-based improvements in other factors affecting the well-being of a society such as health outcomes, jobs opportunities and income inequality. This challenge is magnified by continuing skill-biased technical change and further structural adjustments that will likely increase inequality over the coming decades, unless counterbalanced by education, labour market and social policies.

65. Growing inequality is a source of concern in many countries, since there is a risk that globalisation-led changes in skills and labour demand will further raise inequality going forward. Making the most of new technologies will be key to strong growth in productivity and increases in average household income, but it also entails significant and continuous reallocation of labour, skills and capital both within and across firms and economic sectors. This process of structural adjustment and reallocation involves economic and social costs that need to be factored in and addressed by inclusive growth policies. For instance, reallocating jobs towards the most productive firms clearly improves average growth, but also involves private income losses during the job transition and possibly also income losses later if workers experience wage cuts. Quantifying these transition costs is clearly challenging – if only from a data perspective – but is critical for assessing how different policy settings affect the balance of costs and benefits of resource reallocation. Failure to address the implications of reallocation on human capital development, career paths and income profiles, creates the risks of backlash against globalisation and the adoption of growth-enhancing technologies, which affects the resilience of economies.

66. Education and active labour market policies have a major role to play in mitigating inequality. A special focus on lower level schooling is needed to ensure higher productivity and equity across all levels of society. Active labour market policies are also needed to facilitate adjustments in the face of structural changes, particularly in the case of emerging economies, which transition from a high dependence on their agriculture sector. The advantage of these policies is that their impact on wages and employment tend to reinforce each other, resulting in both stronger growth and less inequality.

67. Other pro-employment policies may however widen the distribution of earnings and lead to potential trade-offs. This is the case of policies that reduce unemployment benefits and lower statutory minimum wages relative to median wages, which are associated with both higher wage dispersion and higher employment rates, particularly among low-skilled workers. In this case, reforms of unemployment benefits would be best considered in a context where activation policies are stepped up.

68. While policies that promote equality of opportunity need to be pursued, better-targeted and more ambitious redistribution policies also have a role to play. Tax and benefit systems can cushion the impact of market income inequality on household disposable income. However, further global integration may increase the costs of redistribution, which would sharpen the growth-equity trade-off often (but not always) posed by tax and benefit systems. In this context, relying more on tax bases such as property or consumption may be useful from a growth perspective, although the impact on equity needs to be carefully considered. While consumption taxes may be weaker than personal and corporate income taxes as automatic stabilisers, taxes on immovable property have the potential to play an important role in this regard as real estate values move up and down.

69. Roughly, half of the world population already lives in cities and this share will rise to 70% by 2050. Against this trend, urban policies have a major role to play in promoting economic growth and well-

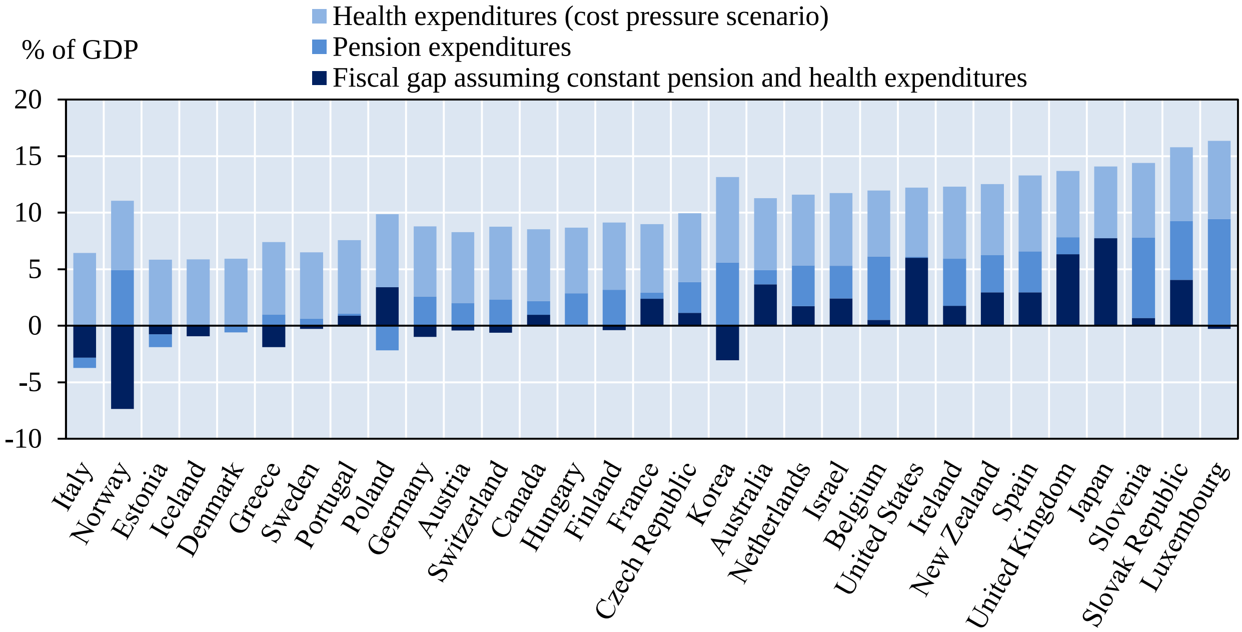
being, and in enhancing resilience for all citizens. While cities are a motor of economic growth, poor governance structures may reduce economic efficiency and growth. Excessive municipal fragmentation can lead to a sub-optimal provision of local services, including transport infrastructure, which in turn hampers resilience and contributes to social exclusion. Fighting exclusion, often concentrated among certain social groups, such as young people from low-income households, immigrants, and ethnic minorities, also requires a good coordination between city-level and localised initiatives, to foster strategies that address skills, housing and internal mobility issues and exploit synergies and complementarities among different policies.

6. Balancing fiscal sustainability and long-term social goals

70. Beyond the legacy of the crisis, fiscal challenges and risks over the coming fifty years are large. The fiscal adjustment needed to deal with rising public pension and health spending and stabilising gross government debt at sustainable levels (60% of GDP is a commonly accepted benchmark in advanced economies, featuring notably as one of the Eurozone 'Maastricht criteria') until 2060 is estimated to be more than 10% of GDP for almost half of the OECD countries (Figure 4). Further pressure would also arise from education and social policies. Fiscal consolidation will have to continue, but governments will also need to favour measures that support growth and equity, including reforms that increase the resilience of public finances to shocks.

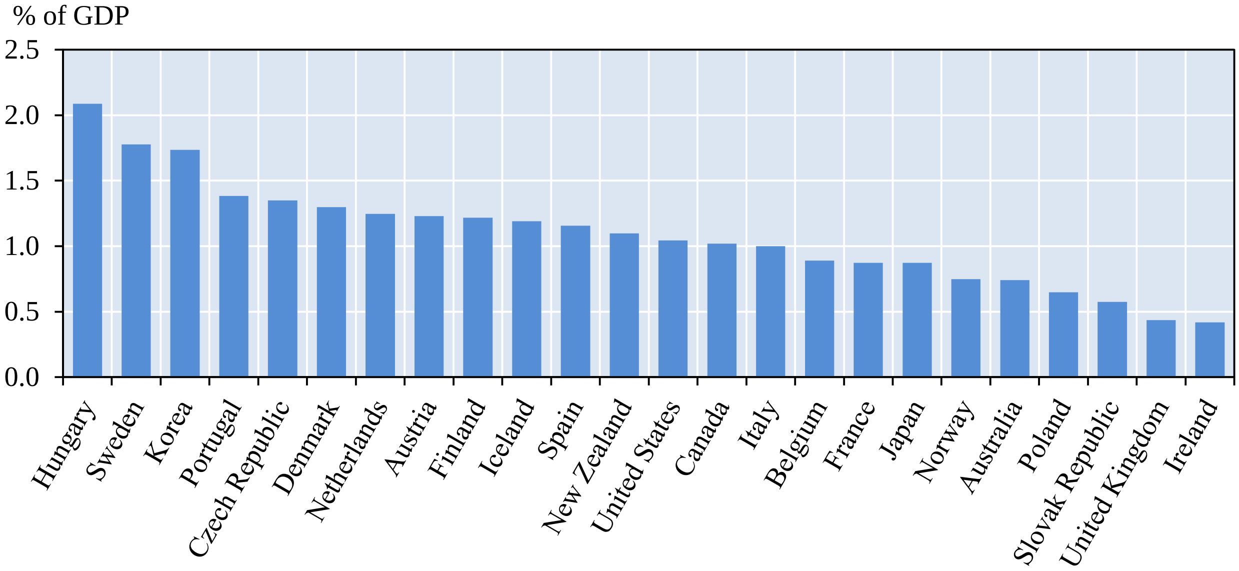
Figure 4. Fiscal pressures in the OECD area are large

Panel A. Fiscal pressures due to fiscal gaps, health and pension spending, 2010-60



Panel B. Fiscal pressure from expanding tertiary education in line with demand (alternative scenario)2

Increase in public spending 2010-60 (% of GDP)



Notes: This figure is based on data available as of March 2014. 1/ The long-term consolidation needs (shown in dark blue in Panel A measure the difference between the underlying primary balance as a per cent of GDP that keeps gross general government debt stable at 60% of GDP in 2060 and its baseline projection for the same year assuming unchanged GDP shares of public expenditure on pension and health. 2/ Alternative scenario refers to a scenario 1 where demand for graduations are derived from an estimated econometric model. Based on an estimated supply model, the scenario assumes that real household expenditures per enrolled student are constant while public funding is assumed to adjust to ensure that supply will equal demand.

Source: Cournède, B. et al. (2013) ; de la Maisonneuve and Oliveira-Martins (2013); OECD (2014f); OECD calculations.

71. Recent OECD work has looked at the extent to which fiscal consolidation can proceed while minimising adverse effects on growth, prosperity and equity (OECD, 2013e). The analysis has shown that reductions in subsidies and in pension spending (notably through increases in the effective retirement age) as well as increases in taxes on immovable property are consolidation instruments involving limited adverse side-effects on growth and equity, although this will depend in practice on how specific reforms are designed.[9] Some fiscal consolidation instruments (e.g. judicious increases in taxes on inheritances or wealth transfers, reductions in certain tax expenditures and efforts to improve compliance by high-income taxpayers) can even reduce income or wealth inequality with limited impact on growth.

72. Structural policies can also ease the trade-offs between consolidation, equity and long-term growth objectives (OECD, 2013e), while making public finances more resilient to shocks. On the tax side, the growth impact of hikes can be reduced through the closing of loopholes and base broadening (including by curbing fraud and evasion) rather than via rate increases. Moreover, in the face of further global integration and an increasing reliance on mobile intangible inputs a shift of taxation towards more immobile tax bases (property, resource extraction and consumption based taxes) is warranted. Last, combining appropriate structural climate change policies that provide a price signal to the economy can help address the lock-in of carbon emission-intensive infrastructure, making it easier to shift toward a cleaner development path. The use of price-based instruments can also generate substantial fiscal revenues or savings.

73. To deal with fiscal pressures, governments should engage in public spending reforms. State-dependent policies or balancing mechanisms, for example, could be introduced in defined-contribution pension systems. However, the increased resilience of public finances comes at the cost of shifting more risk towards participants in schemes. Reforms to increase spending efficiency and to diversify funding sources would also limit the risk that fiscal consolidation measures could lower both growth and equity (*e.g.* by increasing tax wedges or lowering spending on infrastructure).

74. Reforms are in particular needed in the area of education, which plays a key role in meeting the increasing demand for knowledge and skills, supporting growth and mitigating inequality. Given tight fiscal conditions and the increasing international mobility of graduates, governments need to rethink spending priorities. Public funds need to be focused on pre-tertiary education (which carries high social returns) and in life-long learning (where international labour mobility is low). Tertiary education needs to expand through stronger reliance on tuition fees, in response to fiscal constraints and efficiency considerations. A tuition-based and loan-financed system is likely to be more efficient in recovering costs than a tax-based (or income-contingent repayment) system in a world with high mobility of skilled labour, although the implications for equity should be weighed carefully.

75. Reforms are also needed in the health sector. The health sector not only contributes to personal well-being and makes a substantial direct contribution to GDP and employment (OECD, 2013f) but also indirectly supports the productivity of workers by preventing and relieving poor physical and mental health (OECD, 2012a). The major challenge for policy makers is to reconcile the need for fiscal consolidation with a growth in health spending that continues to outpace economic growth. First, governments need to reform the way funds for health are raised, not least through a shift away from social security contributions and payroll taxes to more broad-based financing of health (i.e. through general revenues including taxes on consumption, property and personal income). This would help halting shortfalls in revenue and support job recovery by reducing the tax wedge on labour. Second, the government could share costs more widely with

9 For instance, if older workers with low skill levels find it harder to remain in work than highly-skilled older workers, raising the retirement age will harm equity unless the reform is accompanied by appropriate policies to help the low skilled staying employed.

patients, for instance by being more selective with respect to the range of services covered, while ensuring that the access of already vulnerable segments of the population to health services is not further compromised. Third, productivity and value for money in the health sector need to be improved, for instance by reforming the skill mix in the health sector, and the functions assigned to doctors, nurses and allied health professionals. Reducing unnecessary medical practices that are not justified by clinical needs is another avenue, as is a higher selectivity in terms of which health activities are publicly funded. Regulated competition among health care providers, appropriate budgetary caps, hospital payments based on diagnostic related groups are also among the elements identified by the OECD as potential sources of efficiency gains.

7. Strengthening resilience through greater international cooperation

76. Global interdependencies are likely to continue to grow in a number of areas in the coming decades. While rising interdependencies may help create a more stable global economy, for instance through an increased sharing of the burden of domestic shocks globally, they may also lower the effectiveness of domestic policies and increase negative international spill overs. This raises the importance of international policy cooperation and coordination in several areas, and notably stabilisation policies, taxation, international trade and investment, regulation and competition and also climate change and environmental policies. Applying traditional policy tools beyond borders requires new approaches and greater cooperation across jurisdictions.

77. As global integration continues, the effects of domestic shocks will be increasingly shared with trading partners. This diminishes the efficacy of domestic fiscal policy for stabilisation and points to an increasing scope for co-operative stabilisation policies. In addition, concerted efforts in current account deficit and surplus countries to prevent a renewed widening of imbalances would also be beneficial for global stability.

78. Openness to trade is one important structural reform area that has yet to be fully exploited. Despite progress, including the successful conclusion of the WTO Bali package, trade and the development of Global Value Chains are constrained by remaining barriers in manufacturing and agriculture, a lack of progress in opening services markets, and a range of behind-the-border restrictions. GVCs strengthen the economic case for regulatory cooperation and advancing associated negotiations at the multilateral level, as barriers between third countries upstream or downstream matter as much as barriers put in place by direct trade partners and are best addressed together.

79. The OECD Services Trade Restrictiveness Index (STRI), which provides internationally comparable information on regulatory policies in 40 countries across 17 sectors, provides a unique tool for policymakers to identify areas of regulatory strengths, weaknesses, and opportunities for improvement. Inefficient border processes and behind the border measures can have an adverse effect on GVCs. The Trade Facilitation Indicators (TFI) that have been re-calculated based on the conclusion of the Bali agreement will continue helping governments improve their border procedures, reduce trade costs, boost trade flows and reap greater benefits from international trade. Nonetheless, a thorough examination of how to ensure that regulations do not create bottlenecks in the value chain creation process remains particularly relevant.

80. The promotion of open and transparent investment regimes will also be critical to the recovery of international investment and economic resilience. While OECD surveillance finds that the majority of investment measures in OECD and G20 countries since 2008 have pointed to the direction of liberalisation, barriers beyond the border and potentially hidden protectionist measures apply. In this context, international investment agreements can contribute to enhancing security and predictability for business. The agreements being negotiated among major economic powers in America, Asia and Europe have the

potential to improve the investment climate as well as consistency and coherence in the current fragmented network of bilateral treaties. A key to success in these efforts will be ensuring that such agreements establish a stable framework for liberalisation and the protection of investors and their investments. One element of this is enhancing and improving approaches to the settlement of investment dispute, including with respect to investor-state dispute settlement (ISDS). On ISDS OECD dialogue involving Member and Partner countries has highlighted various options to do so, including increased transparency and alignment with good domestic practices for settling disputes.

81. International regulatory cooperation can foster sustainable growth and resilience through lower barriers to international trade and investment and by improving the rules of the game. International cooperation makes markets function better, levels the playing field, reduces costs, and improves the management of global risks. Regulatory coherence and cooperation are at the heart of current multilateral efforts and of the various trade and investment agreements under discussion. While regulatory cooperation is intensifying, policy making in this area remains largely *ad hoc*. In order to support countries in their effort to carry out evidence-based policy, the OECD has developed a typology of International Regulatory Co-operation (IRC) mechanisms and is investigating the economic case and benefits and costs of each one of these in different country and sector context.

82. Improving international competition law enforcement cooperation could also make economies more resilient and increase productivity. Formal competition law frameworks have become common in recent decades, with the number of jurisdictions with competition law enforcement having increased from fewer than 20 in 1990 to about 120 in 2013, more than a 600% increase. Global mergers, cartel and abuse of dominance cases present a particularly complex challenge.

83. Most jurisdictions can take action against mergers having effects in their territory, regardless of the location of the merging firms. In practice, smaller jurisdictions might be unable to prevent or effectively remedy such mergers, while a single large jurisdiction can effectively block or impose conditions on any merger with global consequences. Moreover the administrative costs of multiple parallel investigations are high. Similarly, global cartels and abuse of dominance cases might face parallel investigations, with some jurisdictions being better able, in practice, to prosecute these behaviours than others.

84. Although co-operation has increased, it has not kept pace with needs associated with global integration and the increased number of jurisdictions with competition law. While techniques for bilateral co-operation have improved since the mid-1990s due to the work of the OECD, other international organisations, and the authorities themselves, making it work well in the future will be increasingly complex. Options for enhanced competition law co-operation range from improving bilateral co-operation to reaching a multilateral agreement for exchange of information, comity and deference standards based on jurisdictions voluntarily opting in to the agreement.

85. Addressing base erosion and profit shifting (BEPS) in a coordinated fashion is also crucial for enhancing resilience. Tax reform to reduce Base Erosion and Profit shifting BEPS can foster resilience by helping to ensure that the erosion of corporate income tax revenues does not place too much stress on other forms of tax revenue and by reducing the incentives created by gaps in the current international tax rules to borrow across borders to take advantage of excessive interest deductions. At the same time such reform can foster growth as BEPS behaviours distort competition, with businesses engaged in cross border activities gaining a competitive advantage by being subject to a lower effective tax rate compared to domestic businesses. If individual countries were to act unilaterally to try to address BEPS, there would be a risk of ending up with situations of double taxation, and cross-border trade and investment would suffer as a result. To ensure that these wide-reaching reforms are the most effective for the largest amount of

people, countries should therefore act together and coordinate efforts. The BEPS project will help to prevent a further erosion of government revenues and also promote a level playing field among firms.

86. Although tax competition can be beneficial in some areas, international coordination could provide more efficient solutions than national tax policies in areas where negative international spill overs are large - for example corporate taxes and taxes on greenhouse gas emissions – by increasing efficiency and raising revenues. These benefits of coordination are likely to rise in tandem with greater of global integration.

CHAPTER 2: RESILIENT SOCIETIES: EDUCATION AND SKILLS, INTER-GENERATIONAL SOLIDARITY ISSUES AND THE ECONOMIC CHALLENGES AND OPPORTUNITIES OF AGEING SOCIETIES

87. Recent economic signs of recovery are encouraging, but a strong and sustained period of economic growth will be needed to address the social legacies of the crisis. Many OECD countries were already experiencing high levels of income inequality, with the recession reducing employment and wages and making income distribution more unequal. In the first three years of the crisis, inequality in income from work and capital increased by as much as the previous 12 years.

88. With households under pressure and budgets for social support under scrutiny, more and more people report dissatisfaction with their lives, and declining levels of trust in governments. There are signs that the crisis has cast a long shadow on people's future well-being. Indeed, some of the social consequences of the crisis, in areas like family formation, fertility and health, will only be felt in the long run. For example, fertility rates have dropped since the start of the crisis, deepening the future demographic and fiscal challenges of ageing. In addition, low-income families have cut back on essential spending, including on food, putting at risk their current and future well-being. While it is still too early to quantify the longer-term effects of the crisis over well-being, it is clear that we will need to put into action policies that strengthen societal resilience.

89. A resilient society is one that is able to cope with shocks, economic and social, by adopting a coordinated and well-integrated set of policies and practices. The goals of society may not change – improving well-being as widely across society as possible – but the means by which a country approaches it varies as circumstances change. Social resilience is promoted by having institutions deliver services to individuals that equip them to cope with change and participate fully in the economy and society, and by ensuring that the institutions can focus their efforts towards the most vulnerable members of society.

90. The capacity of governments to deliver on social resilience is currently constrained by fiscal consolidation. As spending for social policies makes up a large part of government budgets in most countries, it is not surprising that social expenditures are under pressure. However, cuts in social spending risk adding to the hardship of the most vulnerable groups. Efficient and effective social policies are therefore critical to protect and enhance the resilience of societies. The main challenge is to build social protection systems that enhance economic and social inclusion and strengthen social cohesion.

91. Ageing compounds the threat for public finances. Younger workers face a large and growing burden to pay for pensions and health care for the elderly. Governments need to prepare their economies and societies for longer-term social pressures. These policy responses will need to cover a wide range of areas ranging from labour markets to social protection systems, education and skills policies, as well as health and long-term care systems. A comprehensive approach is needed to help societies cope with both short-term shocks and long-term trends.

92. The remainder of this chapter is structured as follows. **Section 1** provides a comparison of inequality in OECD countries, looking at both income and non-income aspects of wellbeing. **Section 2** then discusses education and labour market policies to equip all people in society with the competences and support necessary to cope with the economic challenges and to exploit the economic opportunities they face in life. **Section 3** addresses intergenerational solidarity issues arising from demographic change. It

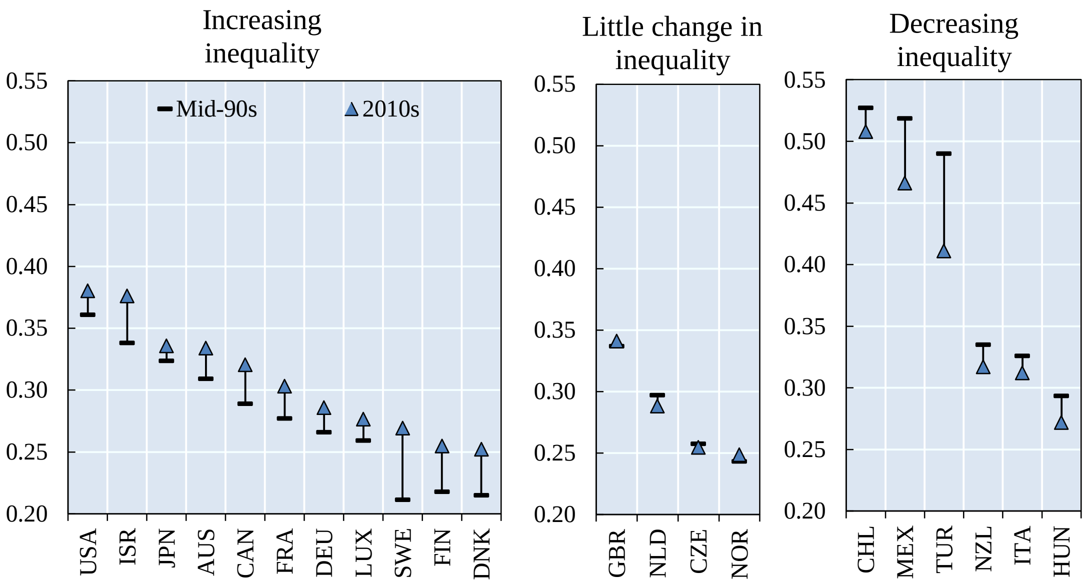
discusses in particular the challenges that ageing poses to countries' pension, health and long-term care systems and how countries have so far responded to this challenge. **Section 4** sheds let on the rise in inequality that comes with ageing and proposes policy option to address this issue. **Section 5** discusses improvements in food safety, food security, and nutrition, and how these factors contribute to the wellbeing of individuals. **Section 6** addresses how developing countries can build more resilient societies.

1. The challenge of unequally distributed growth

93. The gap between rich and poor in OECD countries has reached its highest level in 30 years (OECD, 2008, 2011a). Since the mid-1990s (Figure 5), inequality has climbed by more than 3 percentage points in Canada, Denmark, Finland, Israel and Sweden.

Figure 5. Income inequality increased in most OECD countries

Gini coefficients of disposable income, mid-1990s to 2010



Source: OECD Income Distribution Database (www.oecd.org/social/income-distribution-database.htm).

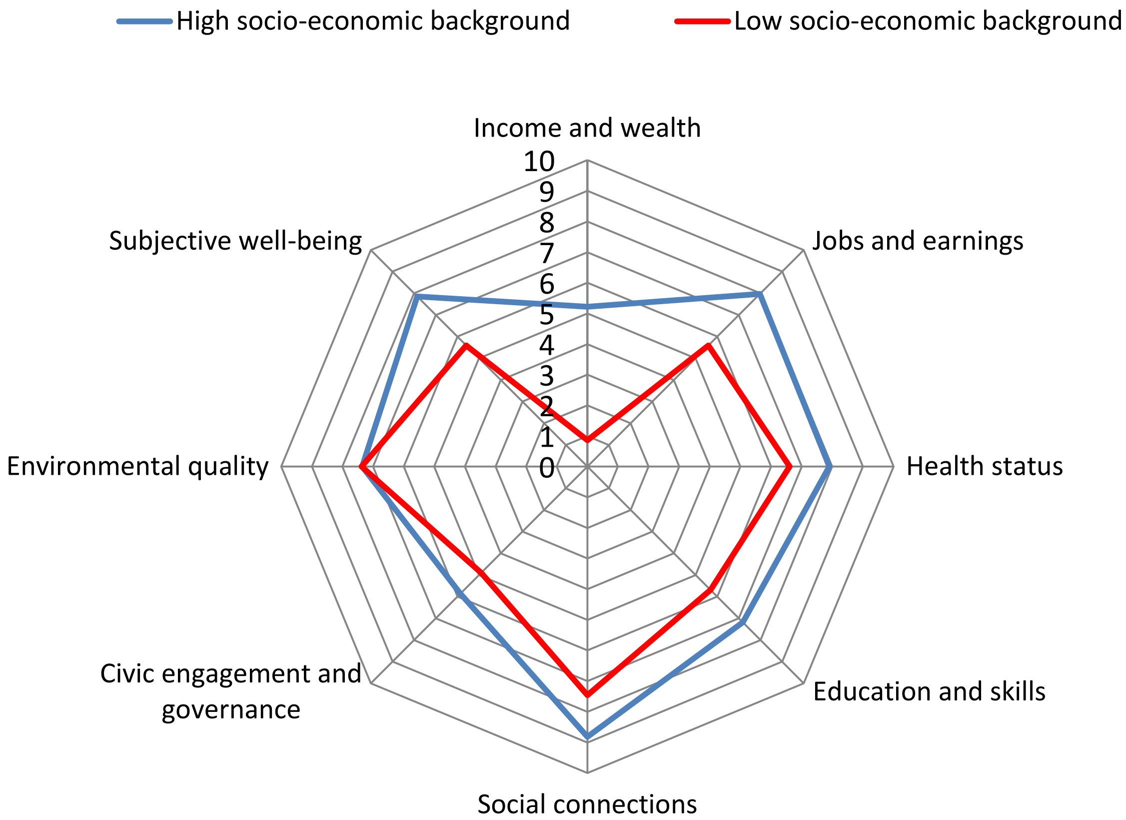
94. In most countries, high-income households fared much better than both low- and middle-income families. In the United States, the share of the richest 1 per cent in all pre-tax income has more than doubled since 1980, reaching almost 20% in 2012. But the increase was also large in Australia, Canada, Ireland and the United Kingdom, and significant in some Scandinavian and Mediterranean countries. The average income of the top 1% of earners grew much faster than the average income of the rest of the population, leading the top percentile to "capture" around 47% of total income growth in the United States, 37% in Canada and about 20% in Australia, New Zealand and the United Kingdom. The share of an even smaller group at the top – the richest 0.1 per cent of earners – accounted for more than 8% of all pre-tax incomes in the United States, 4 to 5% in Canada, Switzerland and the United Kingdom, and close to 3% in Australia, France and New Zealand.

95. As shown in the OECD work on multidimensional well-being (OECD, 2013g), the challenge of inequality is not only about income; many other elements of well-being are also distributed unequally in the population.

96. In the OECD area, there are large differences in well-being outcomes between people from high and low socio-economic backgrounds (Figure 6). More people from the first group report to have a very good or good health status (80%, compared with 61% of the latter). The cognitive skills of pupils from families from the first group are over 20% higher than those of pupils from the second group, and disparities exist also in the strength of social connections and in the extent to which people engage with politics. While 92% of people in the first group report being able to count on support from their social network, only 85% do so in the second group. Voter turn-out is also higher among the better-off (77%, compared to 66% of people with low socio-economic backgrounds). Some authors argue that increasing concentration at the top is damaging democracy due to a combination of political financing, lobbying and 'revolving doors' between private and public office (Deaton, 2013). Subjective well-being also shows a strong social gradient, with people from a low socio-economic backgrounds being exposed to higher risks of crime and reporting lower life satisfaction.

Figure 6. Large differences between people from high and low socio-economic backgrounds

Inequalities in well-being outcomes in the OECD area and selected emerging economies

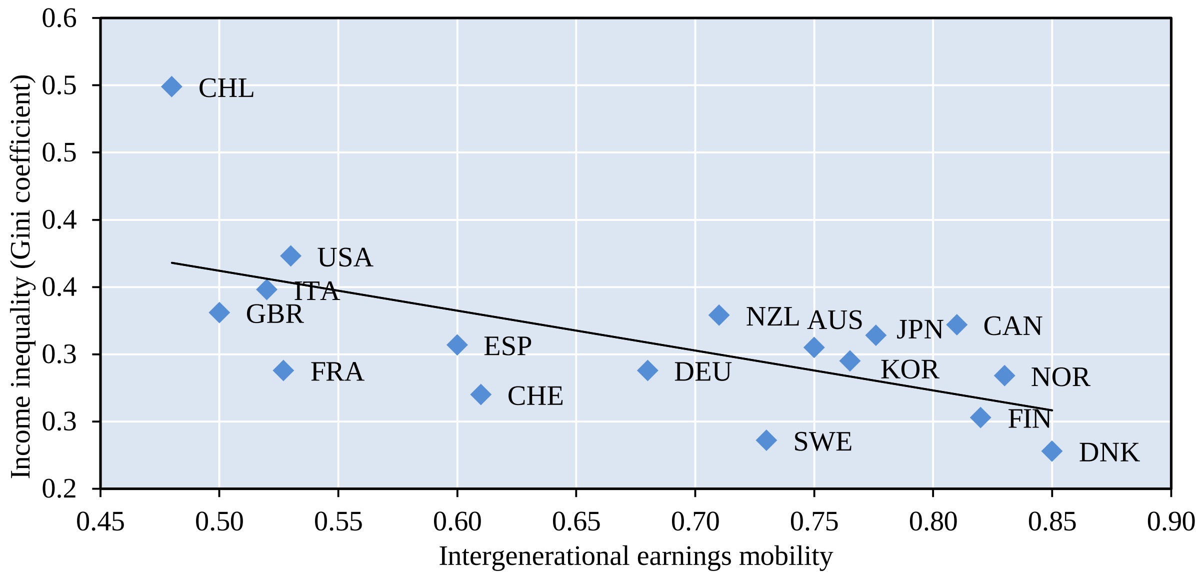


Note: The figure shows well-being outcomes in 11 dimensions by the socio-economic background of the individuals. High and low socio-economic background refer to the top and bottom quintile in the disposable income distribution for "Income and wealth", "Health status" and "Civic engagement and governance", while to educational attainment ISCED 5/6 ISCED versus 0/1/2 ISCED for all the other dimensions. In "Jobs and earnings" the socio-economic background includes also information on earnings and in "Education and skills" the PISA index of economic, social and cultural status (ESCS) is considered. Outcomes have been normalised between 0 and 10 to be comparable across the board. The chart covers the 34 OECD member countries as well as Brazil and Russia. The data refer to 2011, or the latest available information. For more information see: http://stats.oecd.org/Index.aspx?DataSetCode=BLI.
Source: OECD (2013g).

97. For many people, what matters is not so much inequality of outcomes but rather inequality of opportunities. However, across OECD countries, there is evidence that countries with higher income inequality (at a point in time) are also less socially mobile (Figure 7), as measured by the relationship between earnings of fathers and sons. More equal societies, such as Denmark, Finland and Norway, have greater earnings mobility while the opposite is true for countries where income inequality is higher, like in Chile, but also in Italy, the United Kingdom, and the United States. It is, moreover, the inequality in well-being outcomes – such as in health, education or civic participation – that have the most direct impact on citizens' daily lives.

Figure 7. Countries with higher income inequality are also less socially mobile

Income inequality and intergenerational earnings mobility



Note: Intergenerational earnings mobility is measured by the earnings elasticity between fathers and sons.

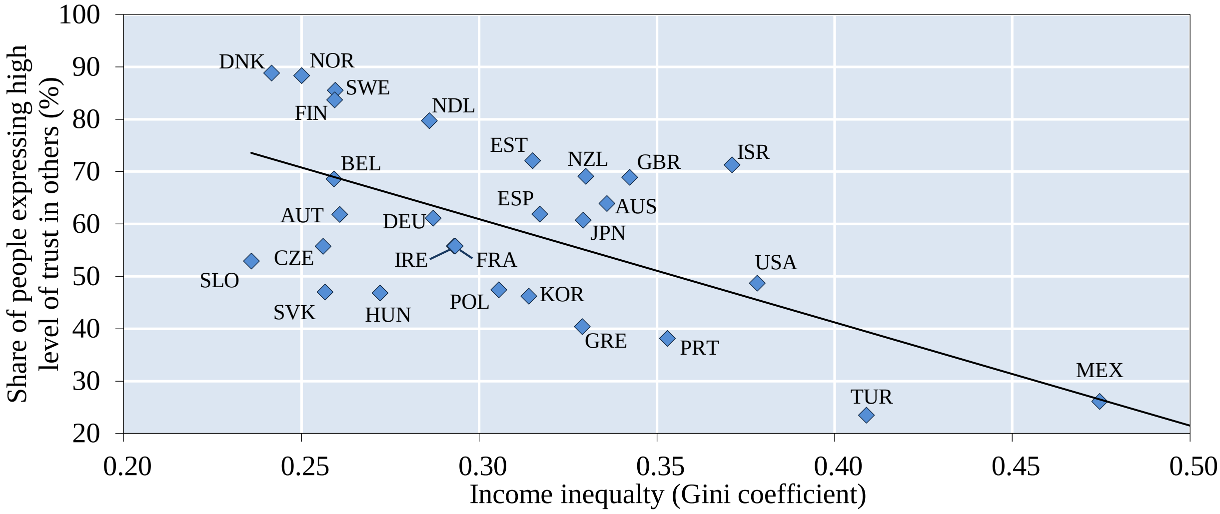
Source: OECD (2008a), D'Addio (2014, forthcoming).

98. Large shifts have also happened between generations. Between 1995 and 2007, incomes grew most among the elderly (close to 2% per year) and somewhat less among working-age adults and households with children (about 1.7% per year). Young people fell back, particularly in the United Kingdom, but also in Denmark, Greece, and the Netherlands. The crisis exacerbated this trend. While incomes of all other age groups fell, those of the elderly increased. The young lost the most in terms of disposable income - on average 0.9% per year between 2007 and 2010. Relative income poverty is now higher among youth (14%) than among elderly (12.5%) for the first time since OECD records started. Instead of getting a solid foundation upon which to be able to cope with economic and personal shocks in the future, young people find themselves struggling to get established in the adult world.

99. High inequality can also be detrimental for the social fabric, as it may reduce trust in others and confidence in public institutions. Higher levels of trust in others are strongly associated with lower levels of income inequality (Figure 8). There is a risk of a vicious circle developing: in more unequal societies it is harder for people in different strata of the population to share a sense of common purpose and to trust each other. Low levels of trust impede positive social bonds developing, in turn contributing to high inequality (OECD, 2014g).

Figure 8. Higher levels of trust in others are strongly associated with lower levels of income inequality

Share of people expressing high trust and levels of income inequality, late 2000s



Source: OECD (2011b).

100. As is discussed in Chapter 3, confidence in public institutions has fallen. This decline challenges the functioning of democratic institutions and the ability of governments to mobilise support for reforms. Policies to reduce inequalities are more difficult to introduce when low societal trust translates into reduced social cohesion and resistance to redistribution.

2. Strengthening resilience through an inclusive growth agenda

101. Resilient societies are not achieved simply by redistributing resources from the "haves" to "the have-nots" – though some such redistribution is both socially and economically desirable and necessary. Rather, the approach must be to ensure that all people in society are equipped with the competences and support necessary to take advantage of the circumstances available to them and to adapt when these circumstances change. It is much easier for someone with a good educational background, for example, to reskill and reorient in the labour market. Participation in lifelong learning activities is greater for those with high skills than for those with lower skill levels. This requires strong policy interventions at key moments in the life course of individuals and families.

A good start in life

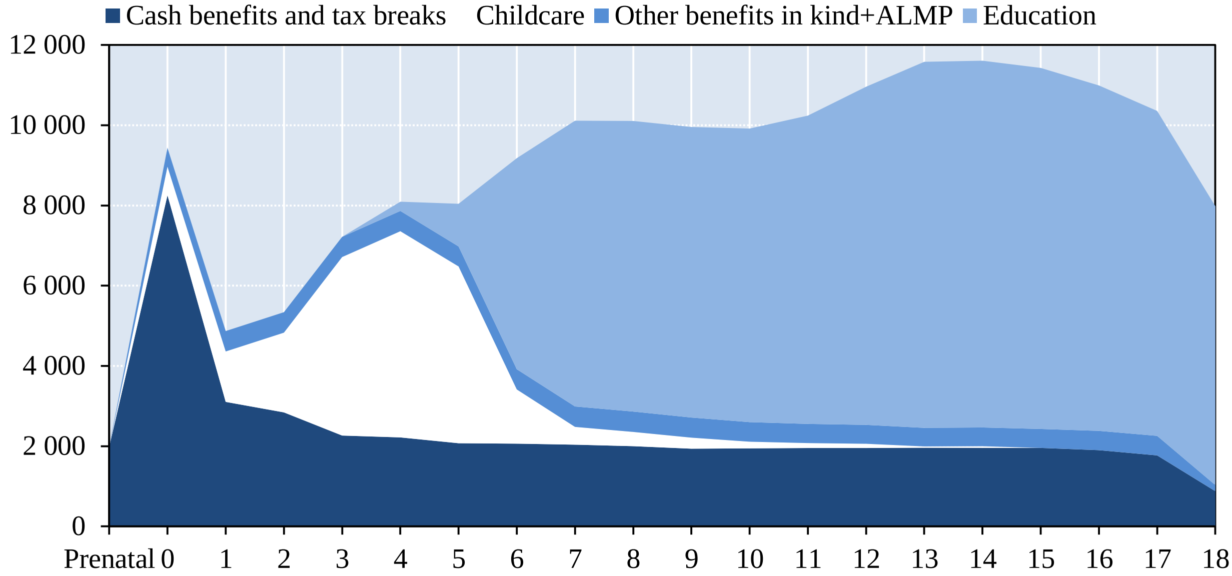
102. Supporting children and their development strengthens individuals and societies' resilience by increasing their chances for professional and personal development throughout their lives. The effectiveness of public investment in human capital is highest when it takes place in early childhood, when it is focused on the most vulnerable population, and when it is maintained throughout childhood. High-quality formal childcare is linked with cognitive and developmental gains, particularly for children from more disadvantaged home environments and at kindergarten age (OECD, 2011c). However, in many countries children in the lowest income groups are least likely to participate in formal childcare services, highlighting the importance of ensuring access, affordability and quality.

103. Many countries provide tax support and cash allowances to families throughout childhood, but spending on cash transfers is highest during the early years with the payment of maternity benefits and

income support benefits during parental leave (Figure 9). After this peak, however, average spending per child declines sharply to increase again gradually as children grow up.

Figure 9. Public investment in children increases as they grow up

Public spending per child in the OECD by age in USD PPP, 2009



Source: OECD (2014h) – OECD Family database.

104. Interventions during the early years should ensure that formal childcare services are available when parental leave runs out. However, in many countries there are gaps in support where there is a dip in investment when children are around 1 to 4 years of age. Investment in children during the "kindergarten years" (age 3 to 5) is below levels available in later years when children attend compulsory primary and secondary education.

105. Skills are formed in a variety of learning environments including families, schools and the community. Children from disadvantaged backgrounds are less likely to be exposed to stimulating learning environments that foster their skill development. Equipping children with the skills they need to achieve lifetime success and to contribute to society improves not just their economic prospects but also their prospects of enjoying better health, of being engaged and active citizens, and leading more satisfying lives. Skill-building is a lifelong commitment and policy makers need to ensure that it starts early.

Advancing an education agenda, including social and emotional skills

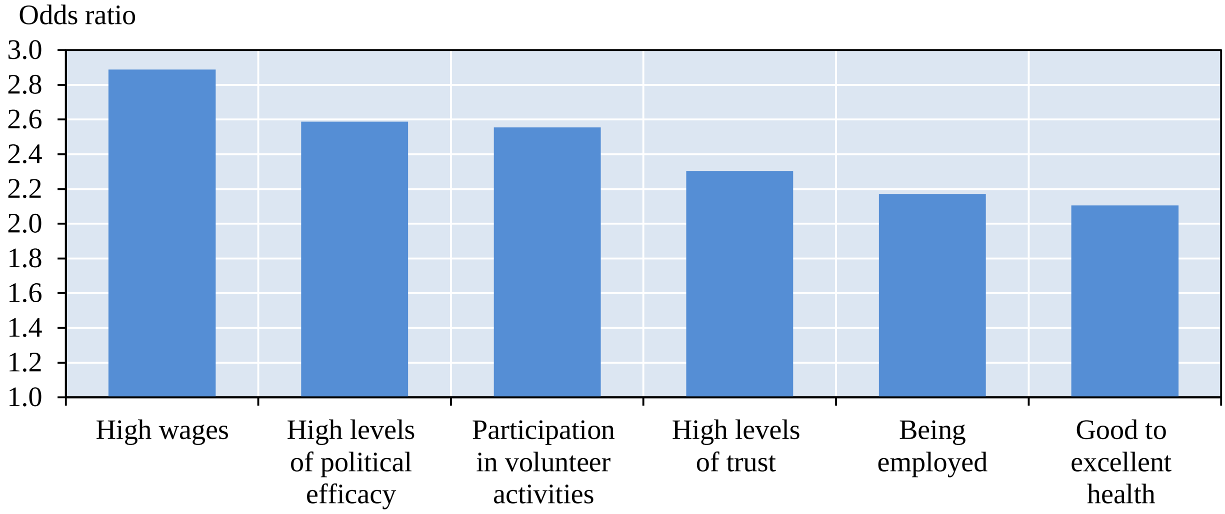
106. Skills are at the centre of any notion of resilience. At the aggregate level, within the complex interplay of economic, political, social and cultural contexts, skills can provide communities, institutions and infrastructure with greater flexibility, intelligence and responsiveness to rapid economic and social changes. At the individual level, skills are closely related with a wide array of factors related to resilience, including the reach of social networks, access to resources, but also beliefs and habits of mind, including the disposition to assess, take and manage risks.

107. In all countries, it is crucial to build solid skills through access to high-quality, inclusive and labour-market relevant education that enables individuals to realise good economic and social outcomes,

but also helps to build stronger and more resilient communities (Figure 10). Data from OECD's PISA surveys provides evidence that education can have a significant impact on individual resilience. Students from disadvantaged backgrounds in France, Israel or Turkey show learning outcomes that are comparable to the lowest performing countries in the PISA assessment, which then likely lead to very limited labour-market prospects.[10] PISA also shows that children can overcome social disadvantage and become resilient by being engaged, motivated and by holding strong beliefs in themselves and their abilities and the support by their teachers, thus offering policymakers tangible levers to raise resilience.

Figure 10. Likelihood of positive social and economic outcomes among highly literate adults (2012)

International average



Note: Odds ratios are adjusted for age, gender, educational attainment and immigrant and language background. High wages are defined as workers' hourly earnings that are above the country's median. Increased likelihood (odds ratio) of adults scoring at Level 4/5 in literacy on the OECD Survey of Adult Skills reporting high earnings, high levels of trust and political efficacy, good health, participating in volunteer activities and being employed, compared with adults scoring at or below Level 1 in literacy (adjusted).

Source: OECD (2013h) - Skills Outlook 2013: First Results from the Survey of Adult Skills.

108. It is also important to maintain skills and help those already in the labour market to adapt their skills to changes in labour market conditions. The OECD has made considerable progress in improving the measurement of key information processing skills and other generic skills over the past years. The OECD Survey of Adult Skills (PIAAC) has provided first-of-its-kind measures of the skills people have, and how these relate to economic, health and social outcomes. The results show that poor skills severely limit people's access to better jobs. On average across countries, the median wage of workers who score at Level 4 or 5 in the literacy test – meaning that they can make complex inferences and evaluate subtle arguments in written texts – is more than 60% higher than the wage of workers who score at or below Level 1 – those who can read short texts and understand basic vocabulary.

109. Differences in skills are also at the root of other inequalities. In all countries, adults with lower skills proficiency are far more likely than those with better skills to be unemployed, report poor health, to perceive themselves as objects rather than actors in political processes, and to have less trust in others,

10 By comparison, French PISA scores across the domains of mathematics, reading and science are close to or above the OECD average while those of Turkey and Israel are significantly below the OECD average.

which are all attributes that are closely related to individual resilience. At the aggregate level, where large shares of adults have poor skills, it becomes difficult to introduce productivity-enhancing technologies and new ways of working. That, in turn, hampers improvements in living standards and resilience at the aggregate level.

110. Research suggests that social and emotional skills are as important as cognitive skills in bringing better lives, including lower levels of obesity, depression, bullying, delinquency, anti-social behaviour and greater life satisfaction. Evidence from the United Kingdom suggests that moving a child from the lowest to the highest social and emotional skill decile reduces the likelihood of reporting obesity by 10 percentage points. Similarly, in Switzerland, raising social and emotional skills (self-esteem) reduces the likelihood of suffering from depression by 26 percentage points.[11]

111. PISA results from 2012 show that students who report that they persevere until everything is perfect, who remain interested in the tasks they start, do not give up easily when confronted with a problem. In as many as 25 countries and economies, students who have greater perseverance score at least 20 points higher in mathematics than students with lower levels of perseverance - the equivalent of about half a year of schooling. In Finland, Iceland, Korea, New Zealand and Norway, this difference is larger than 30 score points. Similarly, students with strong self-belief perform better in mathematics by an average of 32 PISA score points. The difference in mathematics performance associated with strong self-belief is 50 points or more in Iceland, Korea and Norway – well over the equivalent of a full school year (OECD 2013i).

Transition into work: unleashing the human capital of the young

112. Despite being the most educated generation ever to enter the labour market, young adults now face the highest risk of being unemployed and poor than any other age group in society (Figure 11). There is a risk that this discourages them from investing in skills and that it leads them to develop poor expectations about their own abilities and life chances with possible long-lasting scars[12]. They will have neither the skills, nor the self-confidence, to adapt to changing circumstances.

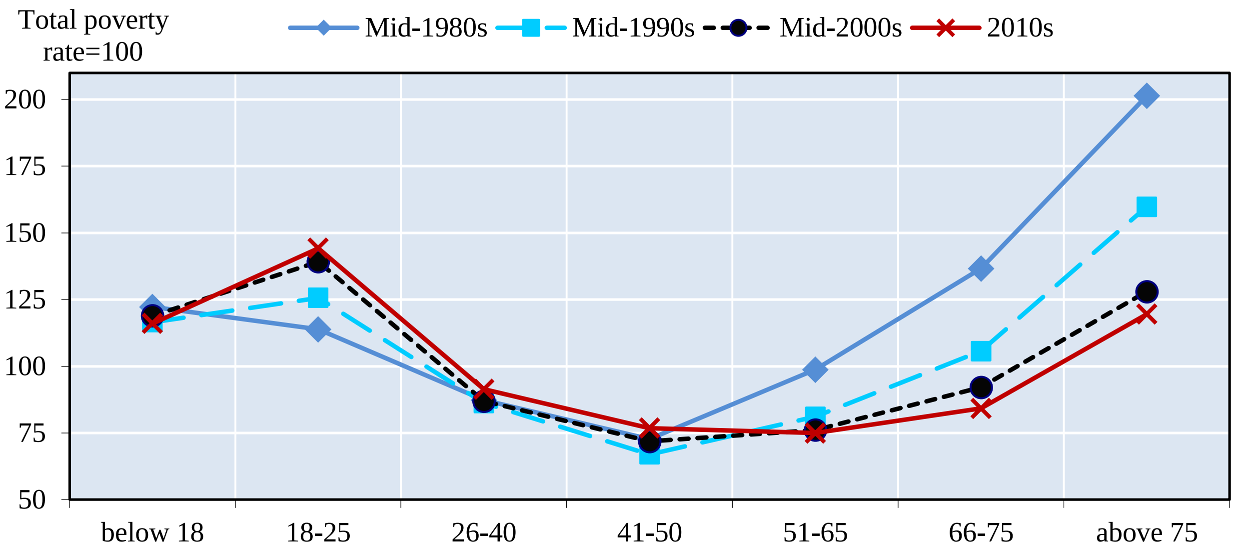
[11] The OECD Education and Social Progress (ESP) project is developing a comprehensive set of instruments to measure and follow social and emotional skills from childhood to adolescence. This work will help set international standards for social and emotional skill measurements. The resulting data will help countries reflect on the appropriateness of current policies and practices to further improve children's life chances.

[12] This may not be a universal phenomenon. For example, poor labour market conditions in Spain were correlated with an increase in student enrolment numbers and enrolment rates from 2008 to 2011.

Figure 11. Young adults are now more likely to be poor than any other age group

Risk of relative poverty by age of individuals, mid-1980s to 2010s, OECD average

Poverty rate of the entire population in each year = 100



Note: OECD unweighted average for 16 OECD countries for which data are available from the Mid-80s: Canada, Denmark, Finland, Germany, Israel, Italy, Japan, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Sweden, Turkey, United Kingdom, and the United States.

Source: OECD Income Distribution Database (www.oecd.org/social/income-distribution-database.htm).

113. The recent crisis has hit youth harder than any other group. The total number of employed youth (aged between 16 and 29 years) fell by 4.6 million in OECD countries between 2007 and 2011, despite a rise in the youth population of 1.8 million over the same period. This corresponds to a decline in the employment rate by 2.8 percentage points. The incidence of temporary employment among employed youth has risen over the same period. In this grim picture, low-educated youth perform even worse than others do: they are much more likely than other youth to not be employed, have non-standard jobs and work part-time involuntarily. As a result, the number of youth not in employment, education, or training (NEETs) has reached over 21 million in the OECD at the end of 2013 or 14.5% of the youth population. The consequence is that young adults are more likely to be poor than any other age group.

114. The study of pathways from school to work at the *individual level* suggests that while for some youth unemployment is only a temporary state in the transition from school to work, for others it tends to persist and lead to exclusion from the labour market into inactivity. Indeed, many young NEET remain in this status for a long period of time. In Europe, the risk of remaining a jobseeker or dropping out of the labour force for several years is positively associated with bad health, low educational attainment (including that of parents) and poverty. The same holds true in the United States, and these pathways are also positively associated with being black or Asian American (racial or ethnic status cannot be identified in the European data). In Europe, unemployment and inactivity are more persistent than in the United States: in the United States even long periods of unemployment or inactivity are often interrupted with short periods of employment or education. Within Europe, youth from English-speaking and Northern countries appear to make faster transitions into the labour market than youth in Continental countries.

115. For the most disadvantaged youth, programmes are needed to enhance the skills that are key to reach independence. These programmes need to target both cognitive skills and personality traits, which influence a range of outcomes: educational attainment, labour market performance and social outcomes

like health (mental health, substance abuse, risky sexual behaviours) or even crime. Personality traits or life skills, such as conscientiousness, emotional stability or openness to experience, are particularly important and teenagers and young adults can be helped to develop them.

Improving job quality and tackling informality

116. Reducing informality and addressing job quality are important for resilience, since households with informal or non-standard work arrangements are more likely to lose their jobs and earnings during downturns, and are less able to take advantage of new opportunities when economic conditions improve.

117. In the past, policy in many countries focused overwhelmingly on getting people into employment. While this remains a necessary condition for most people to be able to participate fully in society, it is not sufficient. Job quality not only affects individual well-being and that of the households in which they live, but also labour force participation, motivation, productivity and aggregate economic performance as well. A resilient society is one in which most people spend most of their working lives in jobs which enhance their quality of life and well-being.

118. In emerging economies, the main issue is not so much unemployment and the lack of jobs per se, but the lack of better paid and more protected jobs in the formal economy, especially as social protection is inadequate. The vast bulk of the population in these countries have weak social protection systems with limited coverage to those outside the formal sector. Without such support, laid-off workers cannot afford to search for a job and usually have no choice but to seek employment in the informal economy. Hence, a key policy aim must be to reduce vulnerability of workers to labour market risks and promote labour market security, while at the same time promoting development, employment and job-quality goals.

119. In advanced economies, a combination of balanced employment protection rules for workers on different contracts, unemployment benefits and effective training and activation policies provide both labour market security to workers and sufficient flexibility for employers. The balance between flexibility and security also needs to be maintained across different workforce groups. People on temporary contracts, especially young people, find it harder to keep or find jobs when economic times are bad, but often have less access to unemployment benefits and help in finding new jobs (see Box 1).

Box 1. Tackling labour market segmentation in Spain

In 2012, Spain embarked on an ambitious and comprehensive labour market reform. One element of the reform was to tackle labour market segmentation by reforming the system of employment protection. This involved modifying dismissal regulations for workers on open-ended contracts, redefining the conditions for fair dismissal, reducing monetary compensations in the case of unfair dismissal and eliminating the requirement of administrative authorisation in the case of collective redundancies. Moreover, a new permanent contract for full-time employees in small firms has been introduced with an extended trial period of one year. OECD indicators on employment protection legislation (EPL) indicate that the reform has significantly reduced the rigidity of the Spanish legislation on dismissals. Nevertheless, severance pay for permanent workers in Spain remains among the highest in OECD countries, despite the significant reduction in compensation for unfair dismissal brought about by the reform.

A preliminary evaluation of the results of the reform by the OECD (2013j) suggest that it has led to around 25 000 new permanent contracts each month, with the effect concentrated in small and medium firms (those below 100 employees). The reform has also contributed to containing the duration of the unemployment spells, in particular due to faster transitions into permanent contracts for those workers entering unemployment after a temporary job. The analysis also shows some signs that separations decreased after the reform, especially for temporary contracts, possibly resulting from the greater use of internal flexibility measures as an alternative to contract termination. All these findings point to a positive effect of the reform in dampening the widespread segmentation of the Spanish labour market, although it will take time before the duality of the labour market becomes a thing of the past.

Source: OECD (2013j).

120. Job quality is not only about the type of contract, it also concerns the content of the job. Some jobs are very demanding, both in terms of hours and required speed, which can be emotionally draining and stressful. Yet such high demand jobs can also be motivational, stimulating and rewarding. Conversely, low-effort jobs can be mundane and dull. Any imbalance between level of demands of the job and the level of job resources at the workplace is a critical factor that determines job strain. Evidence from epidemiological studies indicates that workers in high-strain jobs are more likely to suffer from physical and mental health problems. This is worrying as high-strain jobs are relatively widespread and have increased during the past decade in selected European countries (OECD, 2012a).

121. Employers are best placed to ensure healthy work environments by reacting at an early stage to combat the adverse effects of work-related stress and mental illness. This involves measures to prevent work-related health problems, such as (i) providing a supportive environment; (ii) management and human-resources practices to promote workers' engagement; (iii) training; (iv) management systems to maintain and enhance good conditions (notably through occupational, safety and health (OSH) measures for those physically demanding jobs). However, these measures also need to be combined with early monitoring and intervention for those taking sick leave so that those with significant problems can benefit from timely help. If someone does have to take long-term sick leave, they may need to benefit from extra support as they move back into work (OECD, 2012a). Employers and employees can be supported in these challenges by government providing accompanying services and advice.

122. There is also a need to ensure that appropriate health services, particularly for those conditions, which may not be life-threatening but nonetheless reduce work capacity. Mental health conditions such as anxiety and depression are inadequately diagnosed and treated in all OECD countries, with the result that mental health problems, which are treatable and manageable through appropriate workplace adaptation, are now frequently the biggest source of disability benefit receipt.

123. A further dimension of job quality is whether workers have the opportunity to continue to develop their skills. But, those with low skills and low levels of educational attainment are much less likely to access training than those with higher attainment and skills, which risks trapping low-skilled workers in a vicious spiral in which lack of opportunity for training and low skills becomes mutually reinforcing.

124. However, skills are not always effectively used by employers, and this can particularly be the case within certain sectors and regions (OECD, 2014j). There are a number of ways in which policymakers can help to increase employer demand for, and utilisation of, skills at the local level. These are discussed in Box 2 below.

Box 2. Tools to raise the quality of local jobs and improve skills utilisation

- *Provide technical assistance* to improve work organisation and management practices.
- *Create incentives for collaboration,* e.g. helping firms to share knowledge and develop shared regional brands, providing funding for joint firm initiatives to raise product market strategies.
- *Ensure that the public sector prioritises quality jobs within its own HR practices*
- *Ensure the availability of patient capital*: in order to invest fully in their staff companies need long-term investment security.
- *Develop a quality-driven supply chain*: public procurement can be used to help local firms think longer term and therefore invest in increased productivity.
- *Ensuring that skills policies are embedded in economic development policies*
- *Working with intermediaries*: brokers and intermediaries can be particularly useful when working with employers on productivity issues. Unions can also be natural partners in improving job quality.

Ensuring that under-represented groups do better in the labour market

125. Increasing the labour market participation of under-represented groups – such as women, youth and older people – can contribute to economic growth and greater social cohesion. This can support resilience by increasing the number of economically active citizens and thereby government revenues, reducing disparities among the workforce, and fostering social solidarity, while allowing a reduction in expenditures on out-of-work benefits.

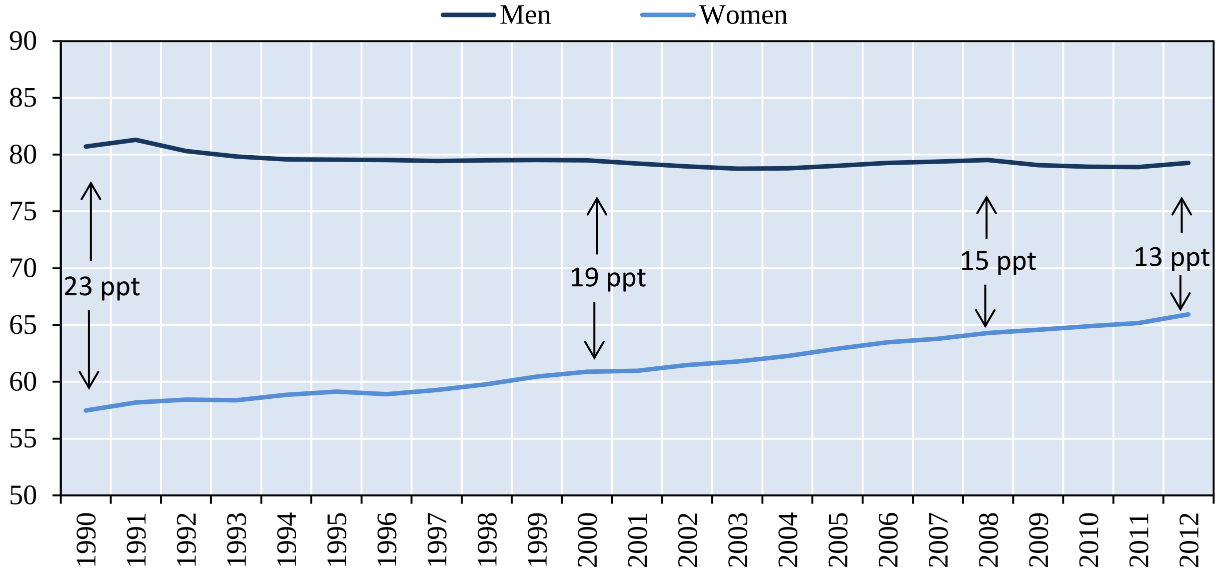
Closing the gender gap in employment

126. Closing the gender gap must be a central part of any strategy to create more sustainable and inclusive economies and societies. It is not only about fairness and equity, but also about empowerment and resilience of women and economic growth. Greater educational attainment has accounted for about half of the economic growth in OECD countries in the past 50 years – and that owes a lot to bringing more girls to higher levels of education and achieving greater gender equality in educational attainment. OECD PISA results show that girls often perform better at school than boys and, on average, young women (25-34 years) are more likely than young men to complete tertiary education.

127. Despite this progress in education and the fact that gender gaps in labour force participation rates have almost halved over the last two decades in OECD countries, gender gaps in employment remain considerable (Figure 12). Occupational segregation has not markedly improved: men work long hours while women are more likely to work part-time, gender pay gaps persist, and there are still too few women at senior job levels, especially among managers and in company boards. Women are also under-represented among entrepreneurs, and when they do start a business, it is on a smaller scale than businesses run by men. The barriers are numerous. High formal childcare costs can lead women to cut back on working hours, workplace cultures may penalise women for interrupting their careers or working part-time, and discriminatory social norms may limit women's access to credit. Women continue to do the bulk of unpaid household work, childcare and looking after ageing parents, making it difficult to realise their full potential in paid work.

Figure 12. The gender labour force participation gap is narrowing

Labour force participation rate, men en women, age 15-64



Source: OECD Gender Data Portal (http://www.oecd.org/gender/data).

128. Assuming that gender employment gaps remain at current levels and male and female labour participation rates stay constant, demographic trends suggest that the labour force will decrease by more than 10% in Germany and Japan by 2030, and will also affect labour supply in many other countries. This potential decline can be mitigated if female labour force participation were to increase. If, for example, labour force participation rates of women were to reach those of men by 2030 in OECD countries, GDP would increase by 12% over 20 years.

129. In addition to being fair and just, closing gender gaps in employment and ensuring greater participation of women in labour markets are important to promote the resilience of economies and societies. Increased female participation can improve the resilience of households, communities and entire economies to shocks, as well as strengthening the ability of societies to make the most of new opportunities and to innovate.

3. Addressing intergenerational solidarity issues arising from demographic change

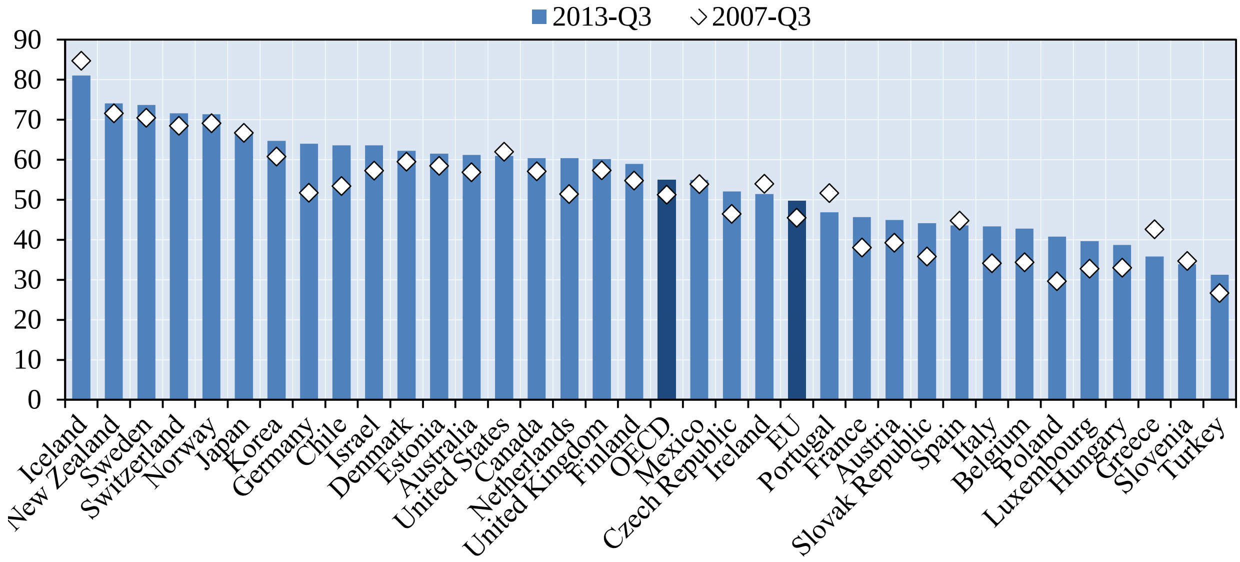
130. Population ageing will present economic and social challenges but will also offer new opportunities in the silver economy (senior entrepreneurship and product-service ecology for seniors) and the white economy (active ageing approaches and new technologies for care of the elderly). For example, the challenge of Alzheimer's' and dementia is inspiring new research in genomics and giving a great impetus to the use of 'Big Data' in order to identify patterns that might lead to breakthroughs in treatment and care. The G8 initiative on dementia, in which the OECD is playing a major role, is giving international focus to such efforts. ICT can be used to deliver services to the elderly more effectively – a major focus of OECD work. At the local level, cities and regions, which adapt to ageing more effectively, will be in a better position to take advantage of the economic opportunities provided by ageing in the future.

131. OECD populations are ageing rapidly. In 1960s, there were about seven people of working age for every older person across the OECD. By 2012, this ratio had fallen to four. Support rates are projected to decline in all OECD countries over the next 40 years to an average of two people of working age for every older person.

132. Contrary to what was observed in previous recessions, the employment of older people rose in almost every OECD country during the crisis (Figure 13). On average across OECD countries, the employment rate of 55-64 year-olds increased from 51% in 2007 to 55% in 2013 (Figure 15). Older workers often postponed retirement, partly reflecting strengthened incentives to work at an older age but also increasing levels of education and wealth.

Figure 13. More older people are working, but large country differences remain

Employment of older workers aged 55-64 as a percentage of the population in the age group



Source: OECD (2014k).

133. People losing their jobs in their late 50s remain at risk of long-term unemployment, social isolation and poverty. They often find themselves caught in a trap between being too young to retire but too old to find a new job. Too often, older workers are perceived as unattractive by employers due to stereotypes regarding their adaptability and productivity. Older workers also rarely change jobs toward the end of their careers and have a lower hiring rate than younger workers.

134. To become resilient, however, countries need to begin preparing for this long-term transformation of their economies and societies, which will affect not only pensions, health and long-term care systems but also economic development more broadly and put the solidarity between generations to the test. Intergenerational solidarity describes a complicated web of relationships between generations, both within families and in wider societies, involving mutually-beneficial exchanges of time, money and risks between different age groups. Policies need to foster these relations, which are an important element of societies' resilience.

135. Life expectancy has seen a near-continuous increase in the latter half of the 20th century, resulting in increasing periods spent in retirement. Recent OECD estimates suggest that women and men could spend 22.5 years and 18 years respectively in retirement in 2012; this is eight years more than in 1970. Most forecasts show continued growth of life expectancy in the future. On the basis of UN projections, life expectancy at 65 will increase further to 21.9 years for men and 25.8 for women in 2060. Increasing the age at which people retire and keeping older workers in the labour market longer have therefore been major objectives of many recent pension and labour market reforms in OECD countries.

136. Pension policy has to strike a delicate balance between social adequacy and financial sustainability. This trade-off could prove a flashpoint for intergenerational conflict. Public benefits remain the backbone of retirement-income support in OECD countries, accounting for almost 60% of old-age incomes on average (according to the OECD income-distribution database). Most public pensions are financed on a pay-as-you-go basis: contributions and taxes from current workers' pay benefits to current retirees. Intergenerational solidarity is crucial to these arrangements. Upcoming generations are needed to

pay for the future retirement benefits of today's workers, thus reciprocating payments made for their parents' generation's pensions.

137. Countries around the world have been responding to the pressure from ageing by introducing pension reforms, which have led to higher pension ages, lower benefit levels, and tightening of access to early retirement benefits. Changes in 15 countries analysed in detail by the OECD will reduce benefits by an average of nearly 20% (OECD, 2011d). This might risk a resurgence of old-age poverty in the future. This risk is also heightened by the growth in earnings inequality in OECD countries, which feeds through into greater inequality in retirement incomes.

138. Policies for long-term care of older people have, so far, been less affected by demographic developments, largely because long-term care has primarily been provided by family carers and policy makers have focused less on their situation. But ageing populations, along with advances in medical technology, and social and labour market changes will inevitably shift the policy agenda to long-term care. The proportion of the population aged 80 or over in OECD countries – half of whom will need some sort of help in their daily living, unless there are significant improvements in the health of older people in the future – is projected to increase from 4% in 2010 to nearly 10% by 2050. In a few countries – such as Germany, Italy, Japan and Korea – this figure will be around 15%.

139. Most care for older people is informal, as shown by OECD analysis (OECD, 2011e). About two-thirds of informal carers are women. Typically, between 70% and 90% of people providing care for older people are family members. Intergenerational solidarity is vividly demonstrated for many families when an elderly relative requires care and with an increasing share of older people needing long-term care, sole reliance on family carers will be challenged.

140. Every OECD country has some form of publicly financed long-term care for older people. These schemes differ, however, in their institutional structure, design and emphasis. Perhaps the most significant difference is in coverage, with countries providing a different mix of means-tested and universal support. In many countries, long-term care policy and provision appears disjointed, with little co-ordination between support for people in their own homes, independent or semi-independent accommodation, and residential or nursing care of varying intensity.

141. The discussion about adequate and sustainable pensions, health and long-term care services highlights transfers from working-age people to the elderly. But there are also important transfers of time and money going in the opposite direction. The data available show that in many countries, older people are net givers of financial support to younger generations. Grandparents often spend a substantial amount of time caring for their grandchildren – in some cases at the same time as providing long-term care to their own parents. Policy can play a role in raising public awareness of these significant contributions by older people, helping to counter any negative attitudes towards older generations, including among older people themselves.

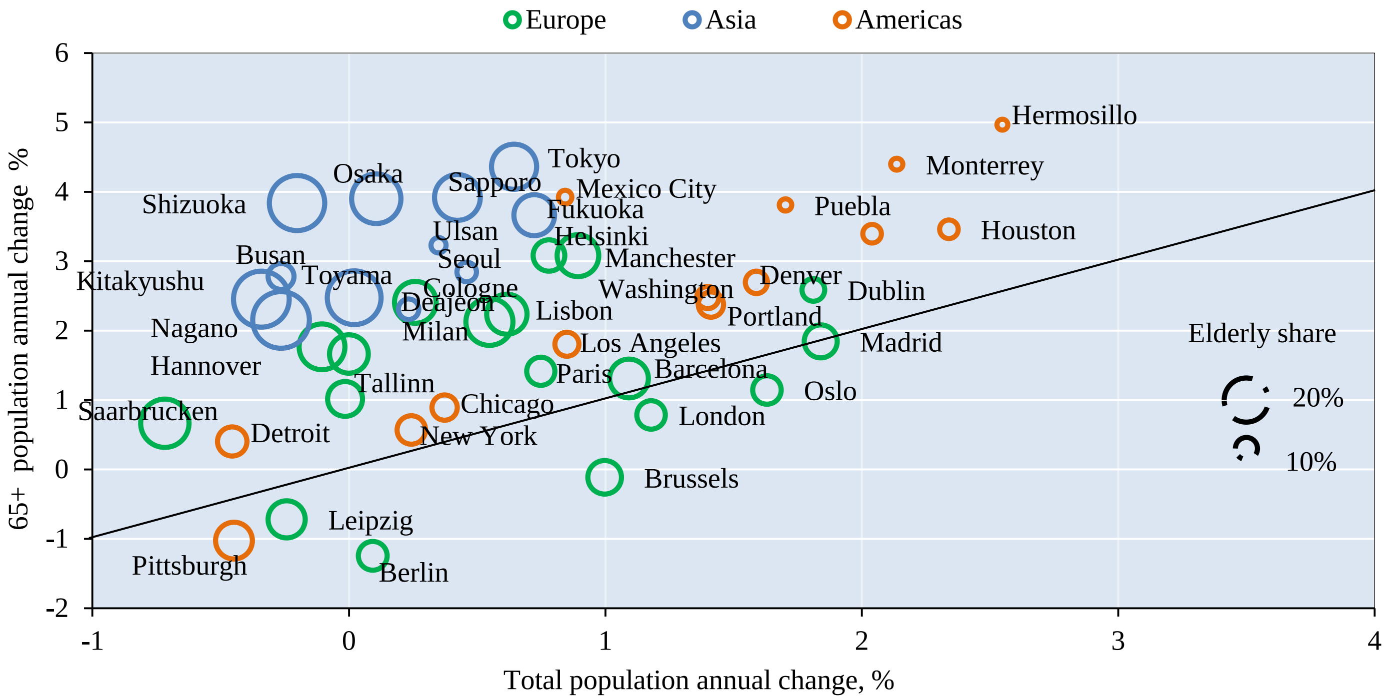
142. A frequently-neglected aspect of population ageing is that pressures on economic and social systems created by ageing will vary dramatically from one place to another. Some cities are ageing very rapidly (see Figure 14) but are only now recognising that they need to develop long-term approaches to address very different age structures in their cities, with impacts on service delivery, land use and infrastructure needs. From 2001 to 2011, suburban areas have aged at a more rapid rate (26%) than urban cores (22%). Spatial segregation of elderly populations raises the risk that suburban areas may become cut off from economic life at the urban core.

143. Cities are looking for solutions to mitigate inequality. Toyama City (Japan), with its 24% of elderly population ratio, is remodelling its physical planning to respond better to the needs of the elderly.

Even relatively young cities, such as Manchester (United Kingdom), are concerned about discrimination against elderly people. Among the policy options to explore, ‘compact city’ strategies are particularly promising. Characterised by high-density development, mixed land use and smarter public transport, such strategies can help improve access to core public services.

Figure 14. Older metropolitan areas age faster, while younger ones age slower in Europe and faster in the Americas

Annual population change, total and 65+, FUAs, 2001-2011 (%)



Source: OECD Metropolitan Database.

4. Improving social resilience through new policy approaches

144. The baby boomers are beginning to retire, while fertility rates have dropped to very low levels in many countries. The balance of societies will change, with smaller working-age populations, potentially larger labour market imbalances, and financing of pensions and caring for elderly people becoming more difficult. Income inequality has been increasing, particularly before taxes and transfers. Capital income is more concentrated and the distribution of earnings is drifting apart. At the moment, elderly groups are the least unequal part of the population, reflecting the fact that their labour market experiences have been relatively similar – full employment, with limited wage inequality. However, a “job for life” and even a “career for life” are no longer a reality and the future elderly population will paint a far more varied picture, with more having experienced extended periods of unemployment and low wages, and others with higher earnings. Furthermore, pension systems have been retrenched, meaning that public transfers are less likely to offset differences in lifetime earnings.

145. Inequality in income is reflected in inequality in health. The gap in healthy life expectancy between low social groups and higher ones is increasing. As a result, a sizeable share of the future elderly risks entering older ages with disabilities and in ill-health. Their ability to keep working and contributing to society will be limited. Further, the need for long-term care and differences in access to care services risk

exacerbating inequalities for the elderly. The experience of old age is going to change dramatically for today's younger generations, with improved living standards and a longer life for some and a shorter, sicker and more poverty-ridden life for others.

146. Societies must not ignore increasing inequalities as populations age. In addition to moral imperatives, there are hard economic reasons that mean unequal ageing is bad policy. Inequality in incomes, wealth, health status and other areas of well-being – which compound over the lifecycle – can result in growing numbers of older people in poverty and destitution. A growing divide in the well-being of older people will put existing welfare systems to the test. It will also jeopardize the effectiveness of recent reforms of labour markets, pension systems and long-term care arrangements.

147. Making societies more resilient will help meet these challenges. Policies that promote inclusive growth can help achieve this. Growth which only benefits the top half of the population (or for that matter, the top 1%) is not inclusive, and risks leaving fractured societies and lost opportunities for individuals, families and the economy. By intervening to help people make the most of their talent, more people can contribute to growth, and benefit from it. Societies can be made more resilient and substantial savings of public expenditure could be made if income, wealth and health inequalities and poverty risks were picked up earlier and addressed at younger ages. Understanding the life course trajectories of today's older people, middle-aged cohorts and young generations, as well as the implications for their health and living standards at older ages, will enable governments to design sustainable and cost-effective policy approaches towards demographic ageing. This will be the theme of a new OECD new initiative in the coming years.

148. Well-designed social protection, health systems, and labour market and migration policies can help reduce inequalities and promote stronger and more balanced growth. Other policy areas, such as education, regional development, housing, and financial market policies, will also have an impact on the extent to which different generations can participate fully in labour markets during their active years and prepare for a long healthy life and a decent retirement.

149. Individuals need to be equipped to deal with a society in which change is inevitable, though the nature and form of change cannot always be predicted easily. Individuals will cope best when they have fundamental skills, self-confidence, a strong social network, and support from a set of government policies. Much of what is required is known. There is an overwhelming case for investing in ensuring that young children from disadvantaged backgrounds do not fall behind their peers.

5. Nutrition, health and food system resilience

150. The food system has seen major improvements in food safety, food security, and nutrition in the past century, contributing to the development of nations and to the wellbeing of individuals. Today, it faces unprecedented challenges. Population growth and a nutrition transition linked to increasing prosperity in emerging and developing economies call for further productivity growth in food production and distribution systems. Some sources estimate that agricultural production will need to double by 2050 in order to feed a growing and wealthier world population. At the same time, many countries, at all levels of income and development, experience the alarming consequences of over-nutrition and obesity, which co-exists with food insecurity and undernourishment. Demand is also growing for crops to be used in energy production, often sustained by government policies, with significant impacts on food markets. Food waste and losses – whether post-harvest due to poor infrastructure and poorly functioning markets or in the distribution system, homes and restaurants – is a significant issue. Competing demands for natural resources – particularly soil and water – are growing while climate change introduces new uncertainties for producers.

151. Health problems related to food, water and lifestyles are emerging as major concerns for governments. Of the top 20 risk factors for health, ten are related to nutrition. Under-nutrition and micronutrient deficiencies continue to play an important role in morbidity and mortality in low income countries, and are responsible for the loss of 150 million healthy life years each year, according to the latest Global Burden of Disease estimates. Nevertheless, the largest nutrition-related burden – responsible for the loss of 230 million healthy life years – now comes from different forms of malnutrition, characterised by energy-rich and often nutrient-poor diets, as well as by excess consumption of foods high in salt, sugar and fat. The most dramatic, but not the sole, manifestation of this trend is the current obesity epidemic (Figure 15). Since 1980, obesity rates have doubled or tripled in many countries worldwide, and in more than half of OECD countries over 50% of the population is currently overweight (OECD, 2010).

152. A resilient society is a healthy one. Wherever it lies on the spectrum of under- to over-nutrition, an unhealthy population can hinder development and create large social and economic costs. Governments need to better understand the driving forces behind current health outcomes in order to identify appropriate policy responses. They should strive to identify win-win policy levers that would improve health and nutrition while also contributing to resource sustainability.

153. A first step in this direction would be to determine the main drivers of observed behaviours and the nutrition-related health outcomes they lead to, distinguishing between supply- and demand-side drivers and covering factors such as prices; incomes; level of urbanisation; family and societal structures; factors affecting physical activity; and levels of education.

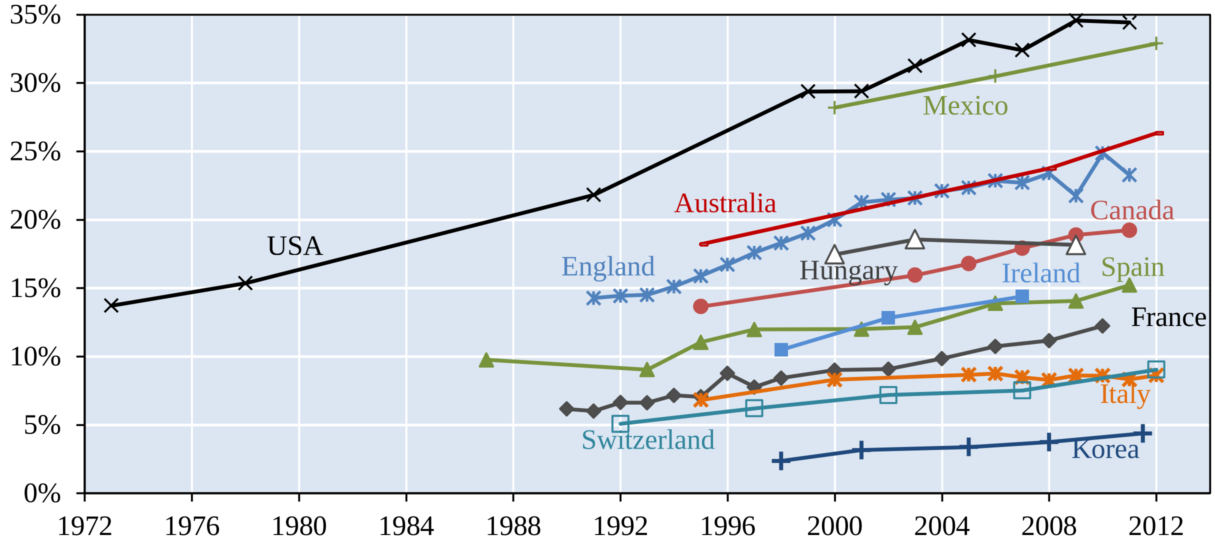
154. A second step would be to identify both the economy-wide policy levers (*e.g.* information, education, regulation, taxes, subsidies, and innovation – all related both to food and lifestyle choices). Within the food system, a broad range of policy dimensions could be explored, ranging from farm level interventions that change relative prices; agri-environmental policies; innovation and sustainability incentives; safety related regulations throughout the food chain; private and public standards; labelling and packaging; and consumer information and education. Governments need to better understand how effective, efficient and equitable different policies are in improving nutrition and dietary choices, while at the same time ensuring adequate access to food for all population groups.

155. New and emerging technologies in food production, including biotechnologies and nanotechnologies, hold promise for improving nutritional outcomes and resource sustainability, while reducing waste. These technologies present both opportunities and challenges for food and environmental safety. The OECD is helping governments and industry to respond appropriately. New technologies are creating sophisticated methods to gather and distribute information about the production processes and characteristics of food products. Dynamic information and labelling systems that are updated in real time open opportunities to access reliable information along the food chain. There are potential benefits for consumers to improve the quality of their food choices, including in terms of nutritional attributes; for farmers to develop strategies to respond to changing demands; for the food industry to trace the origin of products in order to ensure both quality and safety. Governments need to ensure that the policy environment is sufficiently supportive of the development of potential technological solutions, ensuring the right balance between publicly and privately funded research and fostering public-private partnerships where they are appropriate.

156. Consumer behaviour and health outcomes related to food are the result of complex social and economic interactions, and are only partly related to agricultural and food policy dimensions. Understanding the full range of issues is key to finding sustainable solutions.

Figure 15. Obesity growth in selected OECD countries

Proportion of adults who are obese (BMI>30)



Source: OECD age-standardised estimates based on national health survey data.

6. Building resilient societies in developing countries

157. Over the last 20 years, the global community has come together around two historic development efforts: the United Nations Conference on Sustainable Development, which addressed how to meet the needs of today without sacrificing our future; and, the Millennium Declaration and Development Goals (MDGs), which helped to galvanise an unprecedented international effort to meet the needs of the world's poorest.

158. During those 20 years, the world has undergone a dramatic change. Today, economic shocks and other sources of tension are playing a major role in pushing developing country households below the poverty line. Global events, like the financial crisis, renewed conflicts in South Sudan and the Central African Republic, and large natural disasters, sometimes linked to climate change, have altered the course of progress for developing countries in unpredictable ways and demonstrated the need to revisit long-accepted assumptions and models.

159. It is a fact that many people in developing countries are unable to cope with everyday personal shocks – losing a job, getting sick, dealing with changing weather patterns, or falling victim to crime – so these risks pose just as big a threat to their development as poverty itself. The battle against risk and for sustainability and resilience has a different dimension in developing countries and we need to be aware of these particularities when providing policy recommendations.

160. The Millennium Development Goals set out a global vision of development with commonly agreed priorities, but they did not prioritise risk management. However, development actions are never risk neutral, as development either increases risk and vulnerability, or helps to reduce them. This highlights the relevance of the post-2015 development framework incorporating a clear focus on promoting resilience to risks and shocks.

161. To make development resilient and sustainable, development partners will need to break away from silos, maximise potential synergies and minimise potential trade-offs, take informed decisions, and

broaden partnerships for on-the-ground delivery, optimising the use of resources and achieving greater, and more sustainable, impact.

162. A first step in this direction would be clear recognition that building resilience to risks is key to achieving sustainable development. Resilience to shocks is critical if we are to protect hard-won development gains. Resilience involves increasing the capacity of societies to absorb, adapt to, and transform in the face of risks and opportunities – this translates into a call to help people get out of poverty, and stay out of poverty, no matter what obstacles are placed in their way (OECD, 2013). Embracing resilience in the post-2015 would imply recognising the importance of resilience across all layers of society, especially the most vulnerable people. In the same light, the measurement of results should focus on outcomes and impact, rather than processes; it should be workable at the global level, while still making sense when applied to national, local and community contexts.

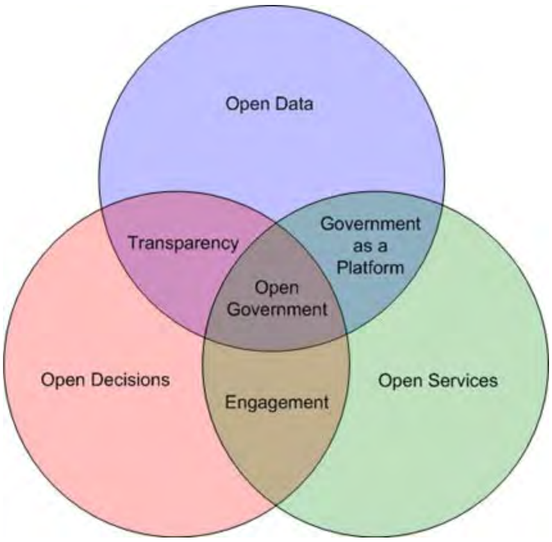
163. A second step would be to adopt a growth model that is sustainable, and that decreases inequality and risks. Growth is important for development, but current economic growth models for developing country contexts ignore important environmental and social costs that are key for sustainable development.

164. A third step would be to place a high priority on tackling the widespread persistence of gender inequalities, a root cause of insecurity, in the post-2015 framework. Women's unequal access to economic resources such as land, property and credit, their dependence on natural resources for their livelihoods, and their continuing concentration at the informal end of labour markets, serve to undermine women's resilience to shocks and stresses. At the same time, women and girls are leaders in developing effective coping strategies. The post-2015 framework needs to ensure the systematic integration of gender equality across social, economic, and environmental and risk reduction goals, targets and indicators; it should also place particular emphasis on ensuring the full and equal participation of women in economic and environmental decision-making, at all levels.

CHAPTER 3: RESILIENT INSTITUTIONS

165. Openness and transparency are at the heart of resilient societies because they bring citizens and government closer together. More open and inclusive policy-making processes help to ensure that policies are better informed and that they match citizens' needs. Facilitating greater citizen participation can enhance democratic engagement, build trust in government, and harness productive forms of responsibility – including in the delivery of public services. The notion of open government is rapidly transforming the way governments and public institutions work, in particular giving citizens more voice and a greater role in the policy cycle from design to implementation. Resilient public institutions that can count on citizens' trust are well placed to promote integrity and trust in private sector businesses and institutions and encourage Responsible Business Conduct (RBC).

Figure 16. Three key dimensions of open government



166. The remainder of this chapter is organised as follows. **Section 1** starts by discussing how open government approaches can help empowering people and make public administrations both more efficient and transparent. **Section 2** sheds some light on the decline in public trust in government since the crisis and its implications and discusses the factors that drive people's trust in government, including sustainable fiscal policies, fair and transparent tax systems, effective and innovative service delivery, and a strong, effective judiciary. **Section 3** presents policy options to restore trust by promoting fairer and more transparent governance structures. Finally, **Section 4** deals with policies to tackle the vulnerabilities of social institutions, focussing on unemployment, pension and health insurance.

1. Open government: empowering people

167. The shift to open government provides an important incentive for the public administration to enhance its performance. Both citizens and business are more able to examine the outcomes from public policy, comment on failures and poor performance, and encourage governments to improve. Over time, this is becoming an important force for reform and modernisation in the public sector (Figure 17).

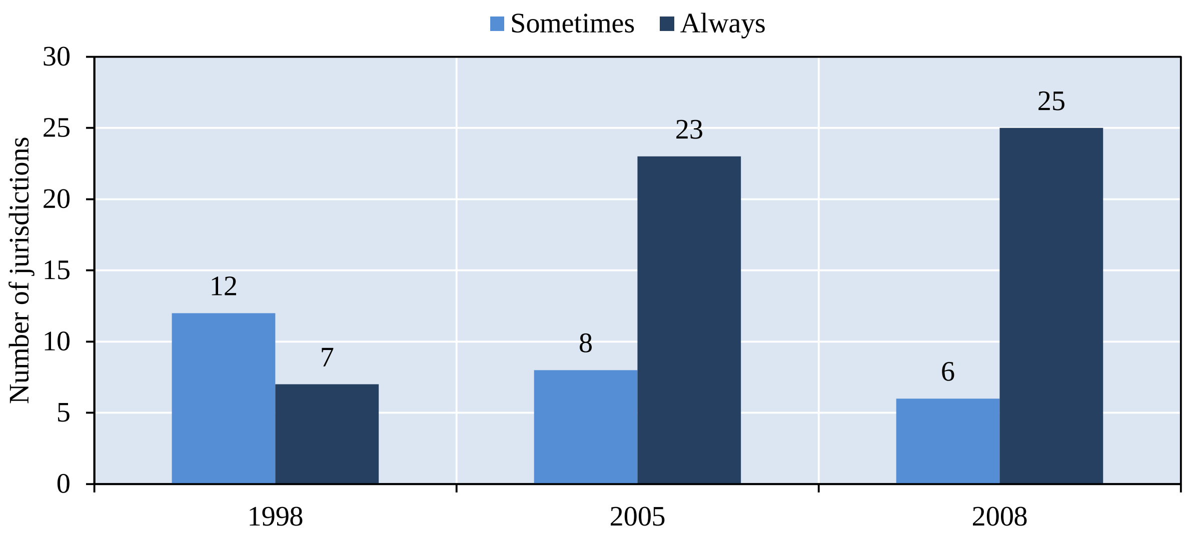
168. Open government is being made possible by technological advances that allow citizens and government to interact in ways never seen before. Most countries have now advanced a long way in the use of e-government as a service delivery tool. For example, in countries such as Estonia, Chile, Mexico and Italy, virtually all tax returns are now filed online. At the policy development stage, technology offers governments the possibility to better understand the needs of citizens through large-scale consultation and crowd sourcing mechanisms.

169. Today's consultation initiatives can canvass input and opinion from large numbers of citizens, whereas in the past they relied on focus groups or sampling. In Europe, almost 10 percent of the adult population has taken part in online consultations or voting, with some countries – such as Iceland and the Netherlands – reaching over 20 percent of the population. In the field of tax administration, the opportunity to engage in much more effective two-way communication with citizens is being exploited to involve taxpayers directly in the design of the processes used to determine and collect their tax liabilities.

170. Through web-based platforms and user-friendly data and information tools, governments can promote an "ecosystem" of diverse actors engaged in public policy implementation and evaluation of outcomes. An increasing number of initiatives use crowd sourcing to generate new ideas for or improvements to public policies. *ParticipatioNZ*, for example, allows people to comment on or propose refinements to government policy via a heavily used web platform.

171. Citizen reporting is becoming a popular way for governments to empower citizens and demonstrate that government is responsive to citizens and values their input. In the US, *Recovery.gov* provided a citizen monitoring tool for the stimulus package through which citizens were able to report suspected fraud, waste, and abuse of funds, leading to over 4 000 complaints. Platforms have been launched to help citizens use open data to hold elected officials accountable. In the United Kingdom, *TheyWorkForYou* provides easy-to-use data on the voting and attendance records, expenses, and financial interests of each of the 650 Members of Parliament. User groups have also sprung up to help aggregate and channel feedback from citizens to government in more effective ways.

Figure 17. Consultation with stakeholders in the preparation of new regulations



Note: Data for 1998 are not available for the European Union, Luxembourg, Poland and the Slovak Republic. This means that this figure is based on data for 27 countries in 1998 and for 30 countries and the EU in 2005/2008. In 2005 and 2008 countries were asked whether they consult sometimes or always on draft primary laws and draft subordinate regulation. If a country answered "always" for one type of regulation, this was counted in the category "always" in the graph.

Source: OECD (2008b), Indicators of Regulatory Management Systems (database), www.oecd.org/regreform/indicators.

172. Governments in emerging economies are increasingly aware of the need for openness and accountability to promote investment, retain talent and maintain social cohesion. Open government is now a priority for many dynamic non-OECD countries including Colombia, Indonesia and Tunisia. Many developing countries are forging ahead with important efforts to use technology to bring government and citizens closer together – such as Costa Rica, Jordan, and Myanmar. The Open Government Partnership, which now includes 63 countries, is one means for sharing good practice across countries.

173. Open data is crucial to the functioning of open governments. Freedom of information or access to information laws are now in place in most OECD countries and technology has helped to overcome some of the practical problems related to accessing re-usable information, and helping governments move in the direction of truly open data. Open government data (OGD) promises to provide the basis for stronger public participation and collaboration in the creation of innovative, responsive and value-added public services. It also stimulates innovation by the private sector and can have tangible economic benefits. The success of initiatives such as *Dark Sky Swackett* or *Yahoo!Weather* are encouraging governments to invest in making data available in easily accessible and reusable ways. The *OECD Recommendation of the Council for Enhanced Access and More Effective Use of Public Sector Information,* aims to stimulate private sector innovation through the (re-) use of public sector information, including data. A prominent success of the Recommendation, for example, was the increased re-use of meteorological data, which enabled innovative services such as *Yahoo!Weather*. The New York City Economic Development Corporation has an annual competition to encourage private software developers and citizens to build apps based on the some of the city’s biggest data sets.

174. Citizens are not only passive users of open data, but they are also active producers of data that can be used for innovative, responsive and value-added public services. Through the internet, they can share information and experiences and increasingly offer advice on addressing daily problems or concerns. This generates data, some of which may be publicly available, that can be extremely effective as a source of insights for citizens themselves without the need for government to become directly involved in data collection. Governments can act as users of these new datasets, but also as facilitators – both online and offline – allowing stakeholders to contextualise data and thus increase the potential for value creation. Examples of this include the *National Public Toilet Map* in Australia, and *Ushahidi platforms*, which are used by authorities around the world to get real time data on the incidence of crime or natural disasters via SMS, the internet smartphones, or social media.

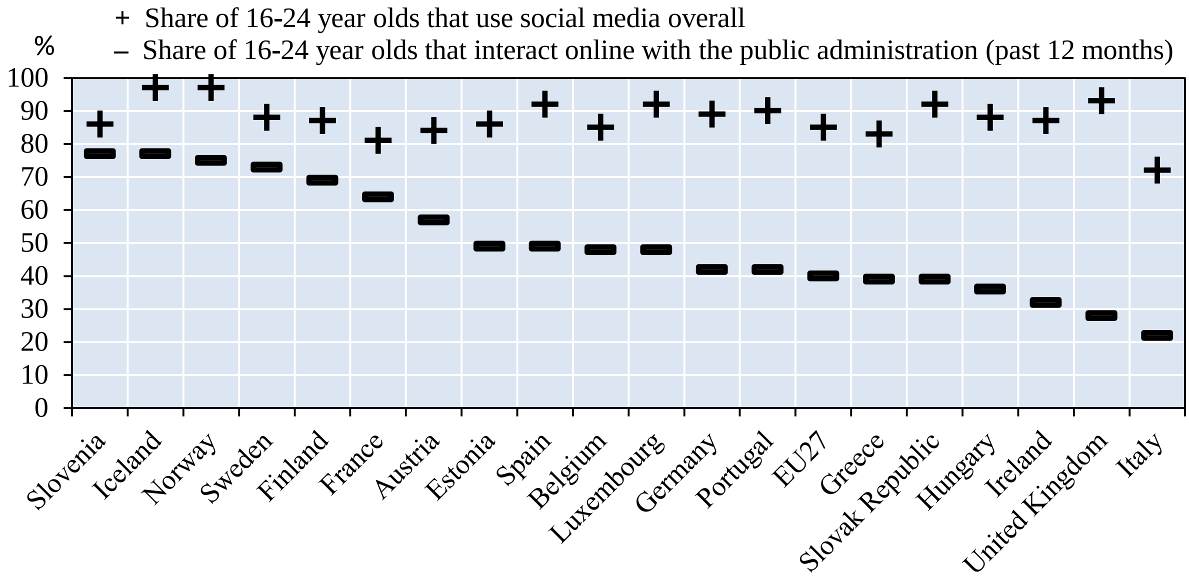
175. The budget is a government’s single most important policy document. Making budget documentation and expenditure information openly available is therefore important. However, while publishing budget data is an important step, challenges remain in ensuring that data can be understood citizens and their representatives in the legislature. There are now many examples of efforts to present budget information in a way that helps citizens. For example, the Public Expenditure Observatory (*Observatório da Despesa Pública*) in Brazil issues thousands of alerts every year regarding potential inappropriate spending. *WhereDoesMyMoneyGo.org* in the UK, *Sielocal* in Spain and *OpenSpending.org* have been instrumental in providing stakeholders the tools to access and transform budget data into summaries, analyses and visualisations that are easier to understand by the general public. Data visualisations prepared and shared via OpenSpending.org are regularly picked up by mainstream media in their coverage of government budget decisions.[13]

176. Going digital must not result in the exclusion of particular groups. The uptake of online interaction with government services varies across age groups. As “digital by default” becomes the norm in many countries, those less able to access or use technology-based services risk losing out, particularly if

13 See, for example, Le Monde (2012).

face-to-face service points are closed or merged in order to reduce costs. The problem can also be linked to poor design of public information or services online. Young people, for example, continue to under-use online services, despite their familiarity with the technologies involved (Figure 18). The gaps between online interactions with the public administration ("–") and overall social media use by young people ("+") are particularly large in countries such as Greece, Hungary, Ireland, Italy, the Slovak Republic, and the United Kingdom.

Figure 18. Young people's use of social media overall compared to their use of the Internet to interact with the public administration, 2013



Source: Eurostat, 2013, "Internet use: posting messages to social media sites or instant messaging" and "Internet use: interaction with public authorities (last 12 months)".

177. The future of open government depends on a solid foundation of trust. The wide diffusion of internet-based systems and services is changing the landscape of actual and perceived security threats. Governments today are assessing and managing risks that are amplified by technological trends such as cloud computing, cross-border data flows, use of social networks and others. Citizens are unlikely to interact with governments via online channels without confidence that their privacy is protected and that their information is processed securely. This can be a significant barrier to fully capturing the benefits of digital government services. This is particularly important for the growing number of government services that are facilitated by digital identities, single sign-on or other digital identification, authentication and control mechanisms. Governments need to enable both trust and innovation. Persuasive government action in this area also can accelerate adoption and diffusion of good practices in the private sector.

178. At the same time, government monitoring and mining of what can be perceived as personal information – even if it is generated on public sites, social networks or online forums – also meets resistance, especially in a climate in which the issue of government surveillance has faced significant public scrutiny. Recurrent discussions – for example on the use of anonymised healthcare information to produce policy insights or generate commercial value – underline the need for governments to consider and address citizens' concerns for consent and privacy while designing policies to use citizen-generated data as inputs for policy or service delivery processes.

2. Restoring trust

179. Strengthening the resilience of institutions requires efforts to improve public trust in government. The 2013 MCM recognised the worrying decline in levels of public trust in government, and encouraged the OECD to explore further how governments can rebuild trust as an important element of their overall approach to sustaining economic recovery.

180. Stronger trust in government institutions should boost economic and social policy outcomes. Trust in government institutions facilitates economic decisions such as investment, hiring and consumption – which in turn foster economic growth. Many reforms necessary for a return to growth involve short-term sacrifices and require broad social and political consensus. In a high-trust environment, such reforms are more likely to be accepted and implemented. In a climate of low trust, citizens tend to prioritise immediate benefits, and will induce politicians to seek short-term gains (Gyorffy, 2013). Stronger trust in government can also improve compliance with rules and regulations, and reduce the cost of enforcement. Trust in the regulator is a determining factor in high rates of compliance. Trust is also very important for well-being, where individuals value political inclusiveness and trust in political leadership.

181. Harnessing positive benefits from higher trust depends on action by government. While trust is complex and multifaceted, there are a number of levers that governments can use to demonstrate to citizens that they are reliable, responsive, open and fair.

182. Regaining public trust involves minimising uncertainty and demonstrating strategic capacity. This has been termed “big trust” – the confidence that the state is able to protect its citizens from external threats. The events surrounding the crisis suggested a lack of preparedness on the part of government, and this contributed to the decline in trust. As the number of shocks of diverse types has increased, the issue of how governments prepare for such events has broadened from a national or regional public policy concern to a global challenge.

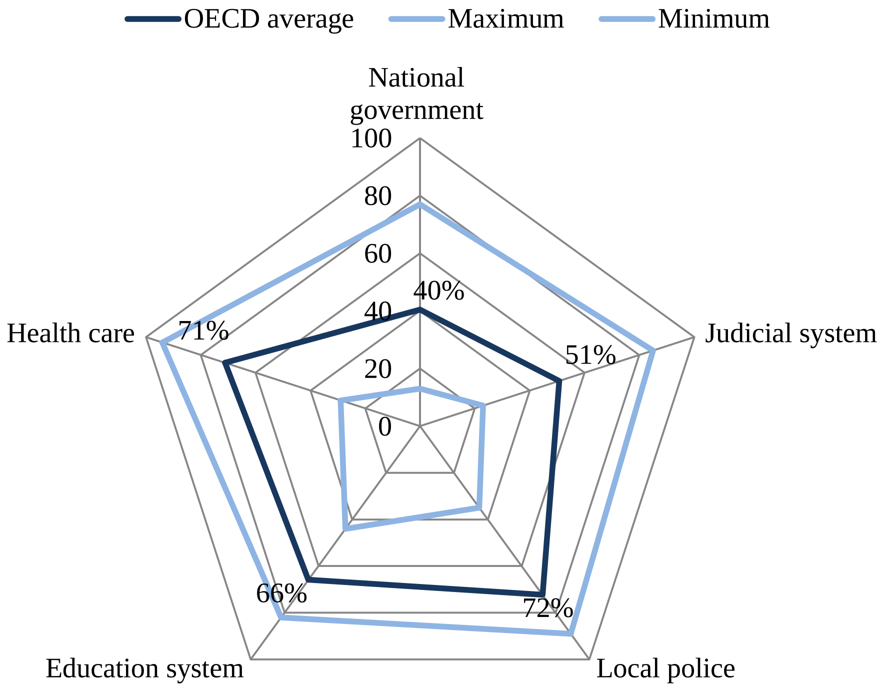
183. Sustainable fiscal policies are important for restoring trust. The public budget establishes rights, obligations and expectations for different parts of society, and aims to achieve a stable balance across these dimensions. As such, it is an important expression of the contract between government and taxpayers. The crisis highlighted possible differences between the expectations of tax payers and the capacity of governments to meet those expectations. Dampening expectations is a difficult challenge in democratic societies that have experienced progressive improvement in economic well-being and government-financed benefits over recent decades. The crisis opened debate on how to achieve sustainable fiscal policies that are transparent, fair and trustworthy. The introduction of independent fiscal institutions in many countries, notably in France, Portugal and the United Kingdom; the introduction or expansion of various types of fiscal rules in many EU countries; more accessible publication of budget data; and the strengthening of medium-term expenditure frameworks will all contribute to aligning citizen expectations and government capacity, thereby helping to restore trust.

184. Tax systems need to be fair and transparent. Trust in the integrity and fairness of the tax system is essential to fostering the high levels of voluntary compliance that characterise an effective tax system. In recent times trust in the tax system has been damaged, with an unprecedented level of public outcry over both tax evasion by the wealthy, and base erosion and profit shifting (BEPS) by global companies. In the aftermath of the crisis, citizens expected the burden of rebuilding public finances to be shared fairly. What they observed was that while ordinary taxpayers were being asked to pay higher VAT, income and property taxes, multinational enterprises were able to achieve extremely low rates of tax through international tax planning. An international tax system designed almost a century ago to prevent double taxation had been left behind by modern business methods and could now be manipulated to deliver double non-taxation. Meanwhile, some wealthy individuals were using secrecy jurisdictions to engage in large-

scale tax evasion. To restore trust in the international tax system, the OECD and the G20 launched the BEPS project and are also strengthening tax transparency and information sharing to combat offshore tax evasion. In developing countries, a fair, transparent and credible tax system not only provides revenue to sustain development but also promotes state-building and trust by encouraging governments to be more accountable to their citizens.

185. Effective, innovative service delivery also matters. The interaction between citizens and the state happens most directly through the consumption of basic services. Ensuring that these services are of high quality and respond to citizens' needs is therefore important to maintain trust in government, even in the face of pressures on public budgets. Recent country studies have shown the close relationship between trust in government and citizens' experience with government services. One common finding of the studies is that citizens tend to trust government more when they perceive it to be a competent service provider(Figure 19). As such, trust in government is related to the capacity of the public administration to implement, and to the success of efforts to modernise and restructure the public sector. Developing a long-term vision for the public sector that goes beyond short-term cuts is therefore a prerequisite.

Figure 19. Confidence and satisfaction across government institutions (2012)



Note: OECD average based on 2012 data for all countries, except data for Chile, Germany, Japan, Mexico, Korea and the United Kingdom are for 2011 rather than 2012. Data are expressed as the percentage of citizens who answered: "yes" to the question "Do you have confidence in each of the following: the national government, the local police force and the judicial system?"; and "satisfied" to the question "In the city or area where you live, are you satisfied or dissatisfied with the following: the educational system, the availability of quality health care?"

Source: Gallup World Poll.

186. Regional, city and local authorities are on the front line of efforts to restore trust. Trust in government tends to be highest at the local level, where services are delivered and where the link with government performance is most concrete (OECD, 2014l). However, the crisis has also had a strong effect on trust in governments at the local level in many countries. Three dimensions are particularly important to

consider when looking at trust from the sub-national perspective. The first is overall quality of institutions and public services, which varies greatly across regions (for example, southern and northern Italy). The second is the fragmentation of policy-making at the local level, in particular in metropolitan areas. For example, in the highly fragmented metropolitan area of Aix-Marseille (France), only 50% of residents feel that the public administration spends public money efficiently in the area, compared with almost 80% in Stockholm (Sweden) (OECD, 2013k).The third is the need for vertical co-ordination among national and sub-national governments, to manage mutual dependency across levels of government. Building trust and effective co-ordination mechanisms across levels of government takes time and is a learning process.[14]

187. Gender balance in public institutions is highly conducive to trust. Evidence increasingly suggests that equal political opportunities for men and women are essential pre-requisites for greater resilience to future crises, and for achieving strong and sustainable growth and development that benefits all. Greater gender balance among politicians encourages inclusiveness in policy making and bolsters trust in government. Increasing gender diversity in the judiciary also preserves the legitimacy of the courts as representative of the societies they serve and helps maintain public confidence in the justice system.

188. Integrity is a crucial determinant of trust. The data available suggest a link between trust in government, both from the business community and citizens, and the perception of corruption. Tools and mechanisms aimed at preventing corruption and fostering high standards of behaviour help to reinforce the credibility and legitimacy of the actors involved in decision making, safeguarding the public interest, and restoring a sense of fairness of policy decisions. Policy tools addressing high-risk areas at the intersection of the public and private sectors – including effective management of conflict of interest, transparent public procurement practices, adequate lobbying and political finance regulations – can all be leveraged to limit undue influence and build safeguards that protect the public interest and build a climate of trust.

189. The role of the judiciary in ensuring that the rule of law is respected and that there is a level playing field for all citizens and businesses is crucial for trust in government. As shown above, trust in the judiciary lags well behind levels of trust in other public services. As an independent branch of the state, the judiciary is critical for guaranteeing the legitimacy, legal solidity and accountability of official actions; for ensuring that decisions are fair and equitable; and for upholding the laws and obligations that constitute the social contract between government and citizens. A strong, effective judiciary supports citizen empowerment. By contrast, when the justice sector is poorly managed or unable to ensure respect for the rule of law, it can have a damaging impact on open government and empowerment.

190. The OECD is uniquely positioned to provide concrete policy recommendations – supported by data, analysis, and policy exchange – to help build trust. The OECD Trust Strategy will generate the following outcomes for the OECD and member countries: (i) better data on trust in government as a more robust support to decision making; (ii) concrete guidance to improve policy formulation and implementation in policy areas in which trust is particularly important (*e.g.* regulation, tax, public budgeting, justice); (iii) mainstreaming trust into OECD policy work, including horizontal initiatives such as NAEC and several Committees' focus on Inclusive Growth; and(iv) the regular monitoring of member countries.

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[14] These different dimensions are addressed in the OECD Recommendation on Effective Public Investment Across Levels of Government adopted by the Council in March 2014, which provides guidance on the governance arrangements which can contribute to bridge coordination failures, both horizontally and vertically.

3. Promoting fairer and more transparent governance

191. The credibility of the formal institutions involved in policy making, and the specific processes by which major decisions are taken, help shape stakeholder trust in the legitimacy of public policies. A policy making process conducive to trust draws on reliable, relevant information, provides for clear information exchange among stakeholders, and effectively articulates the arguments and points of view of the participants.

192. Fair and transparent decision-making starts with the head of government and cabinet. The centre of government ensures that harmonised consultation processes are followed and that appropriate analytical tools are used so that the usefulness and cost-benefit of a particular action can be judged easily by the head of government and cabinet. The presentation of information to the government should allow political leaders to understand the consequences of proposed policy interventions, anticipate risks and resistance, and verify that the information is balanced and fair and has been developed through a transparent process. Obtaining balanced and diverse views includes increasing input from the public.

193. When drafting new primary laws, all OECD member countries now hold informal consultations with stakeholder groups, 82% circulate bills online, and an increasing number of countries publish a public call for comments via ICT platforms. As part of efforts to level the playing field for stakeholders in the decision-making process, 68% of OECD member countries allow any member of the public to take part in consultation processes rather than selecting stakeholders (as was the case in the past). In addition, developing a whole-of-government approach to promoting inclusive policy-making, centres of government also implement processes to ensure that gender considerations are mainstreamed into the regular policy process. This also includes building capacity in the centres of government to ensure that line ministries take into account gender impacts, among other considerations, when designing their policies, initiatives and budgets.

194. The biggest challenge to fair and transparent decision-making comes from undue influence or the perception that undue influence is being exerted on decision makers. Integrity tools and mechanisms, embedded within a solid integrity framework to prevent corruption and foster high standards of behaviour, are necessary to reinforce the credibility and legitimacy of the actors involved in policy decision making. Effective management of conflict of interest, high standards of behaviour in the public sector, and adequate lobbying and political finance regulation, can limit undue influence and provide safeguards to protect the public interest.

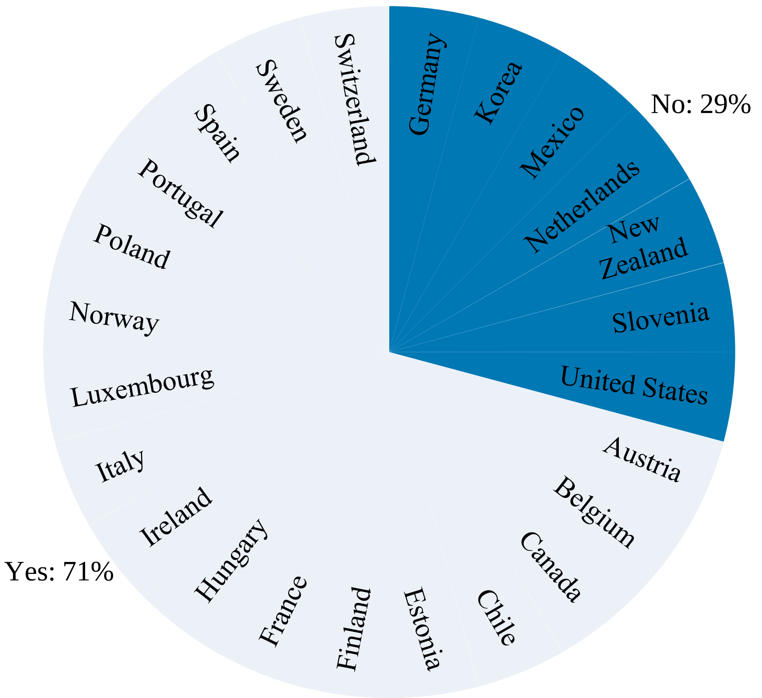
195. Creating fair and transparent governance starts from identification of the high-risk areas. These risk areas tend to be found at the intersection of the public and private spheres. Defining an effective policy approach to dealing with conflicts of interest and similar threats involves first identifying risks to the integrity of public organisations and public officials, making public organisations and individual officials aware of the circumstances in which conflicts can arise, prohibiting specific unacceptable forms of private interest and ensuring that effective procedures are deployed to deal with situations as they arise. The majority of OECD countries have policies to manage conflict of interest according to the OECD Survey on Conflict of Interest (OECD, 2012b). At the institutional level, 76% of OECD countries have a central function responsible for the development and maintenance of the conflict-of-interest policies, rules or procedures. However, the way information is made available and disclosure by institutions outside the executive and legislature remain patchy.

196. Measuring compliance remains a challenge. While in the majority of OECD countries sanctions are foreseen in the event of a conflict-of-interest violation, there is no data available on how sanctions are applied. Although the disclosure of private interests by decision makers is common practice in OECD countries, the actions taken to monitor and ensure compliance following the collection of disclosure forms

varies extensively between countries. Three quarters of the OECD countries verify that disclosure forms were submitted in time, and 54% of countries regularly review the completeness of forms submitted. However, only 39% of countries perform internal audits to analyse the accuracy of submitted information. In Ireland, Italy, Switzerland and Turkey, no actions are taken following the collection of the disclosure forms. However, Ireland, Italy and Switzerland do make most of the disclosed information publically available. This makes it possible for citizens themselves to scrutinize the information submitted by public officials.

197. The "revolving door" phenomenon, involving an increased movement of staff between the public and private sectors, has raised concerns over pre- and post-public employment conditions and its negative effects on trust in decision making. Issues of impropriety (*e.g.* the misuse of "insider information", position and contacts) have led more countries to modernise arrangements to effectively prevent and manage conflict of interest in pre- and post-public employment. To balance conflicting interests, many countries have established standards or principles in order to ensure integrity in present or post-public officials. For example, a "cooling-off" period exists in many OECD countries, where public servants must limit their interaction with their former organisation for a given length of time (Figure 20). The *OECD Post-Public Employment Principles* and the *Post-Public Employment Good Practice Framework* can act as a reference points for policy-makers to gauge their current or future post-public employment frameworks.

Figure 20. Revolving doors: Can a former lobbyist be hired as a government regulator or advisor?



Note: In Canada, there could be obligations for balanced composition in some cases. In Italy, the responses refer to the system put in place by the Ministry of Agriculture.

198. Lobbying is another risk area that many OECD countries are only tackling now. Disclosure of lobbying activities provides sufficient and pertinent information on key aspects of lobbying activities to enable scrutiny. Core disclosure requirements elicit information on in-house and consultant lobbyists, capture the objective of lobbying activity, identify its beneficiaries, in particular the ordering party, and point to those public offices that are its targets. In a survey among lobbyists in Europe conducted by the

OECD, 76% of lobbyists surveyed agreed that transparency was necessary to alleviate actual or perceived problems of influence-peddling. Moreover, a majority of lobbyists even agreed that their campaign contributions made to political parties or candidates should be publicly disclosed (OECD, 2014s forthcoming). Transparency and disclosure of lobbying information has also raised concerns in recent years about how to strike a balance with considerations of legitimate exemptions to transparency, in particular the need to preserve confidential information in the public interest or to protect market-sensitive information when necessary.

199. Another issue that is now receiving more urgent attention is that of political financing. OECD countries have introduced various political finance regulations to promote competition and fairness in election while safeguarding the independence of political actors. Measures tend to aim for a balance between public and private funding sources. Oversight institutions with law enforcement capacities have been created in several countries to ensure the effective implementation of these policies. Institutionalising transparency and accountability in political finance will be a critical entry point to improve the public perception of the decision making process. Disclosing information on party/candidate financing to the general public has emerged as a trend in OECD countries since the early 2000s and is being included in regulations to promote public scrutiny, oversight and informed voting by citizens.

4. Social institutions: enhancing resilience and addressing vulnerabilities

200. Social institutions – especially unemployment insurance – shelter individuals from the full effects of adverse, temporary shocks through risk sharing, and play a useful role as automatic stabilisers. In the long run, the policy settings of social institutions need to be adjusted to cope with permanent shocks and trend changes. Future public health care and pension spending pressures could be a considerable source of vulnerability in many OECD countries (see the discussion in Chapter 1). The design of social institutions determines their capacity to deal with shocks and trend changes, the way risks are shared between the institutions and their stakeholders, and the scope for automatic or discretionary adjustments, when trade-offs between sustainability, adequacy and efficiency arise.

201. Pay-as-you-go (PAYG) pension schemes face financial sustainability issues in many countries. They are exposed to ageing and uncertainties surrounding future productivity trends. Funded pension schemes are affected by interest rate, asset price and longevity risks. Increasing the retirement age is more efficient to balance PAYG pension schemes, while preserving pension adequacy, than increasing the contribution rate or decreasing the pension rate. However, raising the retirement age is not sufficient. It needs to be accompanied by policies to ensure employment of older workers. Adjusting key parameters automatically to trend changes enhances the financial robustness of pension systems. The adjustment can link the pension level, the retirement age, the contribution period or a combination of them to life expectancy. To ensure adequacy in the future and avoid ageing costs unduly weighing on social budgets, widening the coverage of voluntary private pensions should be a prime objective in countries where they represent an important complement to (relatively low) public pensions.

202. Health care spending could rise considerably in the future, mainly due to price and technology developments. Some policy reforms to contain the secular rise in health spending face sustainability-adequacy trade-offs, whereas others do not. For instance, high cost sharing can help curb public spending (though often it merely displaces health spending from one part of the health system to another), but also worsens adequacy. On the other hand, reforming how providers are paid, regulated competition among health care service providers, or appropriate budgetary caps can improve sustainability without damaging the adequacy of services. Reforms aimed at enhancing the efficiency of the health care sector could generate large savings and partly offset future spending pressures, thus easing the sustainability-adequacy trade-off.

203. The recent crisis has led to soaring unemployment in many countries. Generous benefits, long duration and wide coverage generate large increases in public spending during a severe downturn and can create disincentives to work. On the other hand, stringent eligibility criteria or very short benefit duration can jeopardise the core functions of unemployment insurance as a tool for risk-sharing and efficient reallocation of labour. Trade-offs can be eased. For instance, an effective labour activation policy can reduce spending on unemployment benefits and, by getting people back to work, buttresses government revenues. Contingency plans should be in place to cope with a surge in unemployment. Activation policies should be scaled up during crises. Temporary extensions of unemployment benefit duration and the temporary loosening of eligibility criteria may play a useful role in countries where duration is low and access to social assistance is limited.

204. For most BRIICS countries, the low adequacy of protection provided by social institutions, or even the complete absence of institutional risk sharing for a large part of the population, is the main issue. The importance of the informal sector to many low income earners is the most important barrier to providing adequate social risk coverage for all.

CHAPTER 4: RISK MANAGEMENT AND ENVIRONMENTAL RESILIENCE: POLICY MIXES TO TRANSITION TO A GREENER ECONOMY AND STRATEGIES TO IMPROVE DISASTER-RISK MANAGEMENT

205. There is increasing evidence that environmental degradation and over-use of resources will have damaging effects on economic and social sustainability. The resilience of economic and social systems cannot be addressed without also considering the resilience of the environmental systems that support them. The OECD's work on green growth has been helping governments to identify and implement policies that maximise synergies between growth and environmental objectives. Policies to tackle environmental challenges can also have beneficial effects on equity, employment and income. However, the right policy design needs to be put in place to realise this, and to avoid or mitigate any potential negative effects. Addressing such social concerns is crucial for successful policy reforms for greener and low-carbon societies.

206. To win support for green growth policies, a better understanding is needed of the costs of inaction on environmental challenges such as climate change, water scarcity and possible resource bottlenecks. The latest analysis from projects under NAEC sheds new light on the economic costs of inaction on environmental and resource challenges, building on recent OECD work that illustrates the consequences of inaction. It has shown, for example, that unabated climate change is projected to curtail GDP growth prospects in the coming decades.

207. Climate change poses the most comprehensive global environmental risk, with more frequent extreme weather events, rising sea levels and cascading impacts on economies and societies as they deal with the consequences and have to invest in increasingly costly adaptation. Addressing climate change is a key element of environmental resilience within any green growth strategy. The international community has decided to urgently work towards the deep reduction in global greenhouse gas emissions required to hold the increase in global average temperature to below 2°C above pre-industrial levels. The next major milestone in international climate negotiations will be the UNFCCC COP21 meeting in late 2015, where countries will agree on actions to significantly reduce greenhouse gas emissions from 2020 onwards. However, efforts to date remain uneven and insufficient to effect the necessary transition to a low-carbon future. Achieving this will require the alignment of policies across a wide range of policy domains – economic, fiscal, investment, energy, trade, competition and environment – to support a comprehensive economic transformation. A joint multi-disciplinary project by the OECD, IEA, NEA and the ITF could identify how this could be achieved.

208. Adapting effectively to an already changing climate is another key element of environmental resilience. Countries may have to confront a number of major events with global systemic impacts, some of which relate to extreme weather events. Countries are increasingly faced with a wide range of critical risks with cascading effects and increased impact for the global economy. The OECD is exploring how effective disaster risk management and risk financing policies could enhance economic and social resilience, reducing impact, facilitating recovery and ultimately supporting economic competitiveness and sustainable development. Against the backdrop of geopolitical, environmental, societal and economic uncertainties, governments need to ensure that risk management policies entail national strategies for the governance of critical risks, assigning leadership at the national level, involving all parts of government, including at local level, and reaching out to all stakeholders. This requires identifying public and private

responsibilities for risk, engaging with citizens and the private sector, to develop a shared vision and foster a whole of society response.

209. Finally, risks to agriculture and food systems need to be addressed in light of competing demands for natural resources and uncertainties linked to climate change for food producers. Agricultural production will need to increase significantly to feed a growing and wealthier world population, while many countries experience the alarming consequences of over-nutrition and obesity, which co-exists with food insecurity and undernourishment. A resilient society must be a healthy one. Unhealthy populations can hinder development and create large social and economic costs.

210. This chapter is structured as follows. **Section 1** first elaborates on the policy trade-offs and complementarities between growth, equity and environmental objectives. **Section 2** then deals with stopping environmental degradation. It discusses the economic effects of climate change and resource extraction and outlines a new OECD/IEA project to analyse the economic transformation required to reduce greenhouse gas emission to very low levels. **Section 3** discusses ways to increase countries' resilience to natural disasters.

1. Synergies and trade-offs between growth, equity, and the environment

211. OECD work on green growth has highlighted the need to find win-win solutions for growth and for the environment. Policies to tackle environmental challenges can also have beneficial effects on equity, employment and income. However, the right policies need to be put in place to realise this and to avoid or address any potential negative effects or trade-offs.

212. Introducing or aligning environment-related taxes or charges (*e.g.* energy taxes, water charges) better with environmental damage helps to promote more efficient use of resources and cover the costs of providing environment-related services (*e.g.* wastewater treatment). In some cases, but not all, they can have regressive impacts. To address this, governments often introduce exemptions or subsidised rates for certain uses (*e.g.* fuels for domestic heating or fishing boats; electricity for irrigation pumping). Tax breaks on energy use or fuel subsidies encourage continued reliance on fossil energy and thus greenhouse gas emissions and pollution. Applying these subsidies or tax breaks universally – for example through low petrol or electricity prices for all – is ineffective and inefficient. Higher income households often use the most energy, thereby reaping the greatest benefit from these policies (see Box 3). While concern about the potential impact on poor and vulnerable groups is a major obstacle to removing energy or water subsidies, experience shows that potential negative social impacts are better addressed through targeted compensation measures for low-income households, or through social policies.

213. Progress is also being made in the agriculture sector to improve the cost-effectiveness of policy support. In OECD countries, support to agriculture is increasingly aimed at raising farm income with less production-distorting and potentially less environmentally damaging effects (OECD, 2013n). Although OECD countries have made a concerted effort to reduce the agricultural support based on prices and output levels (from 74% in 1995/97 to 50% in 2009/11), support targeted to environmentally beneficial outcomes remains a very small share of the total support to agricultural producers (8% in 2009/11) (OECD, 2013n). More efforts are needed to strengthen cross-compliance, requiring farmers to meet specific environmental conditions as an alternative to price support measures, which provide income transfers to farmers without any environmental conditions.

214. Coherence between energy, agriculture and water policies is essential if governments are to meet social goals without compromising the sustainability of water resources. Maximising access to safe water requires financing, including through water charges. These are needed to cover the costs of infrastructure and treatment, ensuring it can be maintained and expanded to reach those households without access, and

to provide incentives for efficient water use. Despite the move away from subsidised water, water tariffs in many OECD countries remain both inefficient and inequitable. Scarcity pricing in combination with tariffs that take into account household income and size, for example, are among viable policy options to manage water security and increase efficiency while addressing affordability concerns.

Box 3. Mexico's progress on energy reforms to address environmental and social concerns

Mexico is making efforts to reform its subsidies to fuel and electricity, while more effectively supporting the poor (OECD, 2013m). In 2008, energy subsidies (1.79% of GDP) in Mexico cost more than twice the amount spent on anti-poverty programmes. Although these subsidies were reduced to 1.02% of GDP in 2011, they are still highly regressive, with the poorest 20% of the population capturing less than 8% of transport fuel subsidies and only 11% of residential electricity subsidies. Using some of the revenues from reducing energy subsidies to better target support directly to low-income households would benefit the poor, and at a much lower cost to the government budget. Similarly, 90% of agricultural price support in Mexico and 80% of electricity subsidies for irrigation-water pumping benefit the richest 10% of farmers. Overall, Mexico spends more on subsidies to electricity for pumping irrigation water than it does to improve irrigation infrastructure. Some importance progress is being made, however.

The 2013 budget aims to reduce fuel subsidies, and since 2011 irrigation water pumping subsidies in some aquifers have been replaced with direct cash transfers (OECD, 2013m). The carbon tax law has been passed in the Senate in November 2013, although the carbon tax rate is lower than initially planned and natural gas is taxed at zero rate. Nonetheless, this achievement sends a strong international signal about Mexico's commitment to green growth and opens the doors for gradually increasing the carbon tax rate in the future. Efforts have been also made to phase-out energy subsidies. Using some of the revenues from phasing-out energy subsidies to better target support directly to low-income households would benefit the poor and at a much lower cost to the government budget.

215. The transition to a greener economy will bring about increases in employment in some sectors and firms – for example, in the development of new low-carbon solutions. Meanwhile, other more carbon-intensive sectors may shrink. Governments must take action to manage the transition for those affected. Overall, OECD analysis (OECD, 2011g) finds that the net impacts on employment from climate policies can be positive if the revenues from carbon taxes or auctioned permits are recycled back to offset reductions in labour taxes.

216. More analysis is warranted on the distributional impacts (benefits and costs) associated with different green growth policies. Some questions that need to be addressed include: how will different types of households (with different incomes, skills, jobs and preferences) be affected by environmental policies? What are the labour market consequences of green growth policies for different kinds of workers and possible skills mismatches? What impacts are labour market consequences likely to have on the short-term costs of implementing green growth policies?

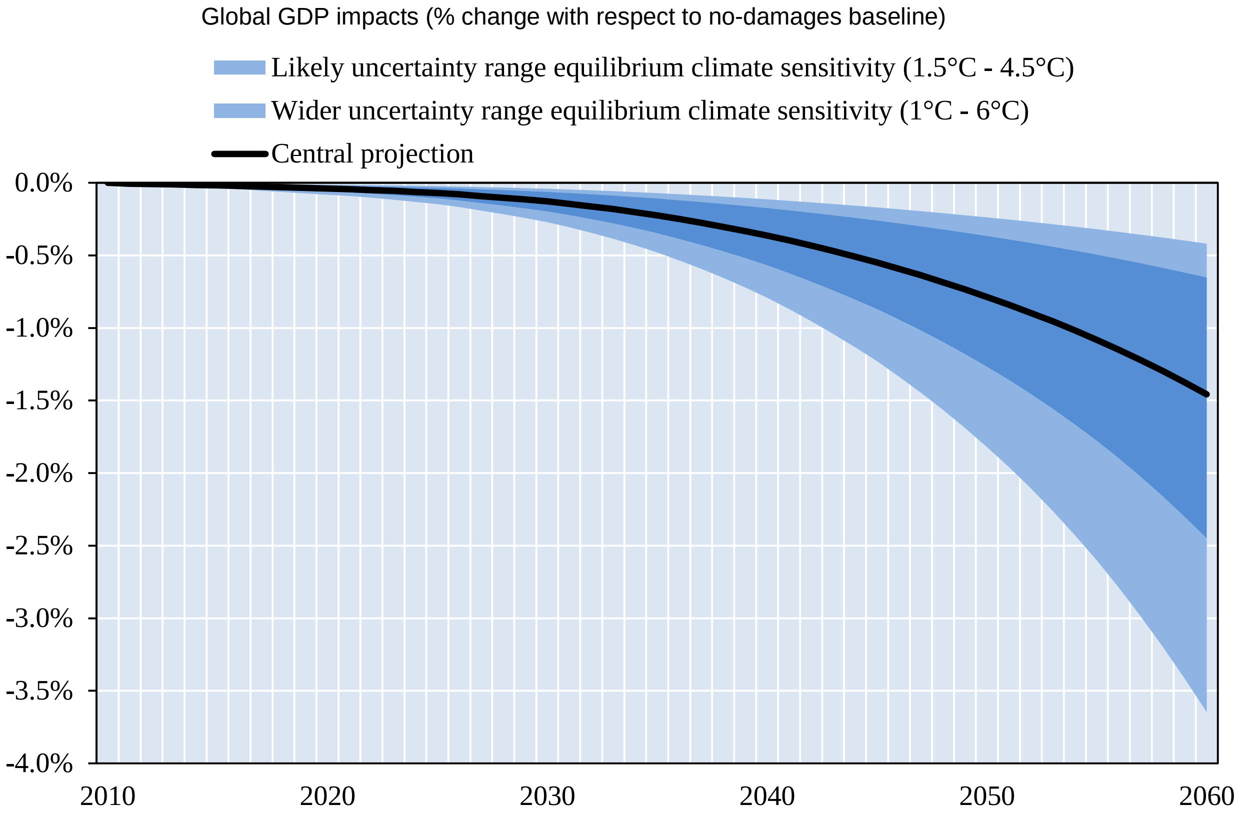
217. Case studies are being carried out by the OECD to examine the social consequences of reducing fossil fuel subsidies, environmentally related taxes, and changes in energy prices resulting from other types of policy. These will also address effective measures to help alleviate negative impacts on the poorest households, including the role of taxes and transfer policies.

2. Stopping environmental degradation

218. Among the various environmental challenges, climate change poses the most comprehensive set of global risks: more frequent extreme weather events, rising sea levels, and their cascading impacts on economies and societies. It is estimated that extreme weather events led to USD 43 billion worth of economic loss in 2013, and the costs seem be steadily rising each year (Impact Forecasting, 2014). Climate

change is also expected to exacerbate other environmental problems such as water stress and biodiversity loss. While the full effects of unfettered greenhouse gas emissions are likely to produce their largest economic damages after 2060, rising global temperatures will start to affect GDP earlier. New OECD projections from the OECD@100 and CIRCLE (Costs of Inaction and Resource Scarcity: Consequences for Long-term Economic Growth), both projects under NAEC, suggest that climate change impacts may lower world GDP in 2060 by between 0.7% and 2.5% in the case of a 1.5°C to 4.5°C warming (Figure 21). Climate change will affect economic performance through a number of channels. At the global level, falling agricultural productivity, as well as capital and land losses related to sea level rise are likely to be among the main contributors to climate change-related impacts on GDP by 2060.

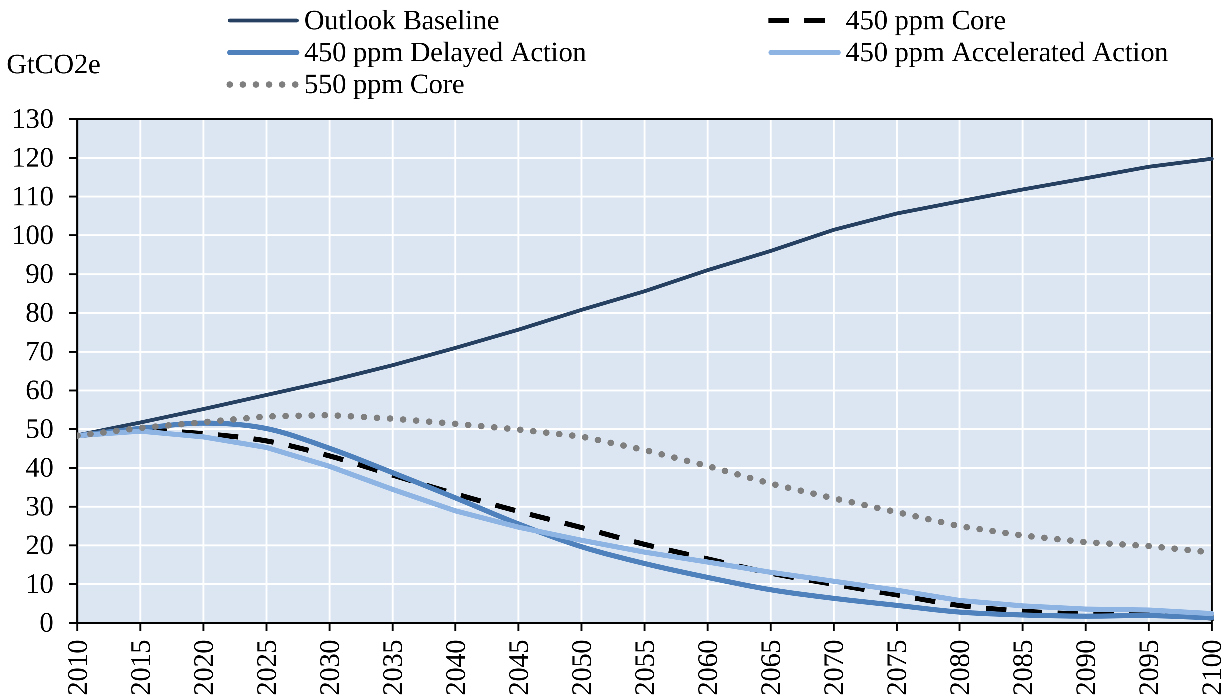
Figure 21. Change in global GDP from selected climate change impacts to 2060



Source: OECD (2014c, 2014m); output from the ENV-Linkages model.

219. Yet any effective response to this threat poses many challenges. The globally agreed climate goal – keeping the increase in global average temperature below 2 degrees Celsius – requires a radical departure from current policies (Figure 22). The economic transformation required to move to the very low levels of greenhouse gas emissions implied is not well understood as no economy has accomplished this transition fully to date. There is, however, a wealth of experience with emission reduction policies, including some important success stories but also some clear lessons on the challenges ahead. The challenges include the high costs of poorly aligned sets of policies, the limited effectiveness of a number of policy approaches, and the lack of credible long-term policy frameworks. A common key barrier is a fragmented, silo approach to climate-related policies, when a multi-sector and multi-ministerial engagement is often necessary.

Figure 22. Alternative emission pathways, 2010-2100 (annual net emissions of all Kyoto gases)



Note: The 450 ppm scenarios are consistent with the goal of keeping global temperature increase below 2°C; with a higher probability under the accelerated action scenario, and a lower probability under delayed action.

Source: OECD (2012b); output from ENV Linkages.

220. The OECD and the IEA, as well as the International Transport Forum and the Nuclear Energy Agency will draw on their respective Committees' work to provide governments with advice on how to deliver effective packages of policy instruments that will facilitate the transition to a low-carbon economy. This will be drawn from a careful examination of the complex linkages between different policy domains including, but not limited to (i) the organisation of the electricity sector and markets (IEA, 2013a, 2013d), (ii) the growing role that energy and environmental taxes may play in budget consolidation and their implications for equity and long-term growth (OECD 2013e, 2013p), (iii) the trade aspects of support measures for the development of clean energy (Bahar *et al.*, 2013); (iv) how to attract private finance for green infrastructure (IEA, 2012; OECD, 2013q); and (v) the intersection of agricultural and energy policy choices (*e.g.* biomass energy use). The project will also consider the potential distributional and competitiveness effects of the low-carbon transition and propose remedies.[15]

221. Next to climate change, the unsustainable use of natural resources is a major reason of concern as it can negatively affect the availability and quality of these production factors. Almost all economic

15 The project will not directly address issues under the auspices of the UN climate negotiations, although the project should inform governments on the policy shifts required to meet whatever outcomes are achieved under the UNFCCC. The OECD/IEA Climate Change Expert Group, which directly advises countries' UNFCCC negotiators, keeps its work at technical level. Likewise, the OECD and IEA emission scenarios are not indications of a national objectives but regional pictures of possible low-carbon evolutions, which provide an evidence base to understand the implications of different political decisions.

activities need water, land and energy, either directly or indirectly. Similarly, recent decades have witnessed unprecedented growth in demand for raw materials worldwide, driven in particular by the rapid industrialisation of emerging economies and continued high levels of material consumption in developed countries. OECD countries accounted for 38% of domestic extraction of used materials worldwide in 2008, while the BRIICS (Brazil, Russia, India, Indonesia, China and South Africa) accounted for 35% (OECD, 2014o forthcoming).

222. The growing demands for energy, land, water, minerals and other resources could give rise to scarcities. Historically, resource scarcity has been met in part by improved resource productivity from technological innovations, but also from our capacity to mobilise substitute or alternative resources. If new resources cannot be technically or economically brought to the market, the resulting bottlenecks could lead to growing competition for some resources, sustained pressures on commodity prices and increased price volatility.

223. In addition, air pollution poses serious environmental risks, particularly in big cities and highly populated areas.[16] The OECD Environmental Outlook to 2050 found that, in the absence of new policies, urban air quality will continue to deteriorate and outdoor air pollution will become the top cause of environmentally related deaths worldwide (OECD, 2012c). Aside from adverse health impacts, air pollution causes material damages (*e.g.* cultural heritage), reduced agricultural yields, polluted freshwater sources and loss of biodiversity.

3. Managing risk to natural disasters

224. Countries are confronting a range of global risks with potentially systemic impacts stemming from natural phenomena, pandemics, major accidents, and malicious acts. Against a complex backdrop of demographic shifts, technological advances, globalisation and climate change, critical risks may develop quickly and through unforeseen pathways spreading across communities, economic sectors and national borders. As a result, governments are confronted with increased pressures and strong public expectations, as any major event will test national leadership up to the highest level. Communities, citizens and businesses will expect governments and economies to be prepared for a wide range of possible events, humanitarian and security crises and other global shocks, and to handle them effectively should they arise, which includes preventing the loss of lives and minimising economic damage (OECD, 2011f).

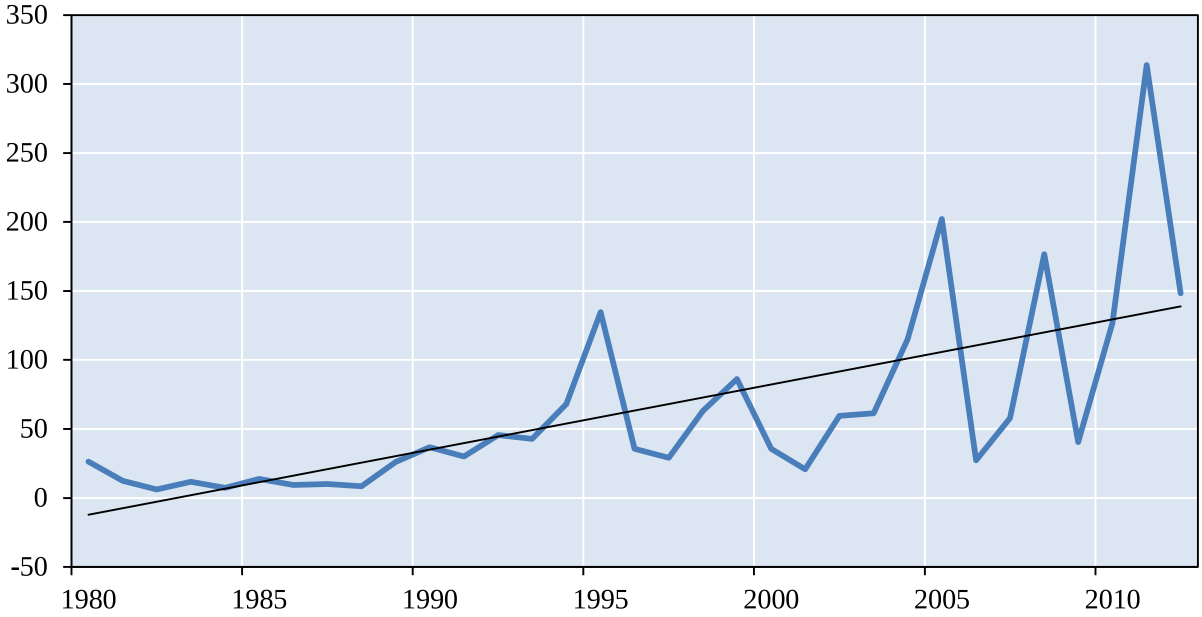
225. The cost of inaction can be very high, both in political and economic terms, and investing in economic resilience can yield substantial returns in the medium to long term. In political terms, the failure to handle a crisis always has repercussions in terms of trust in public institutions. Increased preparedness, stronger government co-ordination and improved early warning systems can make a difference. This is crucial in a global context where trust has been eroded in many countries, and where social media and new means of communication put governments under new and unprecedented pressures.

226. From an economic standpoint, the case for investing in resilience is greater than ever. Whereas higher income OECD countries have experienced significantly lower mortality rates from large-scale disasters, the scale and economic intensity of major disasters has tended to increase in recent years. Total economic damage in OECD and BRIC countries have been estimated at nearly USD 1.5 trillion over the last decade. OECD work (OECD, 2014p forthcoming) shows that the unprecedented extent of damage is a result of greater economic and societal vulnerability (Figure 23).

16 The latest OECD estimates suggest that the cost of health impacts of outdoor pollution in OECD countries plus India and China add up to some trillions of US Dollars (OECD 2014n).

Figure 23. Economic losses in OECD and BRIC countries, 1980-2012

Annual economic losses in billion USD



Note: For a disaster to be entered into the database at least one of the following criteria must be fulfilled: 1. Ten (10) or more people reported killed; 2. One hundred (100) or more people reported affected; 3. Declaration of a state of emergency; 4. Call for international assistance. Economic losses: the economic impact of a disaster usually consists of direct (e.g. damage to infrastructure, crops, housing) and indirect (e.g. loss of revenues, unemployment, market destabilisation) consequences on the local economy. In EM-DAT estimated damage is given in USD ('000). For each disaster, the registered figure corresponds to the damage value at the moment of the event, i.e. the figures are shown true to the year of the event.

Source: EM-DAT: The OFDA/CRED International Disaster Database, www.emdat.be - Université Catholique de Louvain - Brussels - Belgium. Data for OECD and BRIC countries (1980-2012).

227. What does it take to invest in resilience in the future? In terms of governing and managing risks, this corresponds to the capacity and speed of restoring core economic and societal functions after a major disaster. The first element it takes is for governments to adopt a strategic approach based on both scientific evidence and risk-based analysis, and to assign national leadership in a way that represents a strategic investment to preserve future competitiveness. It entails identifying priority areas, and establishing clear policy frameworks that also create incentives for the private sector, critical infrastructure operators and society to carry out their responsibilities. It also entails investing in adaptive capacity in crisis management to prepare for unexpected and new risks, to strengthen early detection and warning systems, to conduct drill exercises, and to improve interagency co-operation and international co-ordination.

228. There is an urgent need to invest in resilience as large scale disasters are becoming more complex and remain unpredictable. Their cascading effects propagate across channels of the interconnected global economy, through critical lifeline networks and global supply chains, as shown during the Great East Japan Earthquake of 2011. OECD countries still have gaps to close, not only with regards to critical national infrastructures and their maintenance, but also in relation to adapting regulatory frameworks to shifting risk landscapes, and in ensuring policy coherence at local level in relation to urban planning and land use (OECD 2014p, forthcoming). The private sector, and more specifically small- and medium-sized businesses, often lacks incentives to invest in back-up systems and business continuity, even though disruptions can result in significant future losses.

229. Governments should engage with citizens and the private sector to increase risk awareness and to achieve a clear understanding that investing in resilience is a shared responsibility to which everyone has to contribute. Evidence suggests that individuals and households consistently underinvest in protection of their own assets against potential risks, which can prove very costly. A recent OECD risk management policy review showed that a major flood of the Seine river in France could affect almost 5 million people, potentially causing 400 000 job losses and economic damage mounting to EUR 30 billion of direct damage in the worst case (OECD 2014q). In such a case everyone would be affected, and the challenge for governments is to overcome "free rider" behaviours and a "prisoner's dilemma" phenomenon, which leads to underinvestment in prevention and resilience.

230. OECD countries are grappling with addressing the implications of taking on a share of the risks that grow with the benefits of a more open and more interconnected economy. This is a common challenge, and a rapidly evolving field where countries can share and learn from best practice. The OECD Recommendation on the *Governance of Critical Risks* (OECD 2014r) provides governments with strategic direction to pursue opportunities that improve living standards, enable economic activity and ensure fiscal sustainability. In this context it clarifies the range of risk management measures needed to deliver national resilience to critical risks, which include:

1. *Risk identification and assessment* that considers inter-dependencies between critical systems, and are used to set priorities for risk management capacities.

2. *Risk prevention and mitigation* such as investments in protective infrastructure, but also non-structural policies such as land use planning that can reduce the vulnerability of societies to disasters. Since this is not the responsibility of national governments only, targeted communication and incentives for individuals and business must be delivered to take self-protective measures to ensure business continuity and resilience of critical infrastructure;

3. *Disaster risk preparedness, response and recovery* capacity to manage novel crises and black swan events, in which leadership in strategic crisis management is of key importance.

4. *Good risk governance* to put in place transparent and accountable risk management systems that learn continuously and systematically from experience.

231. The Recommendation will help to identify concrete risk governance and management practices, and to develop benchmarks to support the monitoring of member country efforts in these areas. A better understanding of the losses, and more comprehensive frameworks accounting for government expenditure and losses in this field, will be very important.

232. Besides physical preparation, achieving financial resilience against disasters is also a critical component of effective disaster risk management. Adequate resources must be available following a disaster to protect individuals, businesses and governments against losses, ensure adequate disaster relief and recovery, and enable reconstruction and the prompt resumption of economic activity. Moreover, so as to avoid the "free-rider" problem, disaster risk management policies should be cognisant of the need to properly align private sector incentives, to ensure adequate efforts by private actors to transfer risks (e.g. through insurance), and to improve the potential return on investment of resilience-enhancing projects. Financial strategies depend on a sound risk assessment process that can identify financial vulnerabilities and quantify financial impacts. As outlined in the *G20/OECD Methodological Framework for Disaster Risk Assessment and Risk Financing* (OECD, 2012d), the development of effective financial management strategies involves the following:

1. Ensuring that *financial vulnerabilities within the economy* are addressed through private markets, subsidies or other instruments, and in this respect ensuring the *availability and efficiency of compensation mechanisms*, whether private (*e.g.* insurance) or public (*e.g.* disaster aid and recovery financing programmes);

2. Ensuring proper *fiscal management* of disaster risks by anticipating potential budgetary impacts and planning ahead to ensure adequate financial capacity and rapid release of funds, thus enabling emergency response, reconstruction of public assets and infrastructure and targeted financial assistance;

3. Ensuring that *clear rules regarding post-disaster financial compensation* are established to enable rapid compensation, demonstrate solidarity and clarify the expected allocation of disaster costs, thereby promoting public confidence in disaster response while aligning incentives and reducing moral hazard; and,

4. Ensuring the *soundness and resilience of the financial sector* with respect to disaster risks through proper regulation, business continuity planning, and stress testing.

233. A strategy for resilience has to engage not only national government but also local levels of government, and in particular cities. Cities are vulnerable to natural disasters and other challenges to sustainability. They concentrate large numbers of citizens and valuable economic, social and cultural assets. Urban planning, building codes, and the organisation of cities have direct implications for disaster risk management. For example, built-up environments can raise the risk of localised flooding after a heavy storm, leading in turn to water supply contamination. Seismic risks have significant implications in terms of building codes and critical infrastructures. The organisation of cities can also facilitate the cascading or spreading of risks. As a result of agglomeration effects and economies of scale, cities are involved in a series of negative externalities that might lead to a deterioration in environmental resilience (CO2 emissions, waste, multiple forms of pollution), as well as a deterioration in social cohesion and inequalities, which can be very acute in the aftermath of a disaster.

234. Fortunately, innovative policy approaches can help bridge some of these challenges. Compact cities have the potential to help resolve these challenges and contribute to a resilient economy. They involve comprehensive policy approaches that favour high-density development, mixed land use and smarter public transport. Good management of infrastructure and public services, such as water, transport and energy, makes a huge difference to well-being in the event of a disaster. National governments have a role in enabling these innovative approaches at city level. Establishing a clear national urban policy framework to identify the urban challenges could encourage cities to take further steps for resilience, thus making a contribution to long-term sustainable development.

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