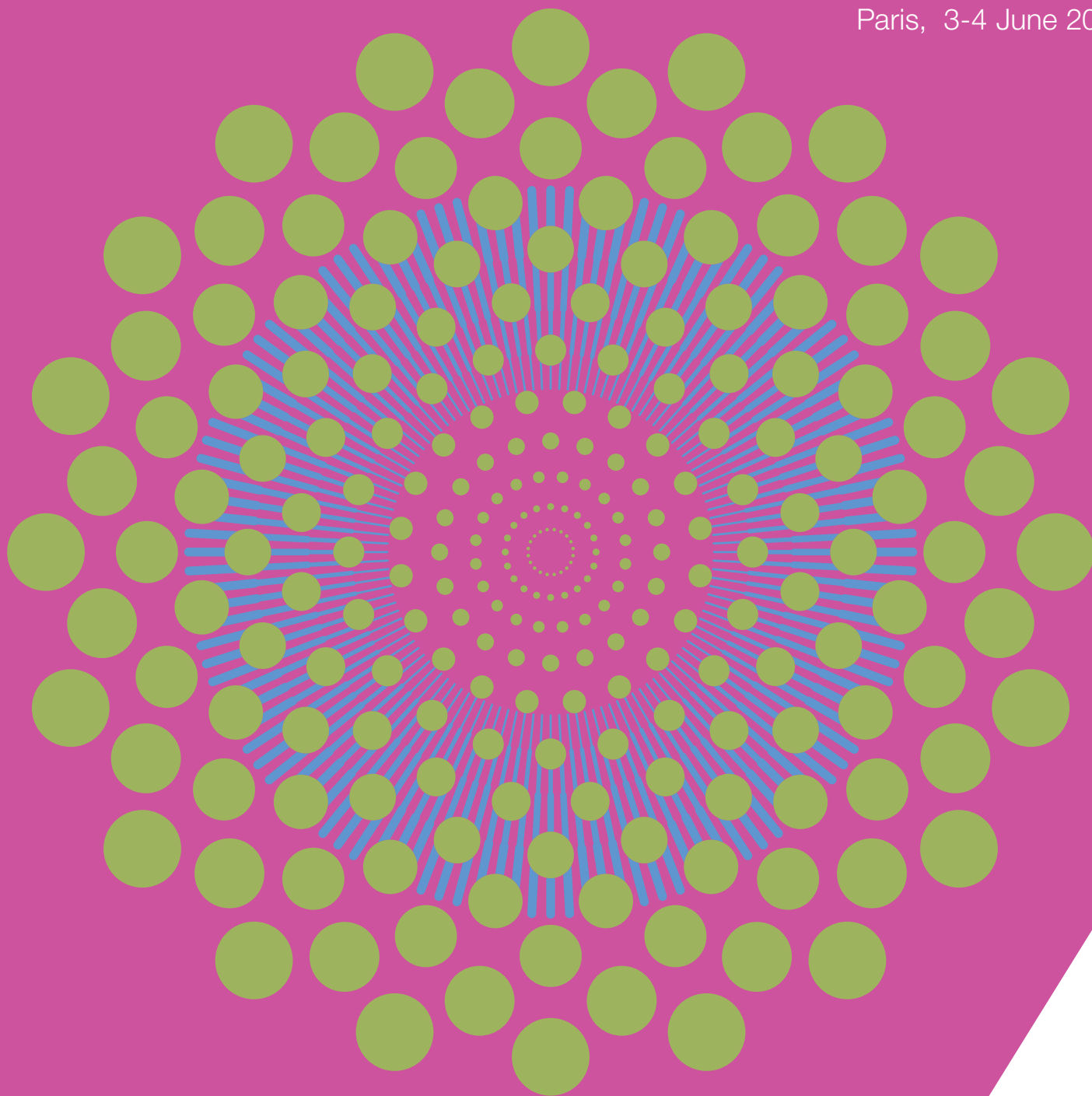


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FINAL NAEC SYNTHESIS

New Approaches to Economic Challenges

Final NAEC Synthesis
New Approaches to Economic Challenges



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EXECUTIVE SUMMARY

1. The starkness and magnitude of the recent crisis and its lingering legacy calls for a serious reflection, to revisit and supplement existing policy approaches and build a new policy agenda for stronger, more resilient, inclusive and sustainable growth. The New Approaches to Economic Challenges (NAEC) Initiative is a **comprehensive organisation-wide reflection process** which is triggering and accelerating a **revision of the OECD's analytical frameworks** as well as a **renewal and strengthening of its policy instruments and tools**.

2. Policy analysis prior to the crisis often prioritised market efficiency. Less systematic focus was placed on aspects of well-being such as quality of life, environmental sustainability and equal access to opportunities. As a result, economic growth was often considered too narrowly as an end, rather than a means to improve societal well-being.

3. NAEC is proposing and supporting a **change in objectives and perspectives**.

- **NAEC calls for a greater focus on well-being and its distribution to ensure that growth delivers progress for all.** This is timely as the gap between rich and poor is at its highest level in 30 years in OECD countries. Policy choices should be informed by an assessment of their impact on different dimensions of well-being as well as their distributional consequences. This will enhance understanding of the unintended consequences of policies and lead to a balanced analysis of the trade-offs and complementarities between different policy options. The OECD has developed an analytical framework that takes these insights into account.
- **NAEC also calls for better integration of the financial sector and related risks in the analysis,** shedding light on the numerous and complex interactions between finance and the real economy.
- NAEC recognises the increased international economic integration and resulting complexity, and the insights that may be gained by analysing the global economy as a **complex adaptive system**. This will help to take into account **uncertainty, spill-overs, systemic risks and network effects**. This analysis, amongst others, will help policymakers get a better grip on rising global interconnectedness.
- NAEC recommends the adoption of a **longer-term perspective** that considers **how economies are embedded in institutions shaped by history, social norms and political choices**. This would lead to more tailored policy solutions adaptable to countries' specific needs, conditions, capacities and institutional settings.
- NAEC recommends informing such a change in perspectives by further developing **strategic foresight**.

4. To make these changes in perspectives happen, the OECD needs to develop, where feasible, **new instruments and tools**, and deepen, generalise and systematise their use.

- These changes require **measurement of stocks** (of wealth, natural, and social capital, etc.) as well as adequate consideration of both stock and flow concepts in analyses.
- It also requires **further developing the use of micro-data** to identify the heterogeneity of households and firms, and facilitate analyses to understand and tackle inequality.

- The Organisation also needs **to review and improve its modelling approaches, taking a more integrated approach** while **diversifying the types of models** it uses and noting the limitations of the fundamental assumptions upon which they are built.

5. All these changes in instruments and tools should enrich OECD analysis. They also need to be supplemented further with **insights from other disciplines which are relevant to policy**, such as **sociology, psychology, geography and history**.

6. The aforementioned new approaches promote experimentation and strengthening of OECD analyses to improve its policy advice. They are leading to a **series of policy recommendations** that would support a stronger, resilient, more inclusive and sustainable growth agenda.

7. To fully understand trade-offs, synergies and unintended consequences of policies, it is essential to **recognise the importance of the multidimensionality and distributional effects of policies**. This requires a **comprehensive approach to inclusive growth** that takes into account the different dimensions of inequality. There is increasing evidence that **large income inequality undermines growth and well-being**, by reducing investment in skills by low-income households. To address these issues:

- **Structural policies** need to be carefully designed to consider their **distributional consequences**, looking in particular at the impacts on groups such as the young and the elderly, and to **mitigate trade-offs between material and other dimensions of well-being**, such as education and health outcomes.
- To ensure equality of opportunity, it is necessary to **promote access to high-quality education from early childhood and to a broader range of skills**, cognitive as well as social and emotional. In doing so, governments should once again focus on disadvantaged and at-risk groups.
- **Taxation systems** need to be reformed to ensure that they are **progressive enough**.
- Labour market policies are another area in which policy makers need to broaden their objectives by **pursuing job quality together with job quantity**, targeting jointly labour market security, the quality of the working environment, and the level of remuneration.
- Governments should **promote gender equity in education, employment and entrepreneurship**, as this is a key factor in economic development, growth and well-being.
- **Promoting inclusive governance, in particular at the metropolitan level**, is also critical for improving well-being and economic growth, as well as for fighting social exclusion. **Mainstreaming spatial policies** will help in general to ensure more effective design and implementation of policies.

8. NAEC is highlighting **the impacts of economic activity on environmental systems** and the consequent imbalances which are putting economic growth, well-being and development at risk. It calls for improving understanding of inter-linkages between economic and environmental goals to more clearly articulate how economic and environmental objectives could be achieved simultaneously. Greater clarity on these connections is all the more important considering that a binding agreement on greenhouse gas emissions reduction needs to be reached by the 21st session of the Conference of Parties to the UNFCCC (COP21) later this year.

- NAEC calls for **ensuring strong market and policy signals** both to make pollution and climate change more costly and clean and green approaches more attractive, and for **increasing the**

ambition and stringency of environmental policies while ensuring they remain competition-friendly by using flexible, market-based instruments.

- It is also critical to **pay attention to the distributional consequences of these policies** and to develop policy packages that enhance their **progressivity**.

9. A return to strong and sustainable growth that delivers for people necessitates policies to tackle emerging challenges such as **the decline in long-term productivity growth**.

- To this end, young and innovative firms (including start-ups) should be enabled to emerge and grow through **policies that reduce the costs of entry, experimentation and exit**.
- It is also necessary to **boost innovation without stifling reallocation**, while implementing **complementary social and skills policies** to allow a more efficient allocation of skills, which are at the heart of social-mobility mechanisms, and ensure that **innovation promotes inclusive growth**.

10. NAEC emphasises the need to **increase macroeconomic stability and the resilience of the economy** by implementing an effective regulatory framework, promoting fiscal soundness and fostering the counter-cyclicality of macroeconomic policies. In order to enhance the resilience of economies, it is crucial to **develop a framework to monitor economic vulnerabilities to shocks**. NAEC also calls for **improving the stability, inclusiveness and sustainability of the financial sector**, while ensuring that **the financial sector plays its key role of financing the real economy**.

- Work under NAEC shows the importance of **strengthening the resilience of banks** through **higher capital and liquidity requirements** as well as **structural reforms**.
- NAEC calls for **reforming the corporate tax treatment of debt and equity**, as this could positively affect resource allocation and financial stability.
- It also calls for more **monitoring of system-level risks** by financial supervisors, with due attention given to **risks rising in the shadow banking sector**.
- It is also necessary to **strengthen equity market infrastructure** and to ensure it plays its role as a key channel for financing companies.
- Meanwhile, it is also necessary to **broaden the range of financing instruments**, particularly for young innovative firms, and to **enable non-bank actors to provide long-term finance**, while **removing regulatory, legal and governance impediments to long-term investment**.

11. Last but not least, to make these reforms politically feasible and socially acceptable, **it is crucial to restore trust in governments and market institutions**.

- To do this, an overhaul of the process of policy-making is needed as a lot remains to be done to **ensure transparency, open government and stakeholder engagement** in some countries.
- The political system must work for all the people and not just special interests. **Lobbying and political finance** thus need to be properly regulated to **address conflicts of interest**.
- In addition, **business and finance must be appropriately regulated** and companies must **pay their fair share of taxes**, while **responsible business conduct** must also be encouraged.

- **Foreign bribery and illicit financial flows** should also be more decisively tackled.

12. NAEC is thus an **ambitious policy programme** that requires political leadership as well as careful crafting and implementation. NAEC does not claim to have all the answers but points to progress in a number of areas. Challenges remain in enhancing the OECD's analytical approaches; accessing and assembling new data; developing modelling capacities; and embracing new ideas and new ways of working across the Organisation. These analytical improvements will need to be supported by appropriate changes in the structure of the Organisation to avoid one-size-fits-all and move beyond a silo-approach to policy, to enhance inter-disciplinarity and to safe-guard against groupthink.

13. This report draws attention to **green shoots of change** in many parts of the OECD. NAEC projects have delivered useful analysis, data and policy tools. Emerging results shed light on critical challenges as well as on the strong, resilient, sustainable and inclusive growth agenda needed to address them.

14. **But a lot remains to be done** if the OECD is to deliver on new approaches to economic challenges. Key NAEC findings need to be mainstreamed in the OECD's core work and flagship publications. Horizontal co-operation among Committees and Directorates should be strengthened through the NAEC seminars and possibly the NAEC Group and internal processes that hinder horizontal work should be reviewed. At the same time, efforts should be made to foster continuous improvement in policy analysis, as well as to anticipate and better respond to emerging priorities. These challenges are to a great extent shared by Member and Key Partner governments heightening the need to deepen the dialogue and outreach on NAEC. Therefore, sharing experiences on new approaches at the country level would help in reframing and designing better policies for better lives.

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INTRODUCTION

1. The New Approaches to Economic Challenges (NAEC) initiative was launched at the OECD in 2012 as an organisation-wide reflection process on the roots and lessons from the crisis, as well as long-term, global trends. NAEC was also launched as part of a broader effort to build an inclusive and sustainable agenda for growth and well-being.

2. Over the past three years, NAEC has catalysed an effort to improve the OECD's analytical framework and policy advice. The whole Organisation is engaged with most Directorates and Committees contributing to different strands of the work. The NAEC initiative is overseen by the OECD Chief of Staff, G20 Sherpa and Special Counsellor to the OECD Secretary General Gabriela Ramos and co-ordinated by Mathilde Mesnard, Senior Advisor to the OECD Secretary General. The process has stimulated multi-dimensional approaches, generated new policy-relevant indicators, led to more horizontal programmes and to a review of long-standing analytical approaches across several policy areas. A NAEC Interim Report was presented at the 2013 Ministerial Council Meeting (MCM), which outlined 29 specific projects that are being undertaken as part of NAEC [[C/MIN\(2013\)2](#)]. This was followed by a Synthesis at the MCM in 2014 which presented a comprehensive overview of the various NAEC projects [[C/MIN\(2014\)2](#)]. The synthesis reflected on the lessons from the crisis and on long-term trends as well as emerging themes.

3. While distilling the main overarching lessons of NAEC, this report draws from the concluding sections of the previous report and highlights the implications for OECD work in terms of policies, as well as new analytical tools and methods.

4. The report anchors the NAEC initiative both in previous efforts in the OECD to reconsider paradigms and approaches and in the context of how OECD Members and other international organisations are responding to the crisis. It will discuss the changes in perspective and mindset and changes in the OECD's analysis, instruments and tools that are required to gear the OECD towards addressing future challenges in an increasingly interconnected and complex global economy. It maps the policy trade-offs and complementarities and discusses the policy implications and recommendations deriving from NAEC projects to support an inclusive and sustainable growth agenda. Finally, it examines how NAEC could foster continuous improvements in the future.

1. WHY DO WE NEED NEW APPROACHES TO ECONOMIC CHALLENGES?

1.1. The OECD is learning lessons...

1.1.1. ...from the recent crisis...

5. The Synthesis presented at MCM 2014 provided a comprehensive overview of the origins of the crisis and the emerging lessons. This report takes the next step in outlining the new approaches that the crisis has given rise to (sections 2.1 and 2.2).

6. Policy analysis prior to the crisis was often framed in terms of increasing output through supply-side reforms, and improving market efficiency. Growth was often considered too narrowly as an end, rather than a means to improve societal well-being. Moreover, the prioritisation of efficiency over other criteria and a silo approach in policy making tended to underplay issues such as inequality and environmental harm, which were often treated as possible secondary effects to be addressed at a later stage. NAEC makes a strong call to have an integrated approach that considers all these elements at the outset of policy analysis, avoiding compartmentalised approaches. It brings concepts such as fairness and redistribution back to the centre of the policy debate, and considers the impacts of different policy options on well-being.

7. The crisis has highlighted the importance of finance for the real economy (see section 2.1.2). At its heart was increasing financial market integration and interdependence that followed deregulation in the 1980s and the 1990s which, combined with insufficient supervision, contributed to the build-up of unsustainable financial imbalances. The crisis erupted against the backdrop of a range of weaknesses in many countries' financial sectors, including flawed incentives across a wide spectrum of financial market participants. The interplay between the supply of credit with the demand for mortgages and securitised bonds (SBs) buttressed by institutional factors such as the rise of shadow banking was a critical determinant of the crisis (Ramskogler, 2014). **The crisis calls for a move towards ensuring effective and efficient financial intermediation that serves the real economy and makes productive use of institutional capital, with appropriate oversight of currently less regulated parts of the financial sector ("shadow banking").**¹

8. Policy makers and economists underestimated the tensions that were building up because analytical approaches often failed to capture the complexity of the global economy and society as a whole, the interconnectedness between and within economies, and in particular the relationship between financial markets and the real economy (see section 2.1.3). Groupthink sometimes precluded diverse and diverging views, while lobbying by interest groups prevented necessary reforms. An important lesson from this is that policy makers should take a long-term view, consider the political economy of reform, and take steps to restore people's trust in government institutions (see section 2.1.4). **A range of new measurement frameworks, data, analytical approaches, assumptions and modelling are needed to fully realise these shifts in perspective** (See section 2.2). Moreover, as the next section outlines, the current outlook for the world economy is highly uncertain, investment and growth rates across the OECD are low and imbalances in financial markets remain high. NAEC should not only help us learn the lessons from the crisis, but also provide recommendations on current economic challenges and how to avoid future crises.

¹ NAEC Project A1: "The crisis: Drawing lessons from history and past policy experiences".

1.1.2. ...current economic challenges...

9. While the economic crisis occurred some years ago, the international community is still dealing with its consequences in terms of low growth, high unemployment, growing inequality and a serious erosion of trust. While activity is projected to pick up by 2016, it will remain modest by historical standards (OECD, 2014a). **The world economy continues to run in low gear** while global trade growth remains below trend. Around the world, private business investment is still just idling along. The cylinders of the engine of growth (investment, trade, credit and emerging economies) are at half speed. Lack of confidence and trust in governments, combined with uncertainties brought about by the threat of rising geo-political risks, cyber-crime and terrorism are also acting as a brake on global growth.

10. **There are concerns of secular stagnation in some countries** with policy interest rates bounded at zero failing to stimulate demand sufficiently, due to low or negative neutral real interest rates and low inflation. The ensuing prolonged and subdued growth undermines potential growth via labour hysteresis and discouraged investment (Rawdanowicz et al., 2014). Financial risks are rising, stemming from low-rate scenarios, that coupled with a lack of trust in the recovery are fuelling the search for yield, buybacks and dividend payments, instead of investment in productive activities.

11. Following the crisis, **many economies face significant debt burdens**. Public and private sector de-leveraging is still necessary in many countries to restore trust and confidence of investors and consumers. But this also limits private investment and public expenditure. Furthermore, long-term trends and aging societies will increase demands on pensions and health-care spending. If additional revenues are not raised to face the increasing demands of ageing societies, fiscal consolidation measures will be unavoidable. If well implemented, OECD work shows that consolidation need not result in strong adverse side-effects on other policy objectives, such as income distribution, short-and long-term growth and current account balances.² Moreover, smart growth-friendly structural reform packages can help make economies more resilient against future crises without affecting negatively equity and environmental goals, and trade-offs can in many cases be mitigated (See Section 3.1).

1.1.3. ...and history

12. The OECD has been influenced by shifts in economic thinking and has undertaken in the past some major exercises reflecting on objectives of policies, methods and work processes (*see Annex I*). Indeed, there has long been a tradition of questioning the OECD's policy approaches at critical times. However, mainstreaming the results of these reflections was a challenge and was not always fully achieved. NAEC is very much in this tradition and builds on these previous endeavours. However, it is a more holistic, organisation-wide effort offering a comprehensive agenda to review and update the Organisation's analytical approaches. Indeed, elements of NAEC such as the emphasis on well-being and inclusion, financial stability, and the environment have been discussed at various points before at the OECD, but in a piecemeal way, without an integrated approach. Moreover, they have been mainstreamed in policy advice only to a limited extent and in a "siloed" fashion. The magnitude of the recent economic crisis calls for a serious reflection, to revisit some older approaches whose lessons have been lost and that could contribute with new insights, and to supplement existing policy approaches, where needed, with new ones, while mainstreaming them across the Organisation.

² NAEC Project A6: "How much scope is there to achieve growth and equity friendly fiscal consolidation?"

1.2. Other organisations are responding...

13. NAEC was born as a reflection on the causes of the crisis. But its most important contribution is to spur work towards **policies that allow not only to overcome the crisis, but also to build more resilient, inclusive and sustainable societies**. International organisations have critically reviewed their policy work and recommendations and NAEC-type exercises are being undertaken in some Member countries. The crisis has thus called attention to the need to shift towards more integrated approaches to policy, closer co-ordination of policies including through the G20, more consideration of systemic risks and long-term scenarios, while thematically sustainability and inequality have become more salient. **Many of these lessons are relevant for the OECD, and the responses are in some cases similar.**

14. Prior to the crisis, most international organisations held a deep belief in markets and their capacity to deliver optimal solutions, while government interventions needed to be kept in check. Many now accept the importance of a more balanced approach recognising the contributions of both markets and government. This approach recognises the role of government in facilitating the smooth functioning of a market economy.

15. The IMF has established working groups to review its policy advice in the areas of energy and climate change, gender and inequality. It has also held a series of conferences on Rethinking Macroeconomics, which triggered "a healthy reconsideration of what worked and what did not". Systematic evaluations from the Independent Evaluation Office (IEO) have highlighted institutional failings in the lead up to the crisis. The Fund failed to detect important vulnerabilities and risks in the world economic and financial system. This led to a failure to alert its Members due to a complex interaction of factors,³ many of which had been flagged before but had not been fully addressed. The ability to correctly identify the mounting risks was hindered by **"a high degree of groupthink, intellectual capture, a general mindset that a major financial crisis in large advanced economies was unlikely, and inadequate analytical approaches"** (IEO, 2011). These problems in approaches were compounded by weak internal governance, lack of incentives to work across units and raise contrarian views, and a review process that did not "connect the dots" or ensure follow-up, while political constraints may have also had some impact (IEO, 2011). The issues that arose were not unique to the IMF.

16. The World Bank has evaluated its response to the crisis and identified a number of lessons. This included the absence of strong mechanisms to ensure early warning, financial preparedness, and operational readiness. The need to focus the priority for supporting structural reforms in countries for inclusive and environmentally sustainable growth, even or especially in the midst of immediate crisis demands was also identified. Finally, it recognised a need to maintain sector or thematic skills and related institutional capabilities in ways that outlast fads or near-term cycles (World Bank, 2010).

17. The European Commission has been involved in rethinking its policy frameworks and increasingly takes an integrated approach to policy recommendations. The financial and economic crisis revealed a number of weaknesses in the European Union's (EU) economic and fiscal surveillance framework and in the past years the EU has taken a wide range of measures to mitigate these weaknesses. As the first step, entirely new financial backstops institutions and facilities have been created, among others the (permanent) European Stability Mechanism (ESM). The Banking Union set out steps towards combatting financial fragmentation, reducing systemic risk and supporting the internal market. The "six-pack" and "two-pack" legislative packages introduced a closer co-ordination of economic policies through a strengthening of budgetary surveillance under the Stability and Growth Pact (SGP), a new governance procedure in the area of macroeconomic imbalances (MIP), a framework for dealing with countries

³ See for instance IEO, 2011 and IEO, 2014.

experiencing difficulties with financial stability, and the codification of integrated surveillance in the form of the European Semester.

18. The international community is at present negotiating a set of Sustainable Development Goals (SDGs) encompassing a universal set of economic, social and environmental targets that will also be applied to advanced economies. A key lesson of the Millennium Development Goals was that **sustained change cannot be achieved through the pursuit of one-dimensional or single sector goals**. NAEC will better prepare the OECD and provide guidance to its Members and Key Partners to respond to the SDGs by incorporating multidimensionality into policy design. It will do so by helping countries identify trade-offs, complementarities and unintended consequences of policy choices, and as a result help improve and better target policy advice. International policy co-ordination will be key to making progress towards a universal set of SDGs. NAEC is exploring and building the evidence base on the interconnectedness of the global economy through global value chains, the financial system and international regulatory co-operation.

1.3. ...while the crisis has led to a shake-up of economic thinking...

19. The crisis has given rise to new strands of economic thinking, and to the re-emergence of older thinking.⁴ This is promising and should provide a better account of how the economic system actually functions, preventing *inter alia* the belief that the complexity of the economy can be fully captured by models that over-simplify reality and are based on limiting assumptions. But the implications for policymaking are not always clear. This is why we need to explore new policy approaches.

20. The Welfare, Wealth and Work for Europe (WWW for Europe) project for instance, a European research initiative, is investigating the necessity and feasibility of a new European growth and development paradigm which aims to enable a socio-ecological transition to high levels of employment, well-being of its citizens, social inclusion, and resilience of ecological systems. NAEC shares with WWW for Europe a multi-dimensional approach and both aim to provide a basis to inform policy-making on long-term social, economic and environmental challenges.⁵

1.4. ... and long-term challenges make this reflection even more necessary

21. The crisis sparked a reflection not only on what went wrong, but also on what lies ahead. The report *Policy Challenges for the Next 50 Years* provides insights on future trends and tensions likely to shape the policy environment over the next fifty years (Braconier et al., 2014).⁶ Using an integrated approach to modelling (see Section 2.2.5), the project **provides policy guidance, considering likely long-term changes in underlying economic structures and in the context of multidimensional policy objectives**. The project suggests that in the period to 2060, global growth prospects could be mediocre compared with the past. Emerging economies might exhaust catch-up growth and demographics will be less favourable. Other things being equal, population ageing will result in a decline in the potential labour

⁴ The Institute for New Economic Thinking (INET), for example, is supporting this fundamental shift in economic thinking through research funding, community building, and spreading the word about the need for change. The OECD has partnered with INET and a NAEC side-event was held on the margins of the INET Annual Conference in April 2015 hosted at the OECD.

⁵ A joint OECD-WWW for Europe conference was held at the OECD in December 2014 exploring how to further enhance Welfare, Wealth and Work in Europe. The WWW for Europe is part of the EU horizon 2020, the EU Research and Innovation programme. For more details on WWW for Europe see Aiginger et al (2012).

⁶ NAEC Project B13: "OECD@100: global trends and policy challenges".

force which can only partially be offset by addressing gender imbalances in labour market participation and by increasing migration. In addition, mega-trends have been identified which will have implications for growth and well-being. These include environmental pressures, (e.g. climate change and resource depletion); technological progress; and rising inequalities. **These trends are creating new "friction points" within and among States and societies.**

22. Consequently, a number of key challenges are likely to face policy makers in the coming decades. These include lower growth, demographic changes, rising inequality in market incomes, growing economic drag from changes in climate and other environmental pressures, increasing fiscal pressures, and challenges to economic stability. Environmental pressures will intensify **due to rapid urbanisation, industrialisation and economic development.** Feedbacks from environmental damages will compound these pressures and will increase the likelihood of abrupt, unpredictable and potentially irreversible environmental changes. This necessitates a change in the way economic growth is achieved, to one that more fully recognises the role of natural capital in economic growth and human well-being, and internalises the environmental costs of existing production technologies and consumer behaviour. These reflections are particularly relevant at a time when the world at large is discussing the elements of a global deal on climate change in the context of the Conference of the Parties meeting later this year in Paris (COP21). Meanwhile, a shift in the world's economic balance is occurring in the direction of emerging economies, particularly those in Asia, with the share of non-OECD countries in world Gross Domestic Product (GDP) expected to rise further from close to 50% in 2012 to about 60% in 2060.

23. **Demographic forces, including ageing, women's participation in the workforce and migration, will have important policy implications** on health and social systems and the labour market, particularly regarding the sustainability of pension systems and of public debt. Population aging means that the share of people participating in the workforce and working to those who are out of the workforce is declining. As a result, governments will have fewer people paying taxes to raise revenues at a time when expenditures will be higher because they are paying an increasing share of beneficiaries of pensions and health care systems.

24. These changes will also significantly affect the growth capacity of some economies and reinforce the need to look at the distributional effects of policies on education and skills. As for inequalities, including in income, health, education and well-being in general, they were already growing before the crisis, and have only widened since. Without intervention, technological advances and digitalisation may exacerbate these trends further (OECD, 2014b).

25. The adverse consequences of these trends, however, are not inevitable. They **should spur efforts to identify new sources of growth and shift towards a more inclusive, sustainable and resilient development.** This is especially important as even the most familiar mega-trends could be disrupted by changes already underway in both the global economy and the environment. It is therefore crucial to better identify and understand these changes, and design policy measures to address them (OECD 2012). NAEC is contributing to this wider agenda by helping to address the multiple challenges linked to mega-trends.

2. WHAT ARE THE NEW APPROACHES?

2.1. New perspectives and paradigms

26. The work under NAEC underlines that the OECD should deepen its efforts to provide more relevant, better targeted and new evidence-based analysis to Member and Partner countries. To do so, the Organisation should in certain cases shift its focus or perspective, renew its analytical frameworks, develop the use of new tools and better integrate its analysis across policy areas. This section aims to highlight the changes in perspectives that NAEC is calling for as illustrated in Box 1.

Box 1. Changes in Perspectives

- NAEC recognises the **multi-dimensionality of societal objectives** and that they need to be considered and pursued jointly.
- NAEC **also puts inequality and distributional issues at the centre of the economic debate and sharpens the focus on inclusive growth.**
- NAEC recognises the **importance of finance and its link to the real economy.**
- NAEC highlights the **complexity** and **interconnectedness** of our economies.
- NAEC **advocates the development of policy advice that would help governments in facing long-term challenges...**
- ... this implies the recognition of **radical uncertainty** and underlines the importance of developing **strategic foresight.**
- NAEC is thus instrumental in **mainstreaming the sustainability issue.**

2.1.1. Stressing the centrality of people's well-being

Why?

27. NAEC heralds a growth model that considers many dimensions of an individual's wellbeing. It underlines the need to **focus policies on improving people's lives**, where income is one crucial enabling element, among others that matter for people's lives, including health, environment, employment and work, education and life satisfaction.⁷ Macro-economic statistics such as GDP do not provide policy makers with a sufficiently detailed picture of the living conditions that people experience, nor can they alone illustrate the full human costs of the crisis. Moreover, the crisis demonstrated that **strong per capita GDP does not necessarily signal that an economy is 'healthy' or that the quality of life for individuals is improving.** Even though it is recognised that growth in GDP per capita is a key driver of average household disposable income, performance should no longer be assessed through the lens of GDP alone,

⁷ NAEC Project B1: "New approaches to analysing multi-dimensional wellbeing: trade-offs and synergies".

and well-being metrics should supplement, rather than replace GDP. Moreover, efforts still need to be made to better measure GDP (services, intangibles, household production, etc.).⁸

28. Well-being metrics can provide a new and wider perspective to policy makers in the areas that matter to people. Some of these areas have long been on their radar screen, such as jobs, health or education, but the more comprehensive set of outcome indicators at the individual or household levels and their joint distribution across population groups can offer new insights on people's conditions. They can also open new horizons in traditional policy areas by providing a new type of information, such as how people behave and feel about their lives, as well as in a range of new domains that may until now have been beyond the reach of policy makers, simply because relevant information was not available.

29. The well-being framework developed in the context of the OECD *Better Life Initiative* provides a **major opportunity to reinforce the whole-of-the-house effort to assess and better grasp trade-offs and complementarities** among policy objectives. While multiple objectives have always been pursued by policy makers (economic growth, health, fair distribution of income, education etc.) the novelty is the recognition that they need to be considered and pursued jointly. This is a daunting task given the complexity of the issues at stake, but the OECD has adopted a step-by-step approach to assess trade-offs and complementarities across an increasing set of key policy variables and outcomes.

30. The well-being framework is also an opportunity to have a **broader look and a sharper focus on the distributional implications of policies**. Well-being varies among individuals and thus cannot be captured only by measures at the national level or by considering only averages. So the OECD has also focused on measuring inequality between groups in society across the different well-being outcomes. This shows how well-being, whether in terms of income, education, health or general satisfaction with life, is shared across society.

31. A multi-dimensional approach to policy making can improve coherence across the board; it also **increases the transparency and thus the accountability of the decision-making process** as pros and cons of policies can be evaluated *ex ante* in an explicit framework that can be brought to the public discussion. This can be an important input to the overall decision-making process, rendering policies more legitimate and thus more viable. It will thus strengthen the democratic basis on which our societies operate, by opening channels to inform governments about subjective wellbeing and what matters for citizens.

Where do we stand and what does this bring?

32. The OECD is making progress in **better understanding multi-dimensional well-being**. The OECD's work on *How's Life?* has started identifying and measuring objectives and monitoring where countries stand with regard to the dimensions of well-being and their distributions across population groups⁹. This approach is being employed in an increasing variety of policy areas. The recent publication *How Was Life?* for instance illustrated long-term global well-being trends since 1820 (OECD, 2014f). The challenge is to **mainstream these analytical tools in the core analysis** produced by the OECD. There are already several examples indicating the possibilities and potential of mainstreaming this agenda.

33. First, well-being is already being used in the NAEC initiative as a rationale to look at new concepts such as **job quality**. Indeed, the jobs people hold is one of the most powerful determinants of

⁸ Disaggregation of national income by age, gender and income quantile would also help address a broader range of policy questions and should be feasible. Many countries are engaged in efforts to come up with a national account-based concept of the distribution of income.

⁹ This work has also been the basis for the work of the Sen-Fitoussi-Stiglitz Commission.

well-being.¹⁰ But what matter is not only having a job, but also its quality. Job quality is increasingly important because of the changing nature of jobs (e.g., increases in non-standard work such as self-employment and temporary contracts) and the impact of this on access to existing social programmes (e.g., employer-funded and publicly-funded pensions, unemployment insurance, health insurance) that are funded through traditional employee-employer relationships.

34. This work has led to a new conceptual and operational framework to measure and assess job quality based on earnings quality (the extent to which employment contributes to the material living standards of workers and their families), labour market security (the risk of job loss and its consequences for workers and their families), and quality of the working environment (which captures non-economic aspects of job quality and includes factors such as the nature and content of work performed, working-time arrangements and workplace relationships). Moreover, in order to ensure that these indicators are conceptually sound and relevant for policy, the framework provides three guiding principles that are coherent with a well-being perspective: i) focus on outcomes experienced by workers; ii) emphasise the objective features of job quality; and iii) use data on individuals to allow going beyond average tendencies (Hijzen, 2014). These three dimensions jointly define job quality and should be considered simultaneously, together with the number of jobs that exist (i.e. job quantity), when assessing policies and institutions. And these new measures of Job Quality have the potential to change the assessment of labour market performance in terms of quantity and quality. The 2013 edition of *How's Life?* and the *Employment Outlook 2014* already included chapters on job quality (OECD, 2013a; OECD, 2014c).

35. Second, the **Inclusive Growth initiative** is a first attempt to leverage the NAEC framework and operationalise the well-being approach by explicitly assessing the effects of policies on several well-being dimensions and their distributions across the population. It provides a coherent, evidence-based and policy-oriented framework to deepen existing work on inequality and well-being, including inequality of income but also inequalities of non-income dimensions, such as health and employment. It is thus multi-dimensional and focuses on distributional issues to better appreciate interactions and link the individual aspects of inclusive policies to their outcomes. It allows looking at inequalities of opportunities and their impact on growth. It also allows focusing on different segments of the population, for example the middle-class or the bottom 10%, 20% or 40%. This makes OECD work on well-being more "operational" by mapping policy linkages, thus identifying the main channels of transmission of policies to outcomes and highlighting the trade-offs and synergies among pro-growth and pro-inclusive instruments (OECD, 2015a).

36. Third, work is being undertaken also on **green growth and inclusiveness**. Green growth policies play an important role in fostering inclusive growth, in particular through their effect on health outcomes. The impact of green growth policies on household real disposable income is more difficult to assess and integrate in the framework at this stage. More evidence on the distributional impacts of green growth policies is needed, to enable effective policy design. Complementarities between environmental and structural policies in delivering growth are also accounted for (Albrizio et al., 2014).

37. Fourth, the well-being and inclusive growth approaches are beginning to inform the **Going for Growth, Economic Outlooks and Economic Surveys**. Going for Growth has incorporated analyses of the effects of policy priorities on a range of outcomes, including inequality and the environment. Economic Surveys have used multidimensional well-being framework to identify critical issues which are then the subject of more in-depth analysis (Austria in 2013, United States in 2014, and Mexico in 2015).¹¹

¹⁰ NAEC Project B2: "Measuring and assessing job quality".

¹¹ For example, with the 2013 Austrian Economic Survey, well-being indicators pointed to gender balance as a point of friction.

Capturing multi-dimensionality in Economic Surveys and Going for Growth has also led to a broadening and deepening of collaboration between the Economics department and other Directorates.

38. The **Multi-Dimensional Country Reviews (MDCRs)** have also started to apply well-being concepts to frame policy advice to developing countries.¹² They aim to design policies and strategies which do not simply promote growth but rather development in a more comprehensive sense, reconciling economic, social and environmental objectives to ensure that the development path is sustainable and that the lives of citizens improve.

39. The well-being and inclusive growth frameworks are also progressively being mainstreamed in the work on **public governance, regional and territorial development**. This involves the examination of well-being at the regional and city level, generating policy lessons on how to improve the quality and distribution of public services. "How's Life in Your Region" is a step forward in making the concept of multidimensional policy relevant at the level of government that accounts for the bulk of service delivery, investment and procurement in OECD countries.

The way forward

40. The **OECD needs to further mainstream NAEC findings, particularly the emphasis on multi-dimensionality and the focus on distributional outcomes**. This will help to grasp trade-offs and complementarities among different policy objectives and better inform policy choices by highlighting their impacts on different dimensions of well-being. Fully integrating well-being and inclusive growth concepts at the centre of OECD's narrative and as the goal of policy recommendations is still however work in progress. A whole-of-organisation effort is required to articulate a single narrative wiring together the disparate work that is being undertaken throughout the OECD, to ensure a consistent message and standardised approach. Despite the progress that has been made (see Annex 3), a lot remains to be done in particular to use the well-being framework to guide the analysis and draw firm policy conclusions in OECD's core work. While well-being (in addition to green growth, inclusiveness and trade-offs) is now discussed in Economic Surveys, it is not fully integrated into the policy analysis itself. Progress on this front will continue, in part by considering well-being more when discussing with countries possible topics to be covered in Surveys, and by reshaping the Surveys themselves, especially the Assessment & Recommendations to better highlight the links between economic policy and well-being.

41. To do so, the OECD needs to **further develop the Inclusive Growth initiative**. The inclusive growth analysis needs to permeate the work of different directorates and committees. While the OECD has collected data on objective measures of well-being such as health, education and social connection, well-being involves methodological challenges such as how to aggregate findings, compare countries and deal with value judgements, for example in the choice of well-being dimensions and their interpretation that can differ between countries.¹³ The OECD Inclusive Growth framework that was proposed in "*All on Board: Making Inclusive Growth Happen*" will be further developed to provide policymakers with a more rigorous analysis of the consequences of policy choices. This will be done by adding other non-monetary dimensions and quantifying policy trade-offs and complementarities.

42. **A comprehensive measurement agenda** is also required to fully capture the different dimensions of well-being. **Measuring well-being remains a big challenge, with *inter alia* coverage and aggregation issues**. With the required data, multidimensional well-being can provide a suitable umbrella

¹² See <http://www.oecd.org/dev/mdcr.htm>

¹³ These methodological challenges are being discussed in the Committee on Statistics and Statistical Policy (CSSP).

for integrating various policy objectives into one framework. This will also make it easier to support Member countries in their efforts to implement changes in their institutional settings to adopt this more comprehensive framework. A lot remains to be done in this regard. While OECD work has provided a snap-shot of well-being across countries, there is also a **need for more timely, high-frequency and group-specific indicators** that can track short-term movements in well-being. Better knowledge of short-term movements in well-being is crucial for informing policy interventions, especially during and after recessions.

43. This measurement agenda is relevant **for countries at all stages of development**. The focus on well-being and inclusiveness brings with it promising new perspectives on a wide range of policy challenges.¹⁴ The Inclusive Growth initiative, for example, is being enriched when considering the challenges of emerging and developing economies. Recent work has also aimed to adapt the OECD well-being framework to the realities and priorities of less developed countries, while contributing to the ongoing discussion on the post-2015 SDGs, building on its broader perspective on well-being and sustainability (Boarini *et al.*, 2014). While this will be challenging given these countries' capacity constraints in generating data, many of them have pioneered innovative approaches in this field. This work, done for the time being on a case-by-case basis, requires **a significant leap forward to be undertaken in a systematic manner**.

2.1.2. ...the importance of finance and its link to the real economy...

Why?

44. The OECD – and many other Organisations – **underestimated the fragility of the international financial system in the run-up to the crisis**, as well as the extent and global reach of the exposure of the real economy to this fragility. They did not sufficiently consider the complexity of financial instruments; the rising interconnectedness between financial institutions and markets and how these factors, combined with insufficient supervision, potentially undermined the stability of the financial sector as a whole. This also led to an underestimation of how quickly the impacts of the crisis would spread globally. Similarly, one of the key findings of the review of OECD forecasting was that the financial sector needs to be better considered in economic projections, and that we need models underpinned with realistic assumptions to better understand its real impact.¹⁵

45. **Interactions between financial and real economic activities are numerous and complex**. The recent global financial crisis is a reminder that mispricing of financial risks can generate substantial economic costs. An example of this under-pricing is the funding cost reduction for financial firms, especially but not solely those considered systemically important, the debt of which benefits from implicit guarantees provided by public authorities. Even though the guarantees are only perceived, they have value and generate economic costs, creating distortions to competition and incentives. Credit expansion was facilitated by cheap borrowing and significant implicit bank debt guarantees have influenced the behaviour of bank creditors as well as managers, who pursued excessive increases in banking activities. Such public subsidies have also tended to benefit more high-income households and in particular well-off bank staff, thus reinforcing rather than reducing income inequality (Denk *et al.*, 2015b).

46. It is also critical to ensure that **the financial sector plays its key role of financial intermediation**, thus greasing the wheels of the real economy. In particular, it is necessary to improve

¹⁴ The UNDP, for example, made an important contribution to multi-dimensional measurement with the Human Development Index (HDI).

¹⁵ NAEC Project A2: "Forecasting in Times of Crisis: post-mortem of OECD projections".

financing conditions for Small and Medium-Sized Enterprises (SMEs) and entrepreneurs and enable them to diversify their sources of finance. At the same time, policies and regulations aimed at securing financial stability should not be compromised.

Where do we stand?

47. The OECD has strengthened its analysis of the financial sector and its links to the real economy. The financial stream of NAEC has considered several policy issues, including: financial deregulation and innovation; ongoing changes in technology and innovations in the trading of securities; long-term trends, such as ageing populations and longevity risk; the rise in the importance of institutional investors; the mismatch between long-term investment (including needed infrastructure) and corresponding financial products with suitable investment horizons; and the role of prudential authorities in securing stability and adequate supervision of the financial system¹⁶. These developments were put under the spotlight by the crisis and some have, in one form or another aggravated its impacts. In addition, unless properly addressed, financial structures and institutions may pose problems going forward for effective price discovery, resource allocation, financial stability and economic growth.

48. As a result, **financial stability is closely monitored and better integrated in forecasting and modelling**. A post-mortem of OECD forecasting indicated that projections failed to fully reflect the increasing globalisation of real and financial activity prior to the crisis, which had raised the potential for cross-border and cross-market transmission of economic and financial shocks. Indicators of potential financial vulnerabilities are now examined closely. They could reveal potential exposure of OECD and selected non-OECD countries to financial turbulence. Financial Conditions Indices (FCIs) have been used extensively in the forecasting rounds since 2008-09 and as a guide to possible GDP effects in scenario analyses (OECD, 2014a; OECD, 2014d).^{17 18}

49. Work has begun on the difficult task of augmenting existing macroeconomic models with more detailed relationships of banking sector behaviour, and to take better account of global financial interconnectedness. The macroeconomic models available at the time of the crisis typically ignored the banking system and failed to allow for the possibility that bank capital shortages and credit rationing might impact on macroeconomic developments.¹⁹ The economic model that the OECD uses for its *Economic Outlook* projections²⁰ now includes a substantial financial block with many financial variables.

¹⁶ NAEC Project A3: "The role of the financial system in the crisis and reforms required to promote sustainable growth" and NAEC Project A4: "Fostering long-term investment and responding to the challenges of ageing and longevity".

¹⁷ NAEC Project A4: "Fostering long-term investment and responding to the challenges of ageing and longevity".

¹⁸ The OECD makes use of financial condition indices (FCIs) for the United States, Japan, the euro area and the United Kingdom that weight together a wide range of financial variables that have a well-established link with GDP growth 12 to 18 months later.

¹⁹ NAEC Project A2: "Forecasting in time of crisis: post-mortem of OECD projections".

²⁰ NiGEM, an estimated model of the British National Institute of Economic and Social Research. This model uses a 'New-Keynesian' framework where agents are presumed to be forward-looking but nominal rigidities slow the process of adjustment to external events.

What does this bring?

50. The OECD has been at the forefront of new thinking and analysis on the reform of banks. It has contributed to the design of the post-crisis regulatory landscape with the aim of striking a better balance between financial stability and growth. Since the crisis, it has been particularly active in developing analysis on regulatory reforms, including through Secretariat recommendations such as separation of banking activities. As an active participant to the G20 and the Financial Stability Board, the OECD has insisted on consistent international co-operation and advised regulators on improving the regulatory framework.

51. NAEC work also shows that the financing environment for businesses has changed profoundly as a result of the crisis, limiting access to traditional sources of finance for SMEs in particular. Furthermore, the financial crisis underscored the limitations of traditional debt for new, innovative and fast-growing companies. There is a pressing need to broaden the range of financing instruments badly needed to increase the resilience of the real economy to large shocks and foster new sources of growth²¹. Moreover, work on the financial system and its link to the real economy should allow the Organisation to provide critical insight on how to ensure appropriate financing of long-term investment (see section 3.2.5).

52. NAEC work also provides evidence on the impact of a growing financial sector on growth and inequality. Economies gain a lot from moving from a small financial sector to a more developed one. However, when the financial sector is already well developed, as has been the case in many OECD economies, further increases in credit, especially to households, might diminish growth (Cournède and Denk, 2015).²² In contrast, further stock market expansion generally boosts growth. In addition, financial expansion contributes to income inequality in two ways (Denk and Cournède, 2015). First, higher income people can and do borrow more, so that they can gain more than others from investment and education opportunities (Denk and Cazenave-Lacroutz, 2015). Second, the financial sector pays higher wages than the rest of the economy for employees with similar profiles, especially for top earners (Denk et al., 2015a). This suggests that reforms to improve the structure and quality of finance are needed to improve the composition of finance and ensure that the financial sector contributes to growth that is stable and inclusive (Cournède et al., 2015). Reforms, such as curbs on excessive borrowing, are likely to have negative short-term effects on demand, making it more difficult for some to obtain credit. Over the medium to long term however, these reforms support stronger growth and more income equality.

53. NAEC work is also providing evidence that the composition of finance matters. It shows that, beyond a certain level, bank-lending expansion might have a stronger negative association with growth than increases in capital-market credit (Cournède and Denk, 2015). Similarly, increases in credit to households could have a more negative association with growth than credit to businesses. However, expansion in stock-market funding may be good for growth. More work is needed to understand whether there are causal links in all of these correlations. This project also suggests that reforming the tax treatment of debt and equity could have some positive impact on resource allocation and financial stability (see section 3.2.5). However such tax reforms would involve challenging trade-offs for policy makers.

The way forward

54. Reinforcing the analysis of the linkages between the financial system and the real economy is key not only to improve forecasting and the accuracy of analytical models, but also to develop relevant policy

²¹ NAEC Project A5: "New approaches to SME and entrepreneurship financing: broadening the range of instruments".

²² NAEC Project B12: "Increasing the resilience of economies to exogenous shocks".

options to foster appropriate financing of long-term investment. The Organisation is now in a position to better identify and integrate financial sector risks in its work. This is a starting point but this could be strengthened further by developing scenario analysis, and by deepening exploration of tail risks.

55. Indeed, **there are many challenges** in adequately and fully considering the impact of finance on the real economy. We still have to develop our understanding of how financial markets operate, interact and fulfil their function of financing the economy, in particular for both long-term investment and SMEs,. The links between finance and investment in knowledge-based assets and the role of seed and venture capital need to be appreciated better. While emerging issues also need to be investigated further such as the cash-hoarding behaviour of firms and the impact of prolonged low-interest rates. This is essential in informing policy recommendations in this area.

56. To advance the financial stability and growth agenda, the OECD will also need **to put more emphasis on understanding the impact of macro-prudential measures and monitoring** in order to contribute to the international debate on these topics, complementing the work undertaken by other institutions such as the IMF, (Blundell-Wignall and Roulet, 2014a). It will also take further steps to strengthen co-operation on this relevant research agenda (in particular with regard to the macro-prudential research undertaken at the ECB, MaRs, see section 2.2.5). At the same time, the OECD will need to continue its **dialogue with the private financial sector** (especially via the OECD Financial Roundtables) to gain valuable insights from practitioners and market participants, **and with the business sector**, to improve understanding of their financing needs and how alternative finance instruments can serve them. Encouraging dialogue between the financial and the private sector, as well as with governments, will be important to restore trust among market participants following the crisis.

57. It will also be important to **keep financial markets open and avoid financial fragmentation**. For example, measures on banks' foreign currency cross-border operations should be taken in a manner consistent with financial openness principles. Achieving a well-balanced regulatory framework that can balance stability and growth and minimise unintended consequences of financial reforms will be important to make the financial sector serve the real economy and support financing economic growth. In taking part in the G20 initiative on structural banking reforms the OECD, together with the IMF under the aegis of the Financial Stability Board (FSB), is **contributing substantively to discussion on cross-border consistencies and global financial stability implications of bank reforms**, including through its work on the OECD Codes of Liberalisation. Further monitoring of such impacts and analysis of potential effects will be necessary in order to avoid financial market fragmentation and other unintended consequences that may arise from such reforms.

2.1.3. ...coping with complexity...

Why?

58. The NAEC initiative recognises the **increased interconnectedness and complexity of the global economy**, and the need to better understand the policy implications deriving from such complexity. Interconnectedness reflects increasing financial integration, but also increasing trade and investment integration through GVCs. Work on long-term scenarios suggest that interconnectedness will rise over the next decades, via increased trade integration and intensifying trade relations between OECD and non-OECD countries (Johansson and Olaberria, 2014), with important implications for policy.

59. This **growing interconnectedness results in the global economy being characterised as a "complex adaptive system"**. Such a system is "non-linear and dynamic, requiring continuous adaptation to patterns the economic system itself creates", with interactions at the micro level leading to particular macroeconomic outcomes or patterns that are "not the simple aggregation of micro decisions by uniform

decision-makers". Most changes occur endogenously and economies operate within a context of constant fluctuation and multiple equilibria (Silim, 2012). Moreover, complex systems are networks of interdependently linked actors whose incentives and actions affect all other actors, and which evolve, adapt, and reorganise themselves. Complex systems do not work in a linear manner but rather exhibit a series of well-defined characteristics: tipping points, feedback loops, path dependence and sensibility to local contexts (Byrne 1998). In such complex systems, the power of networks is crucial, while feedback mechanisms and the heterogeneity of individuals play critical roles. Taking a network approach can help to identify the critical hubs of the system, as these may be a source of significant vulnerability to shocks.

60. In terms of policy measures, this vision of the global economy as a complex adaptive system requires significant changes in the analysis and in particular further investigation on how networks work so as to better understand their influence. It requires a less mechanistic view of the world, one where an economy is less controllable and predictable and where social norms emerge across networks. In such a world, the resilience and robustness of systems become primary consideration.

What does this bring and where do we stand?

61. The release of the Trade in Value Added (TiVA) database represented a milestone in the analysis of GVCs and in the understanding of the interconnectedness of our economies. While continuing to improve the TiVA estimates and to extend the geographical coverage, the OECD is expanding the agenda to examine the impact of GVCs on jobs and the skills associated with those jobs, the role of multinational enterprises and their contribution to value added and the income from foreign direct investment, the impact of participating into GVCs on innovation and technology diffusion and the added benefits of trade liberalisation in the context of GVCs (e.g. via the so-called tariff magnification effect). This work is essential to provide a **more complete and newer understanding of the interconnectedness of economies and the policies that are required to benefit from GVCs**.

62. The issue of behind the border obstacles to trade was highlighted by NAEC as one of the many examples of how complex interconnections that now define the global economy have outstripped policy frameworks and need to be better addressed by governments acting in concert. It has brought to the front the importance of regulatory co-operation.

63. Increasing financial and economic integration also **requires a greater co-ordination of national tax and regulatory regimes** to close the loopholes and gaps that facilitate the base eroding and profit shifting activities of Multi-National Enterprises. This agenda is being pursued in the OECD/G20 Base Erosion and Profit Shifting (BEPS) Project.

64. **Complex systems cannot be successfully governed or steered with simple, linear mechanisms**. In complex environments, strategies must be developed that take into account the dynamics and interdependency of the system. Simply devolving power to local authorities will not solve the issue unless it is also accompanied by attention to the connections and interactivity present in the system and space is made to facilitate and use the constant feedback that is required to guide complex systems (Blanchenay et al, 2014). The Governing Complex Education Systems project at the OECD, for example, draws on complexity theory to analyse how to build more resilient and robust response systems capable of adapting to changing needs and of identifying key pressure points in the system. Complexity theory has been especially prominent in health care, emergency management and ecology and has been adapted for other sectors, such as education. Several educational programmes worldwide have implemented complexity theory principles to achieve positive results (see Snyder, 2013).

The way forward

65. Long-term trends such as the rising interconnectedness through GVCs as well as the increasing complexity of the production process – not least due to the growing importance of Knowledge Based Capital (KBC) – create new opportunities but at the same time lead to a new set of risks. On the one hand, disruptions in production are likely to spread more quickly. On the other hand, this is also a source of resilience. The rising interconnectedness decreases the vulnerability to domestic shocks and reduces volatility as the risks can be shared and trade patterns can rapidly respond to changes in comparative advantage. It thus also exacerbates the need for policy co-ordination both at national level and in international fora. It is critical to understand better who wins and who loses from this dynamic, and how to ensure that all countries and enterprises, big or small, can participate in GVCs.

66. It is also key to understand the dynamics of GVCs and their strategy in terms of market presence to allow a better grasping of their complex structures as well as the financial flows resulting from their investment behaviour. It enables more informed and effective policy responses with regard to critical issues such as responsible business conduct, beneficial ownership and base erosion and profit shifting. All these phenomena are linked to the rise in complexity and interconnectedness of the global economy and consequent global challenges such as inequality. The policy agenda in this area is thus central to ensure that the global economy delivers prosperity for all.

67. Globalisation and the associated rising interconnectedness and complexity requires all hazards approaches to risk assessments, in order to identify the critical risk factors that are threatening the stability of the global economy. To help address these risks, and to remain at the forefront of analysing the complexity of the world economy, the **OECD should deepen and accelerate its efforts to build new cross-country datasets** and to develop new international accounting standards applicable to economic data that provide a coherent and integrated view of the myriad data sources currently used. This includes particularly those related to GVCs, which are critical to better understand the complexity of the global economy and evolving investment flows. However, the OECD's Inter-Country Input-Output (ICIO) model can be used for the analysis of other interactions between countries, including carbon flows and carbon embodiment. Improved cross-country datasets would help to design better policy recommendations, and to support OECD Members in adopting more relevant and effective policies. It is also necessary to make this work for developing countries. Making these datasets more widely available for research could also contribute to avoiding groupthink.

68. Even countries without significant domestic or external imbalances can be affected by external shocks through spill-overs and contagion through trade and financial channels. The economic crisis highlighted the importance of **understanding the factors that condition a country's economic resilience, i.e. its vulnerability to shocks, as well as its capacity to resist them and recover quickly**. The OECD has developed a set of indicators to monitor country-specific vulnerabilities and potential spill-overs and contagion. New evidence suggests that the indicators are useful in signalling early enough the crises and severe recessions that took place in OECD economies between 1970 and 2010 (de Serres et al, 2015). A future resilience monitoring exercise could consist of two legs. One leg could focus on ex-ante resilience and draw on the set of vulnerability indicators. These indicators can be regularly updated and give insights into areas of vulnerabilities in each country. A second leg would consist of monitoring policy settings that foster ex-ante and ex-post resilience. Particular attention would be paid to trade-offs and complementarities of policies in influencing the different dimensions of resilience (de Serres et al, 2015).

69. The OECD also needs to significantly develop its understanding of complex systems and network effects and study in depth their implications for policy-making. It could take inspiration in doing so from

some members and research institutions that are experimenting with complexity to better inform policy analysis (Jacobzone and Skoratko, 2013). This would be particularly relevant for issues such as financial regulation, public and international governance, innovation or macroeconomic policy, transition to a low-carbon economy and effectively addressing environmental issues more broadly, regional policy, etc. Moving in this direction requires, inter alia, partnering with researchers or institutions that are studying the implication of complexity and network effects for policy making. The Organisation should also deepen its understanding of the impact of policy interventions and their limitations through **further use of simulation and impact assessment**. Furthermore, ex-post and ex-ante evaluation should consider economic, social and environmental impacts in an integrated manner. Such an approach would serve as a tool for achieving balanced policy approaches in the spirit of NAEC.

2.1.4. ...integrating institutions and politics in a long-term perspective

Why?

70. NAEC has pushed towards the adoption of a longer-term view and developing policy advice that would help governments facing long-term trends, such as ageing and increasing supply disruptions, volatile prices and rising political tensions over access to natural resources. A first step in this direction was taken with *Policy Challenges for the Next 50 Years* (Braconier *et al.*, 2014).²³ But going forward implies the recognition of radical uncertainty and its consequences for our capacity to make long-term projections, thus the importance of tackling with different futures and developing strategic foresight. This is also consistent with a perspective considering the global economy as a complex adaptive system, where history plays a crucial role and there is strong path dependence.

71. In such a perspective, **institutions play a crucial role in policy performance and are constantly evolving, as they are imperfect and often inefficient**. Policy recommendations differ widely across countries depending on a country's level of development intermediated through different economic institutions, political systems and social values. As a result countries are heterogeneous in their preferences, priorities and possibilities. The OECD takes this heterogeneity into account with policy suggestions based on multidimensional thinking in a country-specific way. Put simply, **there is no one size fits all approach to policy**. If all economies need more effective government structures ensuring good quality public services for citizens and an appropriate environment for businesses, NAEC recognises that institutional design is important and that the political economy of reform needs to be better reflected in policy recommendations.

What does this bring and where do we stand?

72. Building on earlier work on how to make reform happen, NAEC embraces the **technical, economic and political complexity of the issues and interests at stake in many reforms** that make their implementation dauntingly complex, particularly given imperfect information and distributional uncertainty, and even more when trust is at a low level (OECD, 2010).

73. Government capacity, at all levels of government, remains key in designing and implementing reforms. NAEC projects have also highlighted several important factors in better implementing them. It has shown that **prioritisation and the design of reforms are crucial**. Prioritisation can sometimes make it possible, for example, to consolidate public finances without compromising growth or exacerbating income inequality even in countries with large fiscal gaps.²⁴ Meanwhile, some pro-growth reforms require

²³ NAEC Project B13: "OECD@100: global trends and policy challenges".

²⁴ NAEC Project A6: "How much scope to achieve growth and equity friendly fiscal consolidation".

careful design (and implementation) that takes into account their potential adverse effects on other dimensions of well-being. For instance equity can be adversely affected by pro-growth tax reforms, benefits reforms and employment protection legislation (EPL).²⁵ Most NAEC projects that have identified such trade-offs have also identified policy packages that can help mitigate them (See Section 3). Other policies have to be carefully designed to maximise their impact on growth. For instance, Research and Development (R&D) tax credits have to be designed in such a way as to avoid putting young innovative firms at a disadvantage,²⁶ while well-designed environmental policies can be stringent without harming competition or productivity, and can have positive effects on the most efficient firms²⁷ (See Section 3.2.3).

74. NAEC work also aims at better measuring trust and better defining what needs to be done to rebuild it. Indeed, governments are faced with a dramatic decrease in public trust towards both market and public institutions, as well as towards the governments themselves.²⁸ **Interpersonal trust is an important element of complex societies as well as a personal trait or skill**, essential for the development of social capital and a measure of social cohesion. In high-trust societies, individuals are comfortable sharing new ideas and exchanging information with family, friends and other citizens. Because of this it is easier to reach a consensus among different group interests, thus allowing for more efficient interactions. Data from the Programme for the International Assessment of Adult Competencies (PIAAC) survey reveals that on average, 2 in 10 people across participating countries report trusting more than just a few people while over 1 in 3 believes that they have an influence on government.

The way forward

75. NAEC broadly embraces the view that we need smarter States and governments with appropriate capacity and effective structures to regulate and oversee the functioning of the market economy. While *Making Reform Happen* showed how difficult it was to generalise specific reform episodes across countries and over time, more could be done to consider the importance of political economy in OECD-wide policy advice. In addition, a number of tools outlined in Section 2.2 can help to better target and prioritise reforms as well as assess their distributional impacts and the manner in which they could be sequenced.

76. The OECD could significantly increase its impact on national agendas by "going national". This involves partnering with Member governments at the highest level, working hand in hand to create tailored policy solutions with **due consideration for their specific needs, conditions and institutional settings**.²⁹

77. Governments also need **better data, better analysis and ultimately better policies to address the declining levels of trust in institutions**. Data collection can help formulate advice about reforming institutions that are crucial for trust (see section 3.2.6).³⁰

²⁵ NAEC Project B5: "Assessing the Transitional Cost and Distributional Consequences of Structural Reforms".

²⁶ NAEC Project B15: "Ensuring productivity growth and innovation in the long-run".

²⁷ NAEC project B10: "Environmental policies and economic outcomes".

²⁸ NAEC Project C1: "Revisiting the social contract: rebuilding trust for sustained economic recovery".

²⁹ The OECD has several data sources and tools for supporting a closer look at national policies. For example, the Education GPS provides internationally comparable data and analysis on education policies, practices, and outcomes, enabling countries to set out a specific roadmap tailored to their needs and objectives.

78. It is not only government institutions that are important. Social institutions matter as well. There is a need for the OECD to deepen its analysis in this area, by further reflecting on political and social structures and traditions, and differences in the stage of economic development.

79. Governments also need to **adopt longer-term perspectives to better understand future challenges, how they are intertwined and how they might be addressed**. This is why the short and medium term forecasts are now complemented by long term projections extending to 50 years. Going forward, the Organisation is inquiring on the future of productivity, which is a crucial issue for gauging developments in well-being over the next decades.³¹ Also, the new horizontal project *Ageing Unequally* will look at how the twin trends of ageing and widening inequality are interacting, by using a cohort-based approach (OECD, 2014e). The experiences of the currently aged population indeed provide only limited insight into the nature of ageing in the future, as the experience of work, education, family and health have been so different across different cohorts. The cohort-based analysis will be supplemented with the development of a policy foresight model, permitting an analysis of the effects of policies in one area (e.g. health) on the outcomes in another (e.g. retirement decisions, incomes in old age).

80. An important dimension of long-term thinking is sustainability. **Environmental issues have important economic effects and should be integrated into long-term policy and planning**. The potential for environmental degradation to have substantial negative feedbacks on GDP and well-being also advocates for a longer-term approach to weighing up economic and environmental priorities. For instance, economies and societies need to be more resilient to natural hazards including climate change and extreme weather events. The environmental vulnerabilities of society (e.g. health impacts of pollution) and degradation of natural capital are important externalities that need to be better considered in a multi-dimensional approach to policymaking.³² Specific policy approaches are discussed in Section 3.2.2.

81. To support this type of analysis, **the OECD needs to strengthen its own modelling tools and strategic foresight capabilities**. This involves adopting a planning approach that is informed by the use of multiple scenarios. The OECD will strengthen the evidence base by gathering multiple perspectives on the future, reconsidering assumptions and connecting long-term projections to a broader strategic discussion. To do so, it will deploy mixed methods (including scenarios and modelling) and work through an iterative analytical and discursive process. This new way of working generates forward looking policy engagement and analysis. Greater emphasis than before is put on risks around the main projections and on alternative "what if" scenarios that will have important economic policy implications.

82. The mainstreaming of foresight capabilities – concepts, methods and ways of working – is progressing within Directorates, as part of a co-ordinated horizon scanning exercise. Foresight is also being diffused through committees, promoting a broader culture of effective strategic dialogue between policy stakeholders in Member as well as Partner countries. But, here again, a lot remains to be done to properly input in our policy advice.

³⁰ An example of such data collection is recent work on "What makes civil justice effective?", OECD Economics Department Policy Note No. 18.

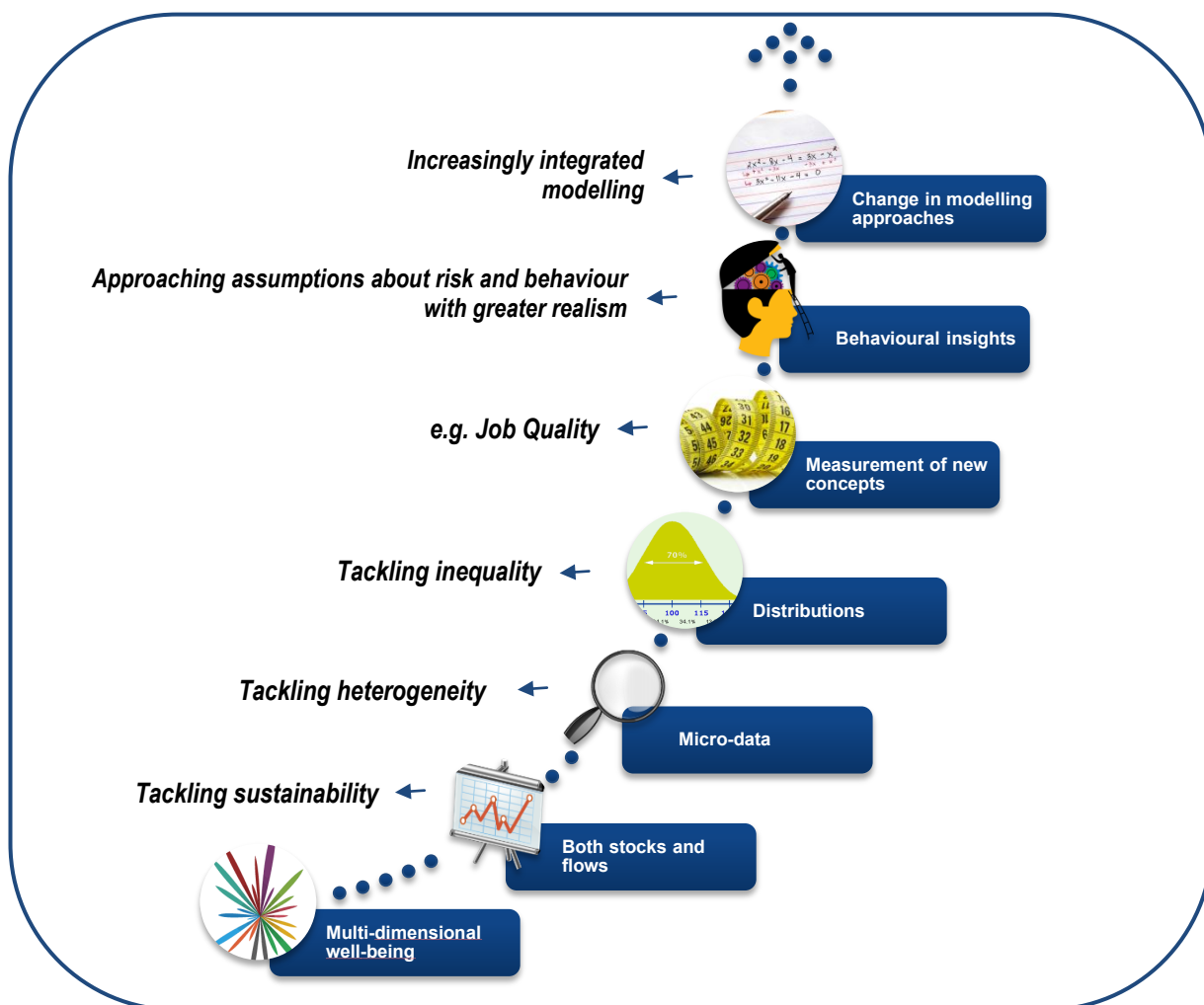
³¹ NAEC project B15: "Ensuring productivity growth and innovation in the long-run" and NAEC-sponsored OECD-NBER conference on long-run productivity (September 2014).

³² NAEC Project B9: "Cost of Inaction and Resource Scarcity: Consequences for Long-term Economic Growth / Benefits of Action".

2.2. New policy analysis, instruments and tools

83. In keeping with the need to better account for the complexity of economic systems and refine and update its policy advice, the Organisation is developing and using new measures, instruments and tools. It is first improving its measurement of stocks and incorporating both stocks and flows in its analysis. In the case of natural capital, this facilitates stronger analysis of sustainability. The OECD is also developing a more systematic use of micro data to design policies which reflect the heterogeneity of agents, and is more systematically considering the entire distribution of outcomes to better understand the sources of growth and tackle inequality. The OECD is also reviewing some of its fundamental assumptions, approaching risk and behaviour with greater realism, and is updating its models, deploying increasingly integrated and versatile approaches that are able to translate the findings of social research and behavioural science into policy design and implementation. The new analysis and tools discussed in this section yield new policy insights (figure 1), but do not necessarily lead to new policy recommendations.

Figure 1: NAEC - A push for using new data and tools



2.2.1. A change in relevant economic assets, focusing on stocks as well as flows

Why?

84. The OECD should put **more focus on the measurement of stocks (economic, natural, social and human capital)**, as well as on the adequate consideration of both stock and flow concepts in its analyses. Assessing the sustainability of well-being over time requires the measurement of stocks of resources that help to shape well-being outcomes, and monitor whether these resources are being used in a way that does not compromise the well-being of future generations. Maintaining, depleting or increasing the different types of capital stocks underpins the various dimensions of well-being.

85. Four different types of resources (or "capitals") matter for future well-being, i.e. economic (including KBC), natural, human and social capital. While the stocks of these resources will not be the only determinants of well-being over time, they offer a practical means to examine the link between the present and the future: through the accumulation or depletion of appropriately valued resource stocks, the choices made by one generation can influence the opportunities available to the next.

86. Expanding data on the value of different stocks, and how it is distributed among different sectors and agents, would help **to adequately assess the inclusiveness of economic growth**. Looking at inequalities in wealth, for example, is crucial in understanding the long-term dynamics of rising inequality. It follows that inequality must be addressed through appropriate policy measures taking into consideration wealth stocks and not just income flows. Investment in economic, human, natural and social capital need to be well monitored in order, for example, to appreciate the distribution of wealth among households, the economic vulnerability of households and their resilience to shocks. Using a 'capital perspective' to assess sustainability implies recognising that focussing only on gross debt is an inadequate guide to sustainability.

87. Developing and **improving measures of stocks of natural capital is also critical to promote environmental sustainability** and better management of natural resources and raw materials. Progress can be monitored by looking at stocks of environmental assets, along with flows of environmental services, and by using indicators that reflect the extent to which the asset base is being maintained in terms of quantity, quality or value.

88. A key aspect of **well-functioning societies is a sustained level of social capital**. Social capital refers to the social networks, systems of reciprocal relations, sets of norms, and levels of trust that individuals or groups may have, or to the resources arising from them. On a societal level, better social and emotional skills foster social cohesion in increasingly diverse societies, by improving mechanisms of bonding and bridging through which social capital is built (OECD, 2015e).³³

What does this bring and where do we stand?

89. Further work is first needed and being undertaken to **properly measure economic capital**. Measuring physical capital stock remains challenging, while a lots remains to be done regarding **KBC**.

³³ NAEC Project B3: "Assessing the effects of distribution of skills and key related institutional variables on multi-dimensional wellbeing outcomes".

90. The OECD has a leadership role in moving measurement of human capital from crude levels of years of schooling or educational attainment levels to realistic assessments of the skills pool in the working-age population as provided by PIAAC. The OECD has developed **experimental monetary estimates of the stock of human capital** (i.e. the stock of competencies, knowledge and skills embodied in people), to complement existing indicators that are based on years of schooling or levels of competencies (Liu, 2011). Monetary estimates of the stock of human capital are useful as they can be compared with stocks of physical capital (e.g. infrastructures, machineries). In addition, these estimates allow one to assess how changes in this stock of human capital are affected by a variety of factors, such as education attainment, labour market and demographic factors. Given that immigrants account for 13% of the population on average in OECD countries, migration flows can also have a significant effect on the stock of human capital in a particular country. The OECD has been developing more sophisticated indicators of the contribution that migrants with different skills levels make to economies (OECD, 2013b).

91. **Work is also proceeding with the measurement of natural capital**³⁴ (in physical and monetary terms). This includes the measurement of land and natural resources with a view to implementing key aspects of the new international economy-environment accounting standard (SEEA). The aim is to complement measures of economic capital (produced and net financial assets) so as to improve the accounting of a nation's wealth in the system of national accounts. Indicators can also be developed from natural capital data to illustrate changes in the natural resource base and lead to a more appropriate measurement of (multifactor) productivity, such as proposed in recent OECD work (Brandt et al., 2014).

92. **On social capital**, the OECD recently proposed a taxonomy of different interpretations, which is being used by some statistical offices as a basis for their own national planning to develop better metrics in this field; and an inventory of the available survey questions, which is informing the use of these measures in OECD publications and analysis. As trust and cooperative norms represent a critical ingredient of social capital, ongoing work on trust in institutions directly contribute to improve measurement and understanding of the importance of social capital for a broad range of outcomes. Steps are also being taken to explore the possibility of providing experimental measures of trust and social norms.

The way forward

93. While there has been much work on improving the data on stocks, conceptual and measurement challenges remain. This is particularly the case with regard to capturing trust and social capital. The OECD could reinforce its work in this area.

2.2.2. A change in the unit of analysis, complementing aggregate with micro data

Why?

94. Traditional OECD analyses based on aggregate data are increasingly complemented with more micro level data, e.g. cross-country firm-level data or household data. Aggregate data hide the great heterogeneity of agents (be they households or firms) that is known to exist across and within countries. Indeed, an important lesson from the work on long-term productivity, employment dynamics, well-being and Inclusive Growth is that it is essential to capture this heterogeneity. Examining the factors that explain those differences and the role that such heterogeneity plays for economic and well-being outcomes is

³⁴ *Green Growth Indicators 2014* proposes a comprehensive set of indicators to measure the transition to a low-carbon, resource-efficient economy and whether the natural asset base is being used sustainably, among other areas. The report builds on an initial set of green growth indicators included in the 2011 Green Growth Strategy.

crucial to the design of better policies. Micro-data are needed to better analyse causal relationships, including those which relate to the role of policy settings. Micro-data can be used for example to measure inequalities in well-being across population groups, and can help analysing the responsiveness of firms of varying sizes to policy changes, or the contribution of different groups of firms to aggregate employment and productivity growth.

What does this bring and where do we stand?

95. Micro-data have already been collected and/or used at the OECD in different areas and have brought in new insights into important policy issues, such as productivity growth and the so-called secular stagnation hypothesis, increasing inequalities or the political economy of reforms.

96. First, **firm-level data improves our understanding of the sources of growth, e.g. employment dynamics and productivity growth** by providing details on the age and size of firms as well as on firm demographics. This in turn sheds light on policies and factors that affect productivity growth at the micro level. NAEC work³⁵ based on the new DynEmp database³⁶ has highlighted the heterogeneity of small firms in terms of: (i) employment growth trajectories; and (ii), their importance for job creation and destruction. The evidence shows that amongst the small firms it is those that are young that create more jobs, with significant differences across countries in terms of their subsequent upscaling. The report also shows that against a longer-term trend of declining start-up rates, young firms suffered relatively more in the recent crisis (Criscuolo et al, 2014).

97. Firm level data has also been instrumental in the development the new OECD's Trade by Enterprise Characteristics (TEC) database, which provides new information on the characteristics and export (and import) intensity of firms by sector and size. Such information is crucial to improve the quality of TiVA estimates. The novelty of TEC is that it does not require any new data collection but rather involves linking data across a number of existing datasets.

98. These and other sources of micro data are a crucial element in ongoing analysis on challenges for productivity growth in the long-term. Only micro data can account for example for the impact on comparative aggregate productivity growth performances of cross-country differences in the ability of young innovative firms to grow or of domestic firms to benefit from innovation occurring across borders in more advanced countries. Similarly, micro-data from the PIAAC survey has allowed relating skill mismatch to productivity differences across countries and exploring the policy channels that can enhance productivity by reducing such mismatch. The design of productivity enhancing policies, policies that enable resource allocation, as well as innovation or skills policies, can be greatly improved by understanding these channels.³⁷

³⁵ NAEC Project A7: "Applying new tools and approaches for better policy making".

³⁶ <http://www.oecd.org/sti/ind/dynemp.htm>

³⁷ The OECD has established a fruitful relationship with academic networks to improve its analysis of long-term productivity issues, which led to the first joint OECD-NBER conference on Productivity Growth and Innovation in the Long-Run in September 2014. See <http://www.oecd.org/economy/productivity-growth-and-innovation-in-the-long-run.htm>. Further work to develop this network and involve country experts is on-going.

99. Second, micro data is also essential for deepening our understanding of inequality and how it is affected by structural policies. NAEC work³⁸ has shown that past growth has not benefitted equally all household income groups, with some of them losing ground and others disproportionately gaining, and that inequality was found to be associated with lower rates of economic growth (Cingano, 2014). Newly collected OECD data on household wealth distribution also shows that wealth is much more unequally distributed than household income, due to very high concentration of wealth at the top of its distribution, with, on average across OECD countries, the ten percent wealthiest households holding almost half of all wealth (Murtin, et. al, forthcoming). Micro-data from the PIAAC has been used to show that increased income disparities reduce skills acquisition among individuals from poorer backgrounds. For countries with a relatively equal distribution of income, this effect is smaller than in more unequal countries.

100. Micro-level data also allow for **probing the association between financial expansion and an increase in economic inequalities**. Micro-level data for EU countries show that financial-sector employees are concentrated in the upper end of the income distribution.³⁹ The data also show that pay is much more unequal in the financial sector than in the rest of the economy. Econometric investigation using these data suggests that financial sector employees earn on average, almost 30% more than explained by their education, experience and other relevant characteristics. Furthermore, the financial-sector wage premium increases along the distribution, to reach 40% for people in the top decile of the overall distribution (Denk et al., 2015a).

101. **Micro-data has also been deployed to investigate the investment puzzle**, and particularly the differentiated situations in emerging and developed economies. Using firm-level data, this work underlines the over-investment in non-infrastructure industries financed by debt in emerging markets, versus the increasing incentives for buybacks in developed markets (Blundell-Wignall and Roulet, 2014b).

102. **Micro-data makes it possible to explore economic instability at the individual, household and firm level**. Such data can shed light on the potential trade-off between growth and stability (Cournède et al., 2015). These data suggest that countries with tight dismissals regulations and low product market competition could find themselves in a "gradual reform gap", where gradual reforms can boost growth, but at the cost of increasing micro-instability, while deeper reforms could boost growth without increasing micro-instability.⁴⁰ Well-developed tax and transfer systems tend to reduce household-level economic instability. Moreover, household-level economic instability tends to be greater in more unequal countries, partly because policies such as the tax and benefit system help reduce both inequality and volatility. Assessing the consequences of international tax avoidance can be enhanced by reference to firm level micro-data in addition to macro-level data. But currently available micro data has considerable limitations.

The way forward

103. The Organisation is now strengthening its efforts to provide access to and more systematically use micro-data, both household and firm-level, linked across national and thematic sources.

104. Indeed, more systematically, the micro-data black-box is being gradually opened through, what are becoming increasingly, conventional channels. Micro-data can be sourced from national statistical

³⁸ NAEC Project B6: "Trends in income inequality and its impact on economic growth". However, there is a considerable body of research on the links between inequality and growth with no firm consensus on the relationship.

³⁹ NAEC Project B12: "Increasing the resilience of economies to exogenous shocks".

⁴⁰ NAEC Project B12: "Increasing the resilience of economies to exogenous shocks".

offices, and administrative records, if problems of cost and capacities, access, confidentiality, legal requirements and security are overcome. These problems can be solved. For instance, the *DynEmp* and *MultiProd* projects make software available to affiliated researchers in each participating country. A code on their confidential micro-data is run, ensuring that the aggregated output respects confidentiality rules. The micro-aggregated results are then analysed by the OECD. Another approach to accessing official micro-data sources, as in the case of the OECD Income and Wealth Distribution Databases⁴¹ or the OECD Business Demography Statistics and Trade by Enterprise Characteristics Databases, is to work directly with experts in national statistical offices who provide anonymised data based on OECD commonly agreed definitions and specifications.

105. The OECD is well-placed to develop new indicators from micro-data and facilitate co-ordination among countries. However, this requires further investments from the OECD, increased co-ordination across Directorates, and closer collaboration with Members.

2.2.3. A change in the targeted outcome, utilising both averages and distributions

Why?

106. Long-standing OECD work on inequality, including flagship publications *Growing Unequal?* in 2008 and *Divided We Stand* in 2011, has highlighted the need to assess the benefits of economic growth and social progress at the level of households and individual groups, rather than at the aggregate economy level. The Inclusive Growth project has recently reiterated this call and underlined once more how an increase in GDP per capita or average income could fail to translate into gains in living standards, for the median or the poorest citizens. Indeed, average indicators can hide important disparities and distributional impacts of policies among the different dimensions of well-being. This underscores the **need to go beyond the aggregate level when assessing the effects of policies**, and to pay closer attention to their distributional consequences in order to identify trade-offs and synergies between policy levers. This would in turn enable governments to promote more inclusive growth.

107. This renewed focus on distribution recognises the importance of taking "agent heterogeneity" to the core of the policy debate, rather than considering effects on a "representative agent", as is the case with conventional growth analysis. It is thus necessary to use measures that capture both average achievements and their distribution.

What does this bring and where do we stand?

108. A number of NAEC projects focus on the trade-offs or complementarities between growth-enhancing and inequality-decreasing policies, by considering the distributional consequences of policy changes rather than just examining impacts on average or representative agents. The **Inclusive Growth policy framework allows for the assessment of the effects of policies on different social groups or segments of income distribution, and for different dimensions of well-being**. Other projects do so for growth enhancing structural policies in general, as well as for specific policy areas such as tax design or energy subsidy reforms.

109. NAEC projects have examined whether structural policies that increase economic growth also improve median households' disposable income,⁴² **finding for example that reforms that boost**

⁴¹ A unique dataset compiled by the Eurosystem on wealth inequality for instance, could be exploited to analyse the links between wealth inequality and economic growth.

⁴² NAEC Project B4: "How policies that increase GDP per capita also increase median income".

innovation widen the wage distribution among employed workers (de Serres and Yashiro, 2014). Other policies that promote labour force participation and job creation may also be associated with a widening of wage dispersion (Paccagnella, 2015). However, in some cases they may contribute to raising employment – not least among lower-skilled workers – thereby offsetting at least some of the resultant increase in income inequality (*Divided we Stand*, 2011; Causa, de Serres, and Ruiz, 2014). Another NAEC project is looking at the transitional costs and distributional consequences of structural reforms more generally, by simulating their short and medium term distributional effects.⁴³ This analysis paves the way for the design of better policy packages that combine required structural reforms with supporting policy measures that allow to compensate for their undesirable distributional effects in the transition phase or even in the long-run.

110. NAEC has also examined specific policy areas having potential large impacts on growth, environmental and social outcomes, such as fossil fuel subsidy reform.⁴⁴ It studied the consequences of a gradual phasing out of all energy consumption subsidies in Indonesia between 2012 and 2020.⁴⁵ This was accomplished using a significantly improved analytical framework linking the micro and macro levels, through budget survey data of 10,000 households, instead of having one representative household in the macroeconomic model (Durand-Lasserve et al., forthcoming). This work shows that **the impact of phasing out energy subsidies on different household groups depends on their expenditure structures, their sources of incomes, and their ability to adjust their demand to changes in incomes and prices**. It highlights that in a world of green growth policies, the potential expenditures on various goods and services by households, i.e. purchasing power, matters as much for welfare as income. It also illustrated how **the distributional consequences can be offset through revenue recycling measures** (cash transfers, offsets in labour taxation, or food subsidies), and how these different measures allow the reform to be more or less progressive, thus leading to the triple gains of increased economic efficiency, improved environmental quality and reduced inequality.

111. Empirical analysis is also being carried out on **what type of tax design would stimulate patterns of economic growth that benefit median households**, instead of focusing on its effect on GDP per capita.⁴⁶ The aim of this analysis is to better target tax policy advice and further develop a narrative on "tax design for inclusive, sustainable and resilient economic growth". For example work has been undertaken on the distributional consequences of Value Added Taxes (VAT), suggesting that countries should not use reduced rates on specific types of goods and services in their VAT system to achieve income redistribution. These are a poor tool for targeting support to poor households. **There is thus a need for a careful, case-by-case reassessment of the relative merits of various reduced VAT rates in OECD countries as reduced rates can have very different equity impacts.**⁴⁷

112. Taxes on household energy use for transport and heating are found not to be regressive on average in the 21 (predominantly European) OECD countries studied, while taxes on electricity are found to be regressive in many countries. If countries want to "green" their tax system while avoiding regressive

⁴³ NAEC Project B5: "Assessing the transitional costs and distributional consequences of structural reforms".

⁴⁴ NAEC Project B11: "Trade-offs and synergies between environment and inequality".

⁴⁵ An OECD-wide project on Reforming Support for Fossil Fuels analyses the impacts on international trade flows and the environment, using the ENV-Linkages general-equilibrium model. This work serves to inform both national and international policy discussions, including in the G20 context.

⁴⁶ NAEC Project B7: "Analysing growth and equality trade-offs in taxation".

⁴⁷ Reduced VAT rates on restaurant, cafes and hotel services clearly deliver vastly greater benefits to richer households than poorer households in both aggregate and proportional terms.

impacts, higher electricity taxes should be accompanied with compensation through the tax and benefit system (Flues and Thomas, 2015).

The way forward

113. Directorates increasingly look at the **distributional effects** of public policies. However, accessing micro-data represents a major challenge to examining the distribution of firms and households.

2.2.4. A change in fundamental assumptions, approaching risk and behaviour with greater realism

Why?

114. The crisis has provoked changes in some of the assumptions about the functioning of the economy, and particularly those related to the behaviour of economic agents and to risks, **paying greater attention to psychological bias, perceived versus objective risks, as well as the nonlinearity in risk perception.**

115. The crisis has also **highlighted the importance of risk assessment.** The assumption of normality in the distribution of risk factors (such as interest rates, and credit quality) proved to be too optimistic as to the frequency at which extreme outcomes are likely to occur. The correlation among different risk factors and their tendency to move together was also underestimated. This led, *inter alia*, to an overestimation of the advantages of diversification of financial instruments.

116. More fundamentally, research from behavioural economics and psychology has illustrated clearly that human beings often make decisions in ways that would not be predicted by the rational agent model of traditional economic theory, maximising utility under given constraints. In fact, **decision-makers exhibit bounded rationality, bounded self-interest and bounded will power** (Jolls et al, 1998). Behavioural insights seek to harness scientific knowledge about human behaviour to enhance the effectiveness of public policies and strengthen capacity for enforcement while lightening regulatory burdens (Lunn, 2014). Efficiency gains can be realised in several ways: by better predicting the impacts of traditional incentive-based policies, and by providing frameworks for identifying aspects of traditional policies that could be improved as well as for ensuring more systematic approaches to policy making that integrate behavioural insights. Behavioural economics offers entirely new types of interventions, often based on psychology, which have not been traditionally considered by economists and policy makers and might lower the cost of policy enforcement while yielding significant results which complement traditional approaches.

What does this bring and where do we stand?

117. There have already been some important changes in the assumptions⁴⁸ underlying OECD work on the nature of risk and the distribution of risk factors, as well as assumptions on the behaviour and homogeneity of agents. More fundamentally, assumptions that markets are always self-correcting and that macro-economic imbalances would self-correct have been cast into doubt. The Organisation is thus increasingly deploying insights from behavioural economics, providing more systematic toolkits for policy making and putting a greater emphasis on horizon scanning and planning for the future.

⁴⁸ These changes include the relaxation of some assumptions such as completely rational information processing, and complete information, which have already been largely integrated in analytical frameworks. Assumptions on the role of the financial sector and more generally the impact of finance on the real economy have also been reconsidered.

118. **OECD work is increasingly conscious of the importance of risks and uncertainty.** This involves better taking into consideration the uncertainty surrounding basic assumptions, providing more information about the risks around future projections, and making greater use of scenario analysis to illustrate possible outcomes. For example, the assumptions underlying *Pensions at a Glance* (including attitudes to risk and how to take into account underlying investment return risks associated with funded private pension schemes) have been explicitly reassessed (OECD, 2014g).

119. **Work on behavioural economics is also expanding,** particularly in the areas of public governance, regulatory policy, consumer policy and environmental policy design.⁴⁹

- The Consumer Policy Committee has recognised the important insights that have been gained into the nature of consumer problems through advances in information and behavioural economics (Tamefuji and Avery, 2014).
- The Environment Policy Committee Working Party on Integrating Environmental and Economic Policies has produced an inventory of examples in behavioural economics which are relevant for environmental policy design (Silva, 2014).
- The Health Committee looks at how insights from behavioural economics can be used to move lifestyles in a more healthy direction without resorting to more conventional regulations or pricing policies, for example through influencing packaging design, labelling, and advertising.
- The Regulatory Policy Committee (RPC) has explored how governments are currently applying behavioural science to design and deliver better regulation (Lunn, 2014), and how economic regulators use and apply behavioural economics in relation to consumers' and regulated entities' behaviour. The RPC and Network of Economic Regulators (NER) will continue to develop a better understanding of this new tool for policy design and delivery by collecting case studies from both governments and economic regulators and distilling good practices.

120. The Public Governance and Regulatory Policy Committees are also developing a policy toolkit which will include some guidance on the application of behavioural economics in policy-making. Further work is under discussion in other policy such as tax policy. The OECD will also be convening the first meeting of behavioural insights practitioners in governments and regulatory agencies **as a platform for sharing the experiences applying behavioural approaches to policy**. This will help in building and sharing knowledge on how and where behavioural economics can contribute to policy making. The platform will contribute to developing good practices in applying behavioural insight, reflecting on what works and why, and what are the short- and long-term effects of interventions.

121. The Organisation is actively exploring the use of horizon scanning to ward off myopia in policy advice and policy making by planning ahead for relatively unlikely but potentially costly events. For example, long-term scenarios for food and agriculture are being developed, bringing together analysis from various disciplines to better capture the linkages between policy areas.⁵⁰

122. The OECD is improving its understanding of national risk assessment, with a systematic analysis and review of national risk assessment systems and a cross national benchmarking of the results. This includes investigation of how to strengthen the links with climate-change assessment. Such analysis could

⁴⁹ NAEC Project A7: "Applying new tools and approaches for better policy making".

⁵⁰ NAEC Project B14: "Long-term scenarios for food and agriculture".

be useful in order to prepare policy responses to extreme weather events and develop adaptive capacity. These efforts aim to encourage the development of effective policy responses early on in order to better prepare for future challenges. More broadly, it is important to draw on horizon scanning and risk analysis in elaborating strategic frameworks for forward looking public policies.

The way forward

123. The OECD should **continuously review and update its fundamental assumptions**, based on insights from academic research, including behavioural economics. New quantitative and qualitative insights from other disciplines, including sociology, anthropology, geography, history and psychology, should also be considered, as they may contribute to a better understanding of the behaviour of agents as well as of the interconnectedness and complexity of our economies, and thereby enrich the policy debate.

2.2.5. A change in modelling, deploying integrated and versatile approaches

Why?

124. Modelling approaches need to be adapted in order to fully appreciate the increased interconnectedness and complexity of the global economy. For instance, the interactions and feedbacks from demographic changes, different patterns of economic development and global environmental changes were not factored into traditional approaches. **A shift towards integrated modelling is therefore necessary in order to more realistically capture such complexity.**

125. The **limitations and boundaries of economic and financial models** were exposed by the crisis. For example, the crisis demonstrated that disturbances from the financial sector can have significant effects on the real economy, and that these effects need not be transitory in nature. Moreover in cases of severe recession traditional elasticities, tax elasticities for instance, break down as the behaviour of agents becomes more risk averse. In addition, by downplaying the herd behaviour of markets and by neglecting the network effects in a global financial market, mainstream macroeconomic models could not predict nor prepare for crises. Too often, modelling efforts took place in isolation, merely considering one dimension of policy, while complex inter-connections with other policy areas were often not considered because of methodological constraints and limited data availability.

126. Efforts should therefore be made to **better integrate the financial sector in economic models**. This is an ambitious undertaking. A key lesson identified while reviewing OECD forecasting was **not to rely on model outputs alone, but to consider informed judgements based on a good knowledge of the real developments** in the financial markets and the real economy. For instance, consulting with the private sector on forecasting results is useful. The private sector can sometimes (though not always) be a useful source of early warning signals. However, this should not compromise the independence of the results.

What does this bring and where do we stand?

127. The OECD should **use a greater variety of models, continuously update them and, enhance its participation in multi-model comparison exercises**. The limitations and boundaries of different models should always be kept in mind and the assumptions on which models are built should be explicitly stated. It should also **consider the outputs of models for what they are, and continue to exercise informed judgement** to derive policy recommendations. NAEC features a number of examples where modelling is incorporating new dimensions and thus is becoming more integrated. It has also provided insights on the modelling approaches of other institutions.

128. The OECD@100 project involved **a combination of modelling tools to provide a multi-dimensional framework for thinking about the future in a structured way** (Braconier et al., 2014).⁵¹ It focuses on how international and national policy settings would need to be re-examined and adjusted to make the most out of aforementioned trends, and to put the global economy on a more sustained growth path. A central scenario was developed combining a set of models describing macroeconomic developments, trade developments, greenhouse gas emissions and income inequalities. It highlighted the shift in global economic activity towards non-OECD countries, a possible slowdown in global growth and likely daunting challenges from rising inequality and climate change damages. The framework is also used to lay bare tensions that are hidden in the central scenario and to explore how policies can affect outcomes in multiple dimensions, including growth, demographics, equity, fiscal and environmental sustainability.

129. The CIRCLE project involves a series of model developments which could provide assessments of the economic feedbacks of a number of major environmental pressures.⁵² The environmental challenges being examined quantitatively include climate change, local air pollution and the land-water-energy nexus. Possibilities to assess water scarcity and pollution, biodiversity and ecosystem services loss and natural resource scarcity will also be examined. Modelling the economic consequences of reduced availability and quality in land, water and energy resources together is novel, as comparable studies tend to focus on individual links between a resource and the economy (see section 3.2.2 for further details on CIRCLE).⁵³

130. **Novel modelling approaches have also been employed to examine the complex set of interactions that affect health outcomes.** The OECD Chronic Disease Prevention (CPD) model links health outcomes both to proximate causes (e.g. people with diabetes are more likely to have a stroke) and distal causes (e.g. overweight people are more likely to have a stroke) using a stochastic model based on individual level data. Similarly, the model takes account of the fact that different types of population (male or female; degree of education; health status) will respond to policy differently. The model covers the health consequences of nutrition and physical activity, and is being extended to cover other lifestyle challenges such as alcohol, salt and tobacco consumption.

131. NAEC also provides a platform for other institutions to share their modelling approaches to inform OECD work. For example, a NAEC seminar featured a presentation on the ECB's Macroprudential Research Network (MaRS), working on improving macroeconomic models used by central banks to measure system risk and assess the risk of bank contagion (ECB, 2014). This research **developed an approach for incorporating a level of systemic financial stability (based on a composite indicator of systemic stress) into macro models.** This approach also allows the model to adapt to changes in policy regimes and in the structure of the economy. For instance the relationship between credit and growth can be switched, and the level of financial instability can be heightened to include worst case outcomes or scenarios. This is a useful approach in gauging the transmission of large financial shocks to the real economy. However, it uses a structural, theoretical approach and future scenarios are difficult to conceive both in terms of the magnitude and transmission of financial shocks.

⁵¹ NAEC Project B13: "OECD@100: Global trends and policy challenges".

⁵² NAEC Project B9: "Costs of Inaction and Resource Scarcity: Consequences for Long-term Economic Growth (CIRCLE)".

⁵³ Kratena et al (2014) investigate if binding biophysical constraints have the potential to slow growth and impede the improvement of other key macroeconomic variables. Using a DYNK (Dynamic New Keynesian) model of the EU27, the authors study two different environmental policy options and evaluate their impact on environmental as well as socio-economic targets (equity and employment).

132. These new research insights should inform OECD work going forward, and co-operation with other relevant research programmes should be further developed.

The way forward

133. The OECD should encourage the use of a variety of models, which are continuously updated, and take into account different data to look at evidence from complementary angles⁵⁴. The use of multiple models to assess policy questions is challenging. But the OECD has already taken an important step in this direction by linking different models (for example, CIRCLE project results were used in the OECD@100 project) and using each to benefit from their comparative advantages, while also integrating model uncertainties through cross-model comparisons.

134. While the Organisation is already increasing its efforts to ensure that in-house frameworks are well-framed in the context of other modelling efforts, **enhanced participation in multi-model comparison exercises is essential to strengthen the robustness of models.**

135. The OECD should also continue to update its models to better grasp the interconnectedness of the global economy. For instance, the OECD is developing a new trade model, METRO, incorporating newly developed databases on TiVA, export restrictions, and Services Trade Restrictiveness Index (STRI). This will enable analysis on new forms of ‘murky protectionism’ that are emerging, in particular various non-tariff (behind-the-border) measures. It will also enable improved analysis of the impacts of changing global market conditions on specific economic actors, more clearly differentiating household trade patterns from those of businesses. This model will also give more consideration of, and linkages to, micro-simulation models, *e.g.* to generate ‘early estimates’ of developments in income distribution.

136. **Developing multiple baselines in scenario analysis** may be useful, better equipping the OECD to deal with different future outcomes.

137. However, it should be recalled that building modelling capacities is resource intensive and requires specific skills and expertise. Moreover all models have limitations, and simplifying assumptions will always have to be made. The OECD should therefore continue to engage with academics, think-tanks, the private sector national governments and international organisations and discuss both the design and findings of modelling. When consulting with the private sector, it can rely on stakeholders already engaged with the Organisation.

⁵⁴ The OECD might for example consider expanding its policy analysis toolbox to include estimated and simulated dynamic structural models, and dynamic general equilibrium analyses, which could be helpful for multidimensional analysis of well-being and for assessing the impacts of different policies on economic sectors and differentiated groups within the population.

3. HOW WILL THESE NEW APPROACHES HELP ADDRESS FUTURE CHALLENGES?

138. This section illustrates how NAEC projects have contributed to the formulation of new policy recommendations to foster a strong, resilient, sustainable and inclusive growth agenda. NAEC has helped illuminate the connections between various policy objectives and the policy trade-offs and complementarities that arise in achieving them.

139. Based on this work, this section provides OECD members with policy advice to face long-term challenges highlighted both by the crisis and by long-term modelling exercises such as OECD@100 and CIRCLE. This is not an exhaustive list of policy recommendations. It rather distils the main findings from NAEC projects that offer approaches for dealing with current and emerging challenges.

140. This section does not imply that all the policy recommendations provided in this section are new. Rather the new tools and instruments outlined in section 2.2 have led to specific insights which supplement existing policy approaches. Table 1 illustrates how each policy theme is informed by new perspectives and new instruments and tools. However, it will take time before new modelling approaches and new policy-relevant measures yield sufficient analysis and evidence to develop a fully new policy agenda. Moreover, some analytical improvements strengthen and re-enforce the rationale for existing policy formulas.

Table 1. Links between policy recommendations and proposed new approaches

Policy theme	New Perspectives	New Policy Tools, Measures and Instruments
Inclusive Growth	<ul style="list-style-type: none"> Well-being 	<ul style="list-style-type: none"> Examining distributions Applying multi-dimensional living standards New measures such as Job Quality
Environment	<ul style="list-style-type: none"> Long-term perspective Interconnectedness of the economy and the environment Well-being 	<ul style="list-style-type: none"> Measurement of stocks of natural capital Integrated Modelling: CIRCLE Measures of environmental policy stringency Links between environmental policies and inequality
Productivity	<ul style="list-style-type: none"> Long-term perspective Well-being 	<ul style="list-style-type: none"> Firm-level micro-data Distributions of firms Allocation of skills and distributional impacts of innovation
Finance	<ul style="list-style-type: none"> Links between finance and the real economy Complexity Well-being 	<ul style="list-style-type: none"> Integrating finance in economic modelling and forecasting Distance from Default measures Revised assumptions about risk Finance and Inequality
Trust	<ul style="list-style-type: none"> Institutions and Governance Well-being 	<ul style="list-style-type: none"> New measures of trust Taxation (BEPS and AEOI) and Responsible Business Conduct New approaches to public policy formulation

3.1. A mapping of policy trade-offs and complementarities

141. Annex II presents an overview of the main policy trade-offs and complementarities that have been documented and discussed in NAEC projects. It highlights the possible interconnections between competing objectives that aim to achieve stronger growth, stability, environmental sustainability, social inclusion, and social equity.

- The upper right part of the table features policy complementarities (in green). In certain cases (in orange) accompanying measures are also required.
- Policies in the bottom-left segment of the table present trade-offs (red) which in certain cases (in orange) can be alleviated through flanking policies.

142. This annex illustrates that it is possible to pursue growth, environmental and equity objectives and to do so simultaneously. It also underlines that an appropriate, well designed policy mix is often necessary to achieve multiple objectives. Based on a thorough understanding of the way policies are connected, the next section suggests policy approaches for taking this broad growth agenda forward.

3.2. Policy recommendations emerging from NAEC

3.2.1. Policies to promote inclusive economies

143. In most OECD countries, **the gap between rich and poor has been rising and is at its highest level in 30 years** (OECD, 2015a). This is due in part to **pro-growth policies neglecting distributional consequences**. Growth driven by skill-biased technical progress favours highly-skilled individuals and those with investable assets. Structural policies can promote growth, but they might be ill-equipped to deal with the trade-offs between growth and equity objectives⁵⁵. Economic institutions also play a role, and rising inequality can in some countries partly be attributed to a decline in unionisation in recent decades, which has fed the rise in incomes at the top and contributed to the decoupling of productivity growth from wage increases (Jaumotte and Buitron, 2015).⁵⁶

144. This rise in inequality **derives also from less redistributive tax and benefits systems**. Since the mid-1990s, cuts in benefits relative to earnings, and tighter eligibility have reduced the redistributive impact of the tax-benefit system, which now on average reduce the Gini measure of income inequality by about one quarter (OECD 2015). This is coupled with personal income tax that has become less progressive and an increased emphasis on indirect taxation.

145. **Excessive income inequality is detrimental to growth and can lead to a vicious cycle of exclusion and higher inequality of opportunity**. NAEC has pointed to the negative impact of increased

⁵⁵ Structural policies that promote more flexible labour markets, for example, facilitate job creation and employment among low-skilled workers but also tend to widen the dispersion of wages, with unclear net effects on the income levels of households in the lowest income bracket. See Annex IV.

⁵⁶ More generally, Levy and Temin (2007) argue that income distribution is strongly shaped by a set of economic institutions. They argue that in the case of the United States, the early postwar years were dominated by unions, a negotiating framework, progressive taxes, and a high minimum wage -- all parts of a general government effort to broadly distribute the gains from growth. More recent years have been characterised by reversals in all these dimensions in an institutional pattern known as the Washington Consensus. Other explanations for income disparities including skill-biased technical change and international trade are seen as factors operating within this broader institutional story.

income inequality on growth.⁵⁷ The human capital transmission channel is of particular importance. There is a link between increased income inequality and stunted skills development for individuals with poorer parental education background both in terms of quantity and quality of their education, which in turn affect overall growth outcomes. Decrease and loss of income for certain economic and social groups affects their future opportunities, such as access to education and health-care services and jobs. Higher inequality of opportunity then results in significantly lower growth, which breeds further inequalities in many other non-income dimensions of well-being.

146. NAEC projects have aimed to deliver win-win growth and inclusive policies. These should be targeting stronger growth that is compatible with and encourages greater inclusiveness, **taking account of both income and non-income inequalities**. New policy directions have been identified within the Inclusive Growth research framework that uses a multidimensional well-being approach (see section 2.2).

Design structural policies to mitigate trade-offs between growth and other dimensions of well-being, in particular equity

147. Some pro-growth reforms require careful design and implementation that takes into account their potential adverse effects on other dimensions of well-being. Equity can be adversely affected by pro-growth tax reforms, benefits reforms and protection legislation.⁵⁸ While this implies a trade-off between structural reforms and equity, a policy package can be designed that can help mitigate these trade-offs. For instance, reforms that boost innovation can widen the wage distribution but efficient redistributive measures and education policies can help off-set rising income inequality.⁵⁹ Moreover, easing employment protection legislation can promote labour force participation and job creation while also widening wage dispersion. These policies should be coupled with reforms of unemployment benefits to provide adequate coverage to all workers as well as reactivation measures for disadvantaged groups.

Promote equal access to education at the earliest stage possible, and broaden the range of skills

148. Inequality has detrimental effects on growth particularly through the human capital accumulation channel. Therefore increasing the quality and extending the provision of education is essential in achieving inclusive growth. This includes not just pre-primary, upper-secondary and post-secondary levels, but also facilitating access to education by underprivileged groups, and expanding vocational and professional education training (VET).⁶⁰ In addition VET should be accompanied by life-long learning facilities. This is important because short-term pressures may lead to cyclical specialised training that leaves employees without relevant qualifications when there is a downturn in a specific sector (such as construction).

⁵⁷ NAEC Project B6: "Closing the Loop: How Inequality Affects Economic Growth and Social Cohesion".

⁵⁸ See the analysis under "Structural policies and the distribution of real household disposable income".

⁵⁹ Other examples where synergies can be achieved include, for instance, reforms that: reduce regulatory barriers to domestic competition, trade and FDI; increase job-search support and activation programmes; and tighten unemployment benefits for all categories of jobseekers – all of which are found to deliver stronger income gains for households at the low end of the income distribution compared with the average household, thus helping to narrow inequality in disposable incomes (Causa, de Serres and Ruiz, 2014).

⁶⁰ According to a recent OECD report, countries should step up their efforts to improve the quality of post-secondary vocational training in order to meet the changing needs of today's job market. The *Skills Beyond School: Synthesis Report* (2014) states that most basic vocational courses cannot teach the higher level skills needed in an increasing number of jobs in fast-growing sectors, such as healthcare technicians and junior managers.

Workplace education and training is therefore also important for inclusive growth and individuals' well-being. In fact, access to skills development and learning opportunities throughout one's working-life is essential to secure opportunities to improve one's job security, employability in the event of unemployment, and upward job mobility.

149. Education is more effective the earlier it starts. The OECD's Programme for International Student Assessment (PISA) shows that children who have enrolled in pre-school education perform better throughout their education life and tend to be better integrated socially. More investment to increase pre-school enrolment among economically and socially deprived households should therefore be a priority. The private sector often plays a bigger role in Early Childhood Education and Care (ECEC) for younger children, while more public funding is usually provided to support ECEC for older children. Services for younger children therefore require parental contributions and can often be expensive but in some cases fee reductions or exemptions, or targeted support for families (through tax relief, allowances or vouchers) can reduce or offset the costs (European Union, 2015).

150. Policies should also help to promote skills for growth and social progress. Skills are multi-faceted and include foundation skills, such as literacy and numeracy, and other cognitive skills, but also social and emotional skills, which have also been shown to make important contributions to employability, social capital and social cohesion (OECD, 2015e).

Ensure that the tax system is sufficiently progressive and equitable

151. Re-evaluating the taxes on personal capital income as well as the role of taxes on inheritance and estates, as well as ensuring a sufficiently progressive personal income tax can reverse the decline in the effect of taxes in reducing excessive income inequality. Policy makers should not aim at implementing tax progressivity on a tax-by-tax basis, as it is the overall progressivity of the tax system which matters.

Pursue job quality together with job quantity

152. Job quality should be pursued simultaneously with job quantity. There appears to be no trade-off between *job quality* and *job quantity*, as countries that have high employment rates also have highest job quality. NAEC sheds light on job quality from the point of view of well-being, defining the former along three aspects: earnings quality, labour market security, and quality of the working environment (Hijzen, 2014). *Job quality* can be supported by policies that reduce EPL and Product Market Regulations, leading to higher earnings in the aggregate, resulting in an increase in the probability of unemployment, which is generally offset by the likely short unemployment spell. Tackling dualism contributes to reducing earnings inequality.

Promote gender equality in education, employment and entrepreneurship

153. Gender equality is not only a moral imperative, it is a key factor in economic development and well-being across the world. Many countries have made significant progress but a lot remains to be done to ensure fairness and equity, and through this to improve well-being and growth. Therefore, the promotion of gender equality should be part of a policy agenda for fostering an inclusive economy. Gender equality has many political, social and cultural dimensions⁶¹, but governments through appropriate legislation, policies, monitoring and advocacy – can impact and remove gender bias in many areas (OECD, 2012a; OECD, 2013h). In education, for example, policies can encourage girls to choose scientific and technological fields of study. At work, equality of opportunity in the public sector and the promotion of entrepreneurship

⁶¹ Social Institutions and Gender Index (SIGI): <http://genderindex.org>

among women, should be complemented with family-friendly policies, including the provision of high-quality and affordable child care, and encouragement of paternity leave, which can help both parents reconcile work and family responsibilities. Governments can adopt or promote policies that close gender gaps in labour force participation and wages (OECD, ILO, IMF and World Bank, 2014), and in access to decision-making positions and business ownership. Governments should also prioritise investments that promote women's economic empowerment in development co-operation programmes.⁶²

Promote inclusive governance, in particular at the metropolitan level

154. A focus on inclusive growth requires rethinking the way that policies are being designed, implemented and evaluated along the policy cycle. This requires coordinating across silos in public administrations so that multidimensional objectives can be integrated and policy trade-offs considered. Delivering on inclusive growth requires inclusive approaches to policy making, averting the risk of policy capture, and promoting wide engagement from citizens and civil society.⁶³

155. Promoting effective metropolitan governance is also critical for improving well-being and economic growth, as well as for fighting social exclusion. Ensuring that relevant decisions are taken at the metropolitan scale will allow metropolitan areas to better exploit agglomeration benefits, and reduce social exclusion by moderating the negative effects arising from social stratification of neighbourhoods, inter alia through decreased disparities in public service provision. When well-managed at the relevant scale, cities can also generate important growth spill-overs and innovation to other regions. Better integrating the governance of transport and of spatial planning is a critical factor to build well-functioning, productive, inclusive and ecologically sustainable cities. Effective metropolitan governance implies long-term co-operation and fitting arrangements to local conditions. It also requires building ownership among key stakeholders, tailoring reliable sources of financing, and designing incentives and compensations for metropolitan compromises (OECD, 2015b, OECD, 2015c).

3.2.2. Policies for environmental sustainability

156. **The impacts of economic activity on environmental systems are creating imbalances which are putting economic growth and development at risk.** Taking action on environmental challenges also offers the potential for economic gains by reducing inefficiency in the use and management of natural capital. It also offers the potential for new sources of growth from innovation and the emergence of markets for environmental goods and services. Nevertheless, the crisis and the subsequent need to address fiscal pressures have in some cases led to environmental objectives, such as reducing climate change and air pollution, receiving less attention.⁶⁴

⁶² The recently published OECD report ABC of Gender Equality in Education documents gender disparities in school performance and argues that they stem from students' attitudes towards learning and their behaviour in school, from how they choose to spend their leisure time, and from the confidence they have – or do not have – in their own abilities as students.

⁶³ The OECD will be holding a Ministerial meeting on Public Governance for Inclusive Growth in 2015 which will explore the governance underpinning of designing, implementing and evaluating public policies for inclusive growth.

⁶⁴ This is, however, not the case everywhere. Some prominent examples of ambitious reforms in countries particularly hit by the crisis and struggling with its consequences (such as Portugal) demonstrate that progress in this area is possible and can contribute to supporting growth, job creation while being budget neutral and socially progressive.

157. **The costs of inaction may be high.** The CIRCLE project quantifies how feedbacks from poor environmental quality, climatic change and resource scarcity and degradation affect the economy. Preliminary analysis has been undertaken on the global economic consequences of climate-change damages, including from sea level rise, impacts on agriculture, energy demand and tourism.⁶⁵ According to the model simulations, the effect of climate-change impacts on global GDP is projected to increase over time, with damages increasing more rapidly than global growth (OECD, forthcoming c). These impacts would lead to a gradually increasing global GDP loss amounting to around 1% to 3% by 2060, assuming firms and households adapt to minimise the costs (OECD, forthcoming c). Underlying the global GDP losses are large variations in consequences related to specific climate impacts on specific sectors in specific regions. Among the impacts included in the analysis, agricultural impacts tend to dominate in most regions.

158. **Environmental policies can improve well-being.** Better air and water quality for example improve well-being directly, but also indirectly by improving health outcomes. Recent work on the costs of air pollution indicates that the health impacts of outdoor air pollution may reduce GDP by on average 4% in OECD countries; the impacts on emerging economies like India and China are even higher ranging from 9-12% (OECD, 2014h).

159. Environmental policies can also improve growth. Environmental policies were in the past often seen as a burden on economic activity, at least in the short to medium term, as they may raise costs without increasing measured output while restricting the set of available production technologies and inputs. At the same time, the Porter Hypothesis claims that **well-designed environmental policies can encourage innovation and create business opportunities**, which may result in gains to profitability and productivity that can in some cases outweigh the costs of the policy. NAEC has helped to advance the understanding of linkages between environmental policies, economic growth and productivity, including appropriate action to monitor progress and measure results (Albrizio et al, 2014).⁶⁶ Transparent and predictable policy frameworks need to be in place to create business opportunities and allow corporations to make long-term capital-intensive investments that improve the environmental performance of the whole economy. This requires use of carbon pricing mechanisms, structural reform of environmental taxation and the elimination of environmentally harmful fossil-fuel subsidies (OECD, 2013d, OECD, 2013e).

160. Fossil fuel subsidies have not only negative environmental and economic costs but **they are also a very inefficient way of redistributing wealth towards the poor**. NAEC has led to the development of a new modelling framework to deal simultaneously with distributional impacts, economic efficiency and environmental effectiveness of environmental policies, with an application to the analysis of energy consumption subsidy reforms in Indonesia.⁶⁷ The direct price effect of subsidy removal is in general regressive⁶⁸ but compensation schemes can make the overall effects of the reform progressive. Using cash transfers has the advantage of being progressive and beneficial to poor households, using food subsidies is less progressive while labour support regressive. Thus cash transfers are the best way to make a phase out both more efficient and equitable. Transfers could also be targeted to lower income groups.

⁶⁵ NAEC Project B13: "OECD@100: Global trends and policy challenges"; NAEC Project B9: "What are the *costs* of policy inaction on environmental challenges? What are the benefits of policy action?."

⁶⁶ NAEC Project B10: "What effect does tightening of environmental policies have on productivity growth?."

⁶⁷ NAEC Project B11: "What are the economic, environmental, and distributional effects of environmental policy reforms?."

⁶⁸ Work by German Institute of Global and Area Studies and University of Goettingen suggests that not all reforms would be regressive, and that the degree of regressivity would vary by fuel (see http://www.greengrowthknowledge.org/sites/default/files/Renner_Presentation.pdf).

Ensure strong market and policy signals both to make pollution, climate change and other environmental pressures more costly and green approaches more attractive.

Increase the ambition and stringency of environmental policies

161. Bold and efficient policies are needed to reconcile economic growth with the conservation and sustainable use of the environment and natural resources. On the basis of a new OECD indicator on the stringency of environmental policy instruments, the OECD study suggests that across OECD countries over the past two decades stringent environmental policies may have on average no long-lasting effects, positive or negative, on multifactor productivity growth (Albrizio, et al., 2014).⁶⁹ The effects of environmental policies on productivity growth differ across sectors and firms, in particular depending on technological advancement. The most-productive firms and industries can increase productivity following the introduction of more stringent environmental policies, while the least productive firms are likely to experience negative effects. Increasing Environmental Policy Stringency does not seem to harm productivity growth, provided that such policies do not obstruct entry and competition (Albrizio, et al., 2014). In addition, there is scope for increasing the stringency of environmental policies in many OECD countries.

Ensure environmental policies remain competition-friendly and use flexible instruments

162. There is thus a case for more ambitious environmental policies, but the design of policies is key. Policy makers need to assure – to the furthest extent possible – that environmental policies are competition-friendly, i.e. well designed and market-based. They should be designed so as to level the playing field; they should not inhibit market entry or competition, or increase fixed costs through excessive administrative burdens in environmental permit and licensing procedures. Coherent and consistent information should be provided and procedures streamlined. Cross-country evidence shows that such burdens to competition are not related to the stringency of environmental policies. Rather, they are related to policy design and hence can be minimised. Environmental policies should facilitate innovation, lower the cost of market testing of new, cleaner technologies and facilitate their adoption and diffusion.

163. To achieve this, and to the extent possible, environmental policies should use flexible policy instruments, leaving it to the firms themselves to choose the most efficient ways to innovate, adjust and "go green". The effects of environmental policies on productivity growth indeed are more robust for more flexible policy instruments, such as price-based instruments, but they do not depend on the actual level of environmental policy stringency.

Pay attention to the distributional effects of environmental reforms

164. Reforms that are good for the economy and the environment can also be good for distribution and for the poor. First, benefits from preventing pollution are typically progressive as poorer households are more exposed to it. Second, the rationale for increasing taxes on energy or removing fossil fuel subsidies is further strengthened by considering how such reforms can actually increase progressivity. Policy makers should thus develop policy packages that make environmental policies progressive and thus also facilitate their adoption⁷⁰.

⁶⁹ NAEC Project B10: "What effect does tightening of environmental policies have on productivity growth?" and "Environmental policies and economic outcomes".

⁷⁰ The forthcoming Towards Green Growth? Tracking Report emphasises that potential distributional impacts of green growth merit greater policy focus, both because green growth policy should not exacerbate

3.2.3. Policies for increasing long-term productivity

165. **Future economic growth and well-being depends on multi-factor productivity, but productivity rates have slowed in recent years.** This is at the forefront of current policy discussion across OECD economies. Some fear that this recent slowdown is permanent (Gordon, 2012) as recent or future innovation waves (e.g. ICT or the mapping of the human genome) might have less impact than previous ones (e.g. electrification and internal combustion). However, a more optimistic view suggests that there is no evidence of diminishing returns with respect to technological progress (OECD, 2014a) and that we are on the cusp of a "New Machine Age" enabled by advances in digital processing power (Brynjolfsson and McAfee, 2011). This would entail potentially large productivity payoffs but these gains will not necessarily be shared equally. It is notable, however, that productivity growth at the global frontier has remained relatively robust in the 21st century. But firms at the global frontier have become older which may foreshadow a slowdown in the arrival of radical innovations and productivity growth. The rising gap in productivity growth between the global frontier and other firms since the beginning of the century raises questions about the ability of: i) the most advanced firms nationally to adopt new technologies developed at the global frontier; and ii) diffusion of existing technologies from national frontier firms to laggards.

166. **Key factors influencing productivity growth give rise to new policy challenges.** Investment in knowledge-based assets (KBA) is a key driver of productivity. However, many of the existing policies are ill-suited to the intangible nature of these assets.⁷¹ The increasing reliance on KBA may also have contributed to growing inequalities by emphasising the role of high skills. The emergence of and integration in GVCs also supports productivity growth.⁷² It requires a better understanding of the sources of sustained competitiveness, such as skills, intellectual property, competition, the circulation and transfer of knowledge, and the reallocation of resources in a knowledge based economy. Their analysis helps to understand where jobs are being created (and lost) in international trade, what skills are inherent in those jobs and what are the impacts on labour income and standards (OECD 2013c; OECD, World Bank, WTO, 2014). **This expansion of GVCs has thus implications for policy making and international policy co-ordination.** It has underscored the importance of identifying appropriate trade and investment policies. It also underscores that, in this highly interconnected world, national policies are increasingly insufficient and international co-ordination and co-operation in policy making are even more necessary.

Boost innovation in the long-term without stifling reallocation

167. Innovation provides the foundation for productivity growth and can also help address social and global challenges at the lowest cost. Innovative economies are thus more productive, more resilient, more adaptable to change and better able to support higher living standard. To support innovation in the long-term, governments can play a key role in particular by unlocking investment in knowledge-based capital and by investing in and shaping an efficient system of knowledge creation and diffusion. In doing so, they should ensure in particular a well-functioning Intellectual Property Rights (IPR) system. They should also seize the benefits of the digital economy and in particular help unlock the potential associated with big

inequality, and because reform depends on effectively addressing political challenges associated with the transition. www.oecd.org/greengrowth/Issue%20Note%20Session%20Two_final.pdf
www.oecd.org/greengrowth/Issue%20Note%20Session%20One%20GGSD%20Forum.pdf

⁷¹ There are however difficulties in measuring intangibles. These include (i) the lack of clear-cut definitions of the firm's resources that constitute intangibles and a standard theoretical model of describing them; and (ii) inconsistent accounting recognition of intangibles and the heterogeneity of non-standard accounting measurements applied as a consequence of this.

⁷² NAEC Project B15: "Ensuring productivity growth and innovation in the long run".

data. Well-designed public investments are also critical in areas that have high social returns, such as R&D, education and knowledge infrastructure (e.g. broadband networks), as well as a long-term and stable perspective for funding basic research. Policy makers should also facilitate knowledge flows and foster the development of networks and markets which enable the efficient creation, circulation and diffusion of knowledge (OECD, 2015d).

168. However, policies to support innovation may sometimes be misdirected. Innovation is a disruptive force in the economy that tends to create winners and losers, leading to considerable reallocation in the economy. While R&D incentives are potentially an important policy tool, they may stifle reallocation by favouring incumbent firms over young firms. Unless carefully designed, they may not stimulate additional investment, but instead subsidise innovation that would have taken place without the incentives, and can also result in re-characterised expenditure rather than genuine investment in R&D. Direct support measures – such as contracts and grants – can be an important complement, particularly for young firms.

Enable the emergence and growth of young and innovative firms (including start-ups)

169. Understanding the impact of productivity dispersion and resource allocation plays a central role in shaping the welfare of societies and the competitiveness of countries.⁷³ Aggregate productivity growth depends closely on MFP at the firm level. Low average productivity can be explained by either too few firms at the top (lack of innovation) or too many firms at the bottom (weak market selection), two different situations that would entail very different policies. Business dynamics thus matter and creative destruction and up-or-out dynamics are central. To better inform policy makers, it is therefore essential to understand how firm-level productivity patterns translate into aggregate productivity. The effectiveness of various policy frameworks aimed at shaping firm productivity and enhancing resource allocation to more productive firms (i.e. allocative efficiency) are thus critical. Identifying the nature and consequences of the misallocation of resources across firms is necessary to provide evidence-based policy advice, which will help enhance productivity growth.

170. Policy needs to better recognise the role of business dynamics on employment and productivity, notably in enabling the emergence and growth of young innovative firms. One key determinant that can explain cross-country differences in resource allocation is regulation⁷⁴. Many existing policies are not well geared towards the needs and requirements of such firms, limiting their potential for job creation, innovation and productivity. **Policies that reduce the costs of entry, exit and experimentation – and thus increase the growth potential of young firms – enhance the ability of economies to benefit from innovation at the frontier.** Entry matters but what happens post-entry is crucial – young firms should grow rapidly or exit, not stagnate as unproductive small-old firms.

⁷³ The MultiProd project will provide cross-country harmonised micro-aggregated data that will be of paramount importance for understanding differences in productivity performance across countries (See Section 2). NAEC Project A7: "Applying new tools and approaches for better policy making".

⁷⁴ Some policies which have been found to influence reallocation include entry regulation (Arnold et al. 2011), employment protection legislation (Andrews and Cingano, 2014; Martin and Scarpetta, 2012), efficient bankruptcy and judicial systems (Andrews, Criscuolo and Menon, 2014), liberalisation and competition (Melitz and Ottaviano, 2008), taxation and so on. Other policies beyond the usual suspects, such as housing, can also promote more efficient resource allocation by improving residential and labour mobility, thereby contributing to reduce skill mismatch.

Boost productivity growth in the service sector through increased competition

171. OECD economies are increasingly dependent on the services sector and this trend will continue, partly due to population ageing. Measurement is an issue but low observed productivity in domestic services is consistent with lower competitive pressures, and lower managerial quality (Bloom et al., 2012). Pro-competition policies are essential to confront poor productivity in services. Improving services competition and productivity can boost aggregate productivity via intersectoral linkages (Bourlès et al., 2013) and by maximising the productivity benefits of GVC participation, given the increasing reliance of GVCs on domestic services.

Implement complementary skills and social policies...

172. As noted above, rising inequality might also reduce the effective human capital pool if it undermines the education opportunities for disadvantaged individuals (Cingano, 2015). This suggests that a range of education and social welfare policies, essential for well-being, may also matter for long term productivity. It is critical to foster talents and skills and optimize their use to support an innovative economy (OECD, 2012b). Data collected via the PIAAC show that skills' level and distribution vary markedly across countries. They also show that countries have very different abilities to allocate skills effectively. Skill mismatches undermine productivity and, hence, GDP growth.⁷⁵ Governments thus need to focus their attention on how skills are being developed, activated and used, as well as distributed. They need to develop appropriate education, employment, mobility, housing, tax and other social policies that encourage and allow people to make the most of their potential. Governments also need to foster close collaboration with employers, trade unions and other stakeholders to build more effective skills systems.

173. Productivity-enhancing reallocation should not be achieved at the expense of well-being. A key challenge in designing EPL is how to favour reallocation, while minimising the costs borne by firms and workers. In this regard, well-designed social safety nets and portable health and pension benefits are necessary to support transitions between jobs, while there is also a case for retraining and other active labour market policies (Andrews et al, 2015).

...and explore innovation for inclusive growth

174. The disruptive nature of innovation and the resulting creative destruction implies a need for complementary policies, e.g. social and skills policies. Some existing innovation policies may reinforce inequalities, by exclusively focusing on certain groups, regions, or firms, contributing to growing disparities in the economy. At the same time, new opportunities for a broader focus of policies exist, e.g. in using digital technologies to democratise the innovation process. Considering the trade-offs and synergies resulting from innovation policies may lead to a better balance between strong innovation and inclusive growth policies⁷⁶. One approach, mainly being applied in developing economies, are innovation policies aimed at enabling "bottom-up" initiatives, e.g. by increasing internet access and encouraging local initiatives, thus facilitating grassroots innovations and tapping into the creative capacity of excluded populations.

⁷⁵ NAEC Project B15: "Ensuring productivity growth and innovation in the long run".

⁷⁶ Innovation policies typically focus on achieving growth impact, but consideration should also be given to supporting innovative activities and products that improve the welfare of low-income groups. In some countries, "inclusive innovation" initiatives aim to provide poor and lower income groups with access to innovative products in the areas of food, health and other basic needs.

Strengthen international co-ordination and co-operation

175. Globalisation has rapidly increased the regulatory challenges faced by governments. Regulations adopted in one jurisdiction are likely to have strong extraterritorial implications to the extent that it may become almost impossible for certain national policy objectives to be achieved without careful consideration of the international context. The crisis also derived from a lack of co-ordination across jurisdictions. These regulatory failures and the rise in the interconnectedness of economies highlight not only the need to promote better regulation, but also **the need for strengthening and improving international regulatory co-operation.**

3.2.4. Policies for maintaining macroeconomic stability

176. Lessons from past and current crises highlight the importance of early warnings on risks, preparedness for these risks, and flexible responses to shocks. Deeper integration is likely to increase stability but might also decrease the effectiveness of automatic stabilisers in the long run. In order to increase the resilience of economies, it is crucial to recognise various risks (including spill-over effects stemming from the interconnectedness of economies), to address pro-cyclicality and vulnerabilities in policy settings, and to reform the financial sector.

177. On the one hand, the global shifts in economic balance and demographic changes that are projected over the coming decades may mitigate global imbalances in the long run. Similarly, more integrated economies could benefit from increased risk-sharing, as trading partners can share the burden of country-specific shocks, thus reducing instability. More generally, a more open economy is likely to be more agile and adaptable to shocks, including because it is less constrained by the limits of domestic demand. On the other hand, the rising integration of EEs with their structural higher volatility could have a destabilising impact for advanced economies. While global trade integration does foster growth and creates jobs, it can also increase international spill-overs from demand and supply shocks, and make business cycles more synchronised. Both exogenous shocks and policy changes abroad will have greater impact on the domestic economies, engendering policy interdependencies and potential synergies. Meanwhile, further global financial integration could also amplify shocks through international spill-overs and hence pose a threat to economic stability.

Increasing the counter-cyclicality and sustainability of macroeconomic policy

178. It is first necessary to **address and prevent the appearance of large asset price and credit bubbles**, as in their aftermath pro-cyclical monetary policy quickly reaches its limits. For central banks and other supervisory bodies, this would require considering a broader set of indicators. Considering the longer term while targeting inflation should help in this regard, according to their mandates. **Robust micro- and macro-prudential supervision would nevertheless remain a first line of defence.** A reduction of the pro-cyclicality of the financial system can also alleviate monetary policy making. This can be achieved by introducing sensibly designed reserve requirements that help to avoid the build-up of imbalances and reduce the volatility of credit growth. Regulatory arbitrage hereby needs to be prevented by the introduction of an international network of macro-prudential institutions.

179. **Counter-cyclical macroeconomic policies** can also increase the resilience of economies to large future shocks. A broad application of automatic stabilisers can be helpful in this respect. However, public budgets can come under pressure very quickly due to unforeseen events. The exposure to contingent liabilities in particular can limit the scope for counter-cyclical fiscal policies during crises. In the future it will thus be necessary to **make contingent liabilities of the public sector visible and to introduce**

safeguards between the public and the financial sector. Extensive stress tests can be used to identify and provide for potential exposures. Further, the introduction of bad debts insurance instruments can be helpful to maintain sufficient fiscal scope during crisis episodes.

180. It is also necessary to **sensibly sequence front and back-loaded consolidation measures across countries**, as this might help reduce the adverse impact of consolidation while maintaining a credible path to long-run consolidation and respecting country-specific circumstances. The synchronisation of fiscal consolidation efforts might indeed lead to large spill-over effects which seem to be more detrimental to output growth during downturns (Goujard, 2013; Veld in't, 2013).

181. For this reason **the required scope for possible fiscal interventions should be ensured by containing and/or reducing public debt levels during expansionary phases.** Building up sufficient margins in good times could make the economy more resilient to large shocks. In this regard fiscal rules, in particular spending rules and budget balance rules, might play a critical role. They help to avoid the build-up of debt, create the necessary room in good times for the pursuit of countercyclical discretionary policy and allow the automatic stabilisers to operate unfettered. Supporting institutions that enhance transparency and accountability is also important to enlighten the public debate and encourage responsible behaviour from policy makers.

Addressing international spill-overs and trade-offs between growth and stability

182. **Policies must aim at lowering vulnerability to shocks**, thus at mitigating the risk that imbalances lead to crises. Such policies include restricted access to credit, but these often entail trade-offs as they could hamper investment and consumption smoothing. For example, uncovered interest parity only holds over very long periods. This means for instance that situations can arise in which low (relative) levels of interest rates in a country coincide with capital inflows and a relatively high exchange rate. While low interest rates thus make credit cheap, the high exchange rate discourages investment in the manufacturing industry at the same time. Such developments increase the likelihood that cheap credit ultimately is channelled into asset markets. **While the first line of defence is the effective use of macro-prudential policy and a move away from financial repression** (Rey, 2013), this is a fundamental allocative market failure that needs to be addressed by transparency and information exchange among regulators at an international level.

183. It is also necessary to **further co-ordinate on stabilisation and structural policies between close trade partners.** Structural policies could enhance resilience against volatile capital flows by addressing external imbalances and changing components of capital flows from volatile portfolio investments to more stable FDIs. Indeed, capital inflows in terms of FDI and equity can mitigate current account risks. Such FDI is fed by increased investment in knowledge-based assets as well as by lowering transport and trade costs. Policies to facilitate FDI penetration, for example through policy co-ordination regarding tax or intellectual property rights (IPRs) could also support stability, as well as structural reforms aimed at improving the business environment in general. Structural policies can also play a role in reducing the risk of foreign financial shocks. Treaties that encourage FDIs and structural policies that remove barriers to FDI and enhance product market competition would reduce the risk of a banking crisis, by removing biases towards relying on debt rather than equity in foreign funding.

3.2.5. Policies for a healthy financial sector financing sustainable demand

184. **Uncertainty and a risk of secular stagnation make investors reluctant to invest in the long-term.** Some OECD economies are beset by persistent levels of low growth. Investment is also just idling along in most countries and investment gaps remain large. Financial sector reform or, more specifically, the lack of its completion, adds to the uncertainty that investors are facing and that makes them reluctant to

undertake longer-term investment projects. Governments need to complete the reform process and, in doing so, make financial regulation more consistent across borders. Reforms must also be time-consistent in order to create certainty for investors.

185. While several lessons have been learned from the financial crisis, **new risks are emerging**. Regulation and capital requirements have reigned in the banking sector. But this means that banking plays a reduced role in financing investment and growth, and non-banks will need to play a bigger role. Moreover, tightening regulation for commercial banks can result in regular bank activities derivatives and complex counter-party relationships migrating to lightly-regulated shadow banks. Meanwhile, demographic changes have increased longevity risk, while issues of poor SME access to finance are persisting despite financial reforms to change this.

186. **As banks have become safer and more constrained, they also play a reduced role as liquidity providers** and their ability to finance long-term investment has been hampered. The heavy reliance on loan finance in a time when banks are deleveraging and reducing their risk-weighted assets does not help to increase credit availability. New financing methods need to be developed to reduce reliance on loan finance. It will also be necessary to enable non-bank actors to take on a greater role in both respects, while paying attention to the development of a more appropriate oversight capability for those currently less regulated parts of the financial sector. The objective of financial stability should not be undermined, as the lack of appropriate regulations could weaken the provision of both novel and traditional sources of financing.

187. Meanwhile, in the context of highly accommodative monetary policy in the main OECD areas, **greater risk-taking and elevated asset prices have added to financial market vulnerabilities**. Increased risk-taking in financial and property markets could quickly unwind, with a sudden shift in investor sentiment and renewed volatility. This is especially the case if weak growth outcomes persist or if investors revise their expectations about monetary policy. A bubble has likely rolled towards illiquid higher yielding assets especially in emerging market economies (EMEs). Moreover, the financial vulnerabilities that have built up in EMEs, notably China, are also a source of risk to the global economy (OECD, 2014a).

Improve banks' strength and resilience

188. Healthy and resilient banks positively contribute to the financing of the economy. Avoiding financial excesses and supporting lending to the real economy is key. A healthy future for finance involves avoiding excesses that can hurt growth and income equality. The OECD has undertaken work on this issue which complements that of agencies responsible for setting regulatory standards for banking and capital markets. While the current G20 financial reform agenda is well underway and has already achieved much to make the financial sector safer and more resilient to shocks, further efforts are needed especially to implement measures addressing the capital framework for banks as well as the too-big-to-fail and competition issues. Concentration in the banking sector has increased in the aftermath of the crisis, and complexity and interconnectedness is still a major concern for regulators. Structural financial sector reforms are an important element to deal with such issues.

189. Strong capital buffers help keep banking sound and reduce the degree to which governments need to stand by banks in trouble because they make sure that owners remain responsible for losses. Substantial progress has been made already under the Basel III framework, but work remains to be done in particular to solve the issue of too-big-to-fail institutions. Besides higher capital and liquidity requirements of the Basel III reforms, structural reforms of OECD banking sectors are needed to improve the sectors' strength and resilience. This can benefit consumers and companies alike, in particular SMEs which still depend largely on bank lending.

190. Future financial supervision should also take a more high-level approach. In the past, supervisors did much to ensure that every financial institution complied with a set of rules. In the future, their key task will be to monitor system-level risks and take remedial action based on them.

Consider reforming the tax treatment of debt and equity

191. Many OECD countries have tax systems that provide a tax deduction for corporate funding through debt. Although that is the case, the tax advantage of corporate debt has been reduced in recent years by the general decline in corporate tax rates and the introduction of rules limiting the tax deductibility of interest expenses. In addition, certain countries have introduced measures providing tax relief for corporate equity which may also have impacted financial structures. Proposals from the OECD's BEPS project will seek to address concerns associated with elevated levels of debt and the artificial location of debt by multinational enterprises. A tax deduction for residential debt interest is also provided by some countries, and has been considered by some to have led to household indebtedness that contributed to the crisis. Further work should be undertaken to better understand how the tax treatment of debt and equity, corporate and residential funding impacts financing decisions, and how those decisions ultimately impact the stability of global markets. Through a better understanding, reforms could be developed that may have some positive impact on resource allocation and financial stability, but countries will have to address challenging trade-offs (e.g., whether to exempt the normal rate of return on equity as well as debt and have a higher tax rate, or to tax the normal rate of return on both debt and equity while having a lower tax rate).

Strengthen the critical infrastructure of equity markets

192. Capital markets need to be deepened in order to take ground in the long-term financing domain from where banking capital has retreated. Work under the financial stream of NAEC (Blundell-Wignall, 2014) has gathered evidence underlining some challenges in fostering long-term finance. It shows, for example, that corporate equity is declining in its liquid, publicly tradable form, and that Initial Public Offerings in particular are decreasing in importance. Given the critical importance of equity for coping with uncertainty and raising additional capital, this work highlights the need for strengthening the critical infrastructure of equity markets, including exchanges, connectivity and broker-dealers.

Prepare non-bank actors to provide long-term finance

193. Ensuring appropriate financing of long-term investment involves tapping the financial resources of institutional investors, especially those of pension funds whose long-term liabilities are a 'perfect match' for long-term assets like infrastructure. However, institutions such as pension funds and insurance companies are not prepared to play a role in providing long term finance. They need to develop credit assessment capability, underwriting frameworks and origination as well as operational services.

194. Developing appropriate financing instruments (including public-private-partnership models), enhancing transparency and standardisation where possible, as well as balancing regulatory reforms while avoiding unintended consequences, can support such efforts.

195. There may also be a need for improved legislation, regulation, liquidity and transparency to support the development of capital market solutions for hedging longevity risk. Up-to-date mortality tables as well as assumptions that include future mortality and life expectancy developments would help in estimating the amount of longevity risk. Better risk management could be reflected in capital reserving requirements to provide incentives to pension funds and annuity providers to use longevity hedges. And reference points for pricing longevity risk and some publicly available information could be used by potential market participants to enter the market.

Broaden the range of financing instruments to foster new sources of growth

196. OECD analysis highlights the range of external financing alternatives to straight debt, including "asset-based finance", "alternative debt", and "equity instruments", and the potential these instruments hold for financing SMEs in the post-crisis context. For example, non-bank instruments such as mini-bonds and equity tools, have the potential to fund innovative and high-growth SMEs. Seed and venture capital, and private as well as public equity finance more broadly, could be fostered to finance higher-risk growth companies. Policy can also encourage direct loans by non-bank actors.

197. The NAEC work outlines the challenges to increasing uptake of these instruments by SMEs and entrepreneurs. It identifies a number of areas for action to overcome these obstacles, including implementing regulation that balances financial stability, investor protection and the opening of new financing channels for SMEs; developing information infrastructures for credit risk assessment, to increase transparency in the markets for business finance; implementing policies that leverage private resources to finance innovative and high-growth SMEs; and addressing SME skills gaps in finance, to improve their understanding about alternative finance instruments and ability to access them. Further analysis will focus on the actions needed to match supply and demand for alternative instruments effectively and create well-functioning markets for SME finance and investment.

Remove regulatory, legal and governance impediments to long-term investment

198. Policies that enhance sustainable growth (including macroeconomic policies) are key to reducing investor uncertainty. Developing investment for growth in a sustainable demand framework may involve removing regulatory, legal and governance impediments to long-term investment, while at the same time keeping those regulatory features indispensable for financial stability of the whole framework. There are a range of issues that need to be addressed in the areas of accounting, solvency II implications, macro-prudential, local content requirements, ownership restrictions, capital controls, treaty frameworks, etc.

3.2.6. Policies to restore trust in government and market institutions

199. **Trust in government and business is at low levels.** On average only 40% of OECD citizens today report that they trust their government, while 57% feel that corruption is widespread in business (Gallup World Poll, 2013). Trust was particularly hard hit by the crisis which stemmed from numerous regulatory failures and mismanagement not only by government but also by business. **Low levels of trust can reduce compliance with laws and regulations, diminish investor confidence and increase risk aversion.** There is also a distributional angle to the decline in trust, with rising inequality undermining trust in institutions that allow a minority to capture a large share of economic growth. Rebuilding trust therefore requires a broad policy agenda covering social inclusiveness and intergenerational mobility.

200. *The OECD Trust Strategy*, will develop policy relevant measurement of trust and review the key drivers of open, informed and fair policy-making, covering issues related to: (i) political finance; (ii) trust; (iii) lobbying; (iv) the revolving door; (v) openness and inclusion; (vi) illicit financial flows and political finance; (vii) local governance and political finance; (viii) politics and public service. The objective is to develop advice on (re)building trust in key sectors such as tax, education, corporate governance and regulation. But restoring trust goes beyond governments. The OECD Trust and Business Project seeks to support businesses to implement international standards for business conduct, levelling the playing field for business.

Ensure transparency, open government and stakeholder engagement

201. Restoring trust requires improvements in the effectiveness of the policy formulation process; this includes **reinforcing and effectively implementing transparency in policy-making by ensuring access**

to information and open government. Yet more transparency can only lead to more trust if it is combined with collaboration between stakeholders. Having considerable stakeholder engagement (with ministries, unions, employers etc.), informal consultations and negotiations are vital steps for rebuilding and sustaining trust.

Promote integrity and anti-corruption in government

202. In a number of countries, the government decision-making process is perceived as having been undermined by the power of money, which has led to low levels of trust in government. Amongst the key factors explaining this prevailing distrust are "wrong incentives driving policies" and "corruption or fraud" (OECD, 2014i). 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 (OECD, 2013f).⁷⁷

Adequately regulate lobbying and political finance and address conflicts of interest

While money is a channel of political participation, if the financing of political parties and election campaigns is not adequately regulated, money may also be the means for undue influence and policy capture by narrow private interests (OECD, 2014i). Adequate regulation of lobbying and political finance is therefore essential to limit undue influence and build safeguards to protect the public interest. Important advancements have been made by many countries in regulating political finance to instil fairness and transparency into the system. However, the effectiveness of regulations is questionable in several countries and many challenges remain.

Improve fairness in the tax system

203. Governments' efforts to rebuild trust will be strengthened by restoring fairness in taxation by delivering the BEPS Action Plan and the Automatic Exchange of Information (AEOI) framework. The AEOI for tax purposes is a potential game changer facilitating taxation of capital income at the personal level at higher and mildly progressive tax rates. The implementation of AEOI is likely to warrant a **new look at how capital and wealth are taxed.**

Support skills development to foster trust and instil values such as tolerance

204. Economic processes happen in a social and behavioural environment, which is strongly influenced by the skills of people. Trust is a good example, both in its form of interpersonal trust and trust in institutions (Cerna, 2014). **Increasing recognition is being given to the crucial role that education systems can play in fostering trust and instilling democratic values such as tolerance and respect for others.** Findings from PIAAC data suggest that social capital and human capital are tightly connected and that countries that are successful in promoting skills acquisition also effectively manage the challenge of promoting interpersonal and institutional trust upon which social capital is built (Borgonovi and Burns, forthcoming). Other prerequisites for growth (such as 'openness for trade' for example, or migrant integration) have a behavioural and skills dimension (for example 'intercultural understanding'). Fiscal systems also depend on trust and perceptions of social justice and reciprocity.

⁷⁷ The CleanGovBiz initiative supports governments, business and civil society to build integrity and fight corruption. It draws together existing anti-corruption tools, reinforces their implementation, improves co-ordination among relevant players and monitors progress towards integrity. <http://www.oecd.org/cleangovbiz/>

Strengthen regulatory policies of business and finance

205. Fundamentally, well-functioning finance relies on trust, which itself requires accountability. Ending too-big-to-fail guarantees is desirable to fend off excess financial activity, and it is also an important step toward rebuilding trust in the financial system, because success or failure in the marketplace is the main accountability mechanism for businesses.

206. Regulatory policy can also play a role in restoring trust in market institutions while simultaneously promoting inclusive and sustainable growth. Conversely, regulatory failure may have dramatic impacts, as illustrated by the crisis, which emphasised how fragmented regulatory frameworks have generated information and implementation gaps. In all cases, regulatory practice needs to be improved and used more strategically.⁷⁸ NAEC has helped to put the spotlight on regulatory governance as a key contribution to economic performance and a lever in the hands of government out of the crisis.

Crackdown on foreign bribery and illicit financial flows

207. The OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions establishes legally binding standards for its Parties to **criminalise bribery of foreign public officials in international business transactions under their laws** and related obligations. It is the first and only international anti-corruption instrument focused solely on the supply side of the foreign bribery transaction.⁷⁹ The OECD Foreign Bribery Report released in December 2014 measures, for the first time, the crime of transnational corruption based on analysis of data emerging from 427 foreign bribery enforcement actions concluded since the entry into force of the OECD Anti-Bribery Convention in 1999.

208. Governments worldwide are joining forces to combat money laundering, tax evasion and international bribery, which make up the bulk of Illicit Financial Flows (IFFs). Although the exact scale of the problem is unknown, IFFs have devastating effects on developing countries. But some progress is being made. Some 1300 tax information exchange agreements have been signed and hundreds of offenders for foreign bribery have been sanctioned. Almost USD 150 million in proceeds of corruption were returned between 2010 and June 2012 (OECD, 2013g). But much still needs to be done and governments need to continue to prosecute foreign bribery offenders. Even Working Group on Bribery (WGB) countries need to do more, as only half of them have sanctioned a party for a foreign bribery offense (OECD, 2013g).

Support responsible business practices

209. NAEC's focus on improving people's wellbeing and restoring trust is central to the work on responsible business conduct (RBC) which is based on the OECD Guidelines for Multinational Enterprises (MNEs). The Guidelines are a comprehensive, government-backed, international corporate responsibility instrument, which encompass the key principles that a trust-enhancing policy instrument should have. It is based on public-private co-operation and is legally binding on adhering states, while voluntary for MNEs. It covers the majority of global investment flows, with participation beyond OECD Members, and crucially, is an open and transparent instrument. It deals with financial flows and investment, which are some of the key sources of global mistrust, due to illicit capital and agglomeration of finance in supranational financial corporations.

⁷⁸ NAEC Project C5: "Promoting Inclusive growth through better regulation".

⁷⁹ The 34 OECD Member countries and seven non-Member countries - Argentina, Brazil, Bulgaria, Colombia, Latvia, Russian Federation, and South Africa - are Parties to this Convention.

210. RBC entails the need for social responsibility, business ethics, and the goal to contribute to sustainable development to become part of business decisions and activities. RBC will help establish a more open investment climate and a level-playing field for responsible investment by increasing the reach of the Guidelines (through outreach and awareness raising) and their implementation (through sector-specific projects, and through mediation mechanisms for national contact points).

4. HOW TO FOSTER CONTINUOUS IMPROVEMENT GOING FORWARD?

211. This report has argued that policy analysis has often been too narrow in scope and should be broadened to focus on well-being and include inclusiveness and environmental impact amongst other issues. NAEC is a wake-up call to think more broadly about global challenges and it proposes exciting new directions for the OECD's policy research. Going forward in mainstreaming the results from this exercise, the Organisation will continue to proceed in its best tradition, i.e. by providing careful measurement and useful policy recommendations based on objective evidence.

212. The NAEC Initiative is such a multi-faceted and ambitious one that much is still to be done, not only in further developing the instruments to expand our knowledge of economic and social trends, but also in promoting co-operation and co-ordination among Member States. This section reflects on how the NAEC initiative could foster continuous improvements in the OECD's approach to long-term challenges, by better integrating the findings of NAEC in day-to-day work, by stimulating further horizontal work, by maintaining a space for fresh thinking and by deepening the dialogue on NAEC with a range of stakeholders.

Mainstream NAEC systematically across the Secretariat and policy committees...

213. Mainstreaming the new approaches to economic challenges described and called for in this report requires continuous efforts over the medium term. Annex III illustrates how NAEC insights are being mainstreamed in OECD work and flagship publications. To make mainstreaming happen, both top-down and bottom-up initiatives are necessary as well as intensive exchange of experiences across Directorates. Defining clear objectives as well as outlining some important next steps would be useful. This involves following up on progress achieved in both the Secretariat and in Committees. Monitoring results will remain critical in maintaining the impetus and in providing a whole-of-the-house perspective on where we stand. This has to be done while maintaining the key role of Committees in overseeing horizontal projects.

214. Last but not least, the Organisation currently does not have sufficient capacity and experience in a number of critical areas (such as on network and complexity economics). To develop such capacity it could develop, as appropriate, co-operation with relevant stakeholders including academic and research institutions.

...and review what Members are doing to change their approaches

215. To inform policy making on these new approaches, it would be useful to follow up closely on what is being done by Member and non-member governments in this regard. A stock-taking and exchange of experience would serve both to inform Committees and to share experiences across Committees and across governments on what works and what doesn't, and the related policy lessons or implementation challenges.

Promote horizontal collaboration...

216. One critical challenge highlighted by the initiative, *inter alia*, is the need for further strengthening horizontal co-operation across Directorates and Committees, as appropriate and consistent with their mandates. Significant progress has been made in recent years, including through the NAEC initiative which has acted as a catalyst for a number of horizontal activities. But a lot remains to be done to further encourage, facilitate and realise the potential of horizontality.

...through the seminars...

217. The NAEC Seminar Series has facilitated an exchange of views across the OECD and with Members on emerging challenges and new approaches to economic challenges. The series has been useful in exposing the Secretariat to cutting edge and sometimes controversial research as well as to experts with different perspectives or disciplinary backgrounds. It has triggered a fruitful discussion and healthy exchange across Directorates. It has also served to inform and exchange on projects with emerging policy recommendations relevant for a number of Directorates, thus contributing to a more fluid policy discussion across the Secretariat. The seminar programme should be maintained to support this policy discussion and continuous exchange with academia, think tanks and other International Organisations.

...and possibly the NAEC Group

218. The NAEC Group was created as an ad-hoc governance structure for the NAEC initiative to allow for proper governance by relevant OECD Committees. It triggered intense discussion on its composition and role at its inception, but has now developed into a useful mechanism to encourage, support and enrich dialogue across Committees. It has also begun to be used to discuss other strategic horizontal initiatives such as Inclusive Growth and Aligning Policies for the Transition to a Low-Carbon Economies. Upon appropriate decision by the Council, the NAEC Group could serve as a governance platform for horizontal projects and for reviewing cross-cutting issues where there is a need to build a more coherent and consistent whole-of-organisation view. It could also help strengthen inter-committee communication and reinforce knowledge sharing of Committee work. However, the relevant policy committees should obviously continue to play the central role in mainstreaming the results of NAEC in OECD work.

Review internal processes that hinder horizontal co-operation

219. It is necessary to develop further and facilitate cross-committee consultations and joint bureau/committee meetings to reinforce ex-ante the consistency of policy messages and their ownership by all stakeholders, especially whenever there are critical policy trade-offs involved. Developing and facilitating staff sharing, exchanges and secondment arrangements could ensure that cross-cutting issues are more appropriately and consistently addressed. It would also be instrumental to reform some processes to make horizontal co-operation more process-light and content-heavy. The performance management review process could provide more incentives to staff to undertake and participate in horizontal projects. Last but not least, the PWB process could be made more horizontal-friendly and less silo-focused. Such reforms should be undertaken in a transparent and accountable manner.

Support continuous up-dating of analytical frameworks

220. There are some challenges in promoting continuous dialogue inside the OECD on updating analytical frameworks. For instance, fostering new approaches has implications for the recruitment of staff; it may be desirable to hire staff from more diversified backgrounds and reinforce the link to academia and cutting-edge research.

221. It is also necessary to develop a culture allowing more debate, including by allowing junior staff fresh from university to participate in and influence more internal debates and to challenge the status quo. The OECD should continue to facilitate the exchange of inter-disciplinary, cross-Directorate work featuring new ideas, novel research and challenging perspectives from staff members.

Expand the partnership to Key Partners, the private sector and civil society

222. The NAEC initiative has proven to be of great interest to our Key Partners. Dialogue with them on emerging NAEC results has been launched in 2015 and there is an appetite for deepening this exchange further in co-operation with the External Relations Committee and the Global Relations Secretariat. The dialogue with the private sector, social partners and civil society on NAEC is also useful in reinforcing the image of the OECD as an open, reflective, and thoughtful organisation.

ANNEX I. NAEC IN HISTORICAL PERSPECTIVE

The OECD has a strong tradition of rethinking fundamental objectives...

1. The OECD was set up under a Convention signed in 1960, which provides that the OECD shall promote policies designed "to achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries while maintaining financial stability. And thus to contribute to the development of the world economy". For much of its history, the OECD was considered to be a "temple of growth" or the "growth conscience" of its members (Schmelzer, 2012).

2. A first questioning of growth emerged in the late 1960s, despite the high levels of GDP growth experienced by OECD members during that decade. It was motivated by the mistaken belief that growth in the 1970s would continue at the same pace as the 1960s. The subsequent report *Problems of Modern Society* outlined a number of long-term problems, as well as more immediate challenges such as the ecological and distributional consequences of growth (OECD, 1969). The report also made the claim that "the steadily increasing wealth [did] not necessarily mean that human welfare improves correspondingly" (OECD, 1969:18).

...adapting analytical work...

3. This questioning of the nature of growth paused in the 1970s. At that time, members were preoccupied with recession, unemployment, energy shortages and stagflation – leading to major changes in OECD policy advice during the 1970s and 80s. The McCracken Report was pivotal in spurring a move away from traditional Keynesian policy approaches of demand management to the adoption of new economic models such as the monetarist and neo-classical ones. It was followed by a major shift of attention towards structural adjustment policies (OECD, 1987). This shift challenged the routine macroeconomic and political prescriptions espoused by the OECD (Schmelzer, 2014). The report provided an improved analytical basis to underpin more detailed reviews of OECD members' economic policies, especially as regards structural issues such as labour and employment policies, industrial and raw material bottlenecks, and agricultural and commodity prices (Carroll and Kellow, 2011). The shift in OECD thinking also contributed to give legitimacy to the critiques of the welfare state in the 1980 (Leimgruber, 2014). Subsequent OECD work in the 1990s and 2000s qualified many of the tenets of the neo-classical synthesis, for instance recognising the limits of the representative agent and rational expectations simplifying assumptions from the point of view of public policy.

...promoting horizontality...

4. One clearly recognised main strength of the OECD is its cross-sector analytical capability and multi-policy committee machinery, which allows it to set out forward-looking policy options (Gass, 2002). However, that potential has not always been realised, leading to compartmentalised approaches. This is not unique to the OECD but common in national administrations and other multilateral institutions. More recently, the International Monetary Fund (IMF) stated that a major post-crisis goal was to overcome the silo mentality and insular culture (IEO, 2011; IEO, 2014). Former OECD Secretary-General Van Lennep set out the need for a horizontal focus rather than sectoral one, attempting to draw out the cross-sectoral impacts of policy developments, so as to make the OECD's work "reflect more closely the actual

conditions faced by governments in making choices, which themselves need to reconcile differing points of view and objectives" (van Lennep, 1998, pp. 180–182 in Carroll and Kellow, 2011).

The OECD has since then conducted important horizontal projects, beginning with the 1987 report on "Structural Adjustment and Economic Performance" (OECD, 1987) which laid the ground for structural policy reform. The Sources of Growth project of the early 2000s provided the analytical basis for the framework adopted in much of the OECD's work on structural policies – inter alia in the *Going for Growth* monitoring process. In response to the jobs crisis in the early 1990s, a major horizontal project led to the OECD Jobs Study, published in 1994, and the OECD Jobs Strategy, launched two years later. These reports contributed a set of evidence-based policy recommendations for how OECD countries could create more and better jobs (OECD, 2011). The OECD Report on Regulatory Reform (OECD, 1997b) also contributed to a major review of regulatory practices in OECD countries, aimed at sustaining growth and improving well-being. In recent years there has been a conscientious effort to tap into the richness of horizontality, and since 2007, the OECD has launched a number of important initiatives, including the Innovation Strategy, the Strategic Response to the Crisis, as well as the Green Growth, Skills, Gender, Development and Inclusive Growth initiatives. Yet mainstreaming horizontal work remains a long-running institutional challenge.

...mastering the probable...

5. The OECD has at various points attempted to consider long-term trends and scenarios. A project called *Interfutures* was launched in the late 1970s to establish a wide-ranging framework of growing interdependence to promote long-term growth and better management of the world economic system. The report attempted to grasp the possible consequences of shifting patterns of growth, refuting the Club of Rome's argument on the *Limits to Growth*, with the aim of "mastering the probable and managing the unpredictable" (OECD, 1979).

...and managing expectations about the future

6. In the late 1990s OECD produced a report looking at "The World in 2020" in which it asserted that the challenge in creating a New Global Age was to "to design and implement balanced policies that foster economic growth, protect the environment and ensure social justice" (OECD, 1997a). This led to rigorous analysis of policy impacts, combining the knowledge of many disciplines. The Shaping the Twenty First Century Report also established long-term, multi-dimensional goals to guide the development effort in what became the basis for the *Millennium Development Goals* (OECD, 1996). Since 2003, the OECD's International Futures Programme has contributed to discussions on the major risks of the 21st century through studies focusing on the consistency, effectiveness and openness of risk management systems in OECD countries. This also led to a new understanding of the implications of risks, and of the need for a forward looking approach to managing risks (OECD, 2003). However, these studies were mostly one-off efforts that registered valid concerns, but did not always lead to comprehensive and sustained efforts to deal with the challenges they described.

ANNEX II. MAPPING POLICY TRADE-OFFS AND COMPLEMENTARITIES

SYNERGIES TRADE-OFFS	GROWTH	STABILITY	ENVIRONMENT	EQUITY / WELL-BEING
GROWTH	<p style="text-align: center;">"STRONG GROWTH"</p> <ul style="list-style-type: none"> • Innovation policies (e.g. R&D fiscal incentives) are enhanced by policies facilitating the exit at low cost of inefficient firms (e.g. not excessively punishing bankruptcy regimes; less stringent EPL) (B15) • Domestic policies encouraging innovation (investment in basic research, protection of IPR, strong competition policies) and international co-operation in the areas of basic research, IPR and antitrust (B13) • <i>Broadening the range of financial instruments for firms increases economic resilience and fosters new sources of growth</i> (A5) 	<p style="text-align: center;">"RESILIENT GROWTH"</p> <ul style="list-style-type: none"> • <i>Making the financial sector more stable</i> can boost long-term growth... but measures to restrict excessive credit accumulation can temporarily restrain demand growth (A3) 	<p style="text-align: center;">"GREEN GROWTH"</p> <ul style="list-style-type: none"> • Reducing environmental degradation has a positive impact on growth (B9) • <i>Increasing environment stringency</i> does not impede productivity growth (B10) (if designed and implemented in ways that minimise the burden to entry, competition and economic activity) 	<p style="text-align: center;">"INCLUSIVE GROWTH"</p> <ul style="list-style-type: none"> • Reducing skill mismatch boosts productivity and decreases inequalities (B13) • Investment in education and skills key for facilitating trade, high-skill specialisation and climbing of the "value-chain" in emerging economies (B13), focusing on the disadvantaged and at-risk groups, in particular by designing early interventions (B3), and fostering a wider range of cognitive competencies and social and emotional skills (B3) • Progressive taxation allows the government to cover (part of) its investment in education and skill systems. • A shift from proportional SSCs towards progressive PITs stimulates labour participation while reducing inequality. (B7) • Inclusive innovation policies
STABILITY	<ul style="list-style-type: none"> • Some fiscal consolidation instruments (cuts to public spending on education, health care, childcare, increases in social security contribution) could raise serious trade-offs with growth (A6) • Risk of "marginal-reform traps" when competition severely restricted or tight regulation on dismissals of workers (boost growth at the cost of greater income uncertainty) (B12) • Boosting growth by reducing progressive taxation or social transfers raises income uncertainty 		<ul style="list-style-type: none"> • Reducing environmental degradation and limiting carbon output lowers the risk of natural resource and climate shocks 	<ul style="list-style-type: none"> • Making the financial sector more stable can reduce inequalities (A3) • <i>Fiscal consolidation</i> could be carried out in a way to minimize its impact on equity (A6) (provided carried out with carefully-chosen instruments)
ENVIRONMENT	<ul style="list-style-type: none"> • Boosting growth can have a negative impact on the environment 			<ul style="list-style-type: none"> • Reducing environmental degradation will mitigate its disproportionately high negative impact on the poorest segments of the population • Success of <i>environmental reforms</i> depends critically on their distributional effects (B11) (if coupled with well-targeted flanking measures) • <i>Green tax reforms, such as removing fossil fuels subsidies</i>, can be socially progressive (B11) (if coupled with well-targeted compensation mechanisms)
EQUITY	<ul style="list-style-type: none"> • Reforms that <i>boost innovation</i> widen the wage distribution among employed workers (B13) (unless flanked with efficient redistributive and education policies) • <i>Promoting labour force participation and job creation</i> widen wage dispersion, but neutral effect on households' disposable income dispersion (B5) (unless flanked with reforms of unemployment benefits for adequate coverage of all workers) • <i>Greater competition in products markets</i> could increase structural unemployment and widen earnings inequality (if not accompanied by policies helping transition to new jobs) • Boosting growth by reducing progressive taxation or social transfers raises income inequality • <i>Tax reforms increasing the weight of indirect taxes</i> (B5) raises inequality in the short run (unless accompanied by measures that lower the labour tax wedge on low-income households through in-work tax credits and other income-conditional tax allowances, improve the design of the VAT system by taxing goods and services consumed especially by the more wealthy at the standard VAT rate, and that strengthen taxation on immovable properties and inheritance). • Progressive taxation create disincentives for workers to up-skill (B7) 	<ul style="list-style-type: none"> • Some fiscal consolidation instruments (cuts to public spending on education, health care, childcare, increases in SSCs) could raise serious trade-offs with equity (A6) 		<ul style="list-style-type: none"> • There is no trade-off between job quality and job quantity (B2)

Complementarities

Trade-Offs

ANNEX III. EXAMPLES OF NAEC MAINSTREAMING

1. Directorates and Committees have begun to integrate NAEC issues and perspectives in some of their work, and to use some new instruments highlighted in the NAEC Synthesis. Some flagship publications are evolving towards a broader consideration of inclusive and sustainable growth and the well-being agenda. However, NAEC perspectives and in particular the focus on well-being is still far from penetrating the core analysis and is often considered as an additional component to be treated separately. But these are non-trivial evolutions that need time to be fully integrated and genuinely mainstreamed. The text below presents some illustrations of what has happened to date.

Well Being and Inequalities

2. *Economic surveys* have begun to incorporate topics that are key to the NAEC narrative and central to a well-being discussion, such as climate change, green growth, education outcomes (e.g. every survey now assesses green growth issues); as well as inclusive growth and income distribution (Japan 2015, Sweden 2015, New Zealand 2015); policy implications of inequality and poverty (Mexico 2015, Indonesia 2015); role of education, training and employment in spreading the fruits of growth (France 2015); gender (Switzerland 2013, India 2014; Italy 2015, Austria 2015); as well as linkages between finance and growth (UK 2015).

3. *Going for Growth* now incorporates an assessment of the impact of pro-growth policies on other dimensions, beginning with inequality and the environment (The 2015 report with Chapter 2 reflecting on policies effects on income inequality, and Chapter 3 assessing the reforms effects on environment).

4. *Structural policy analysis* in ECO pays more attention to effects of policy recommendations on other dimensions of well-being.

5. The Employment, Labour and Social Policies Directorate is assessing the ***full effects of pro-growth policies in terms of distribution of income and opportunities***, including the effectiveness of their policies to support displaced workers. The new *Centre on Inequalities* will look at how policies can address inequalities, in income and other key areas – education, health, access to services etc.

6. It is anticipated that Employment Ministers will call upon the OECD to look again at its *Jobs Strategy* to see if it fully reflects the insights from the NAEC work. In particular, there is a need to incorporate concerns about inequalities; explore more fully interactions with health, education and social policies; and to draw on the insights arising from analysis of PIAAC data.

7. ***Well-being and inclusive growth concepts*** and approaches are already integrated in mainstream work of the Education Directorate (EDU): For Instance, *PISA* Vol. II includes details on the equitable distribution of learning outcomes. ***Inclusive Growth-related concepts*** and approaches have been integrated in the work on the flagship publication *Education at a Glance*. The 2014 edition included indicators on intergenerational educational mobility and equality of opportunity.

8. The *2015 GOV Ministerial* (Finland, October 2015) will highlight the interplay between regulation, budgeting and public management to produce strong institutions for inclusive growth. The fact that these policy areas are being combined for the first time is probably the best indication of a shift in mindset that has taken place in the context of NAEC.

Complexity and Interconnectedness

9. *The Economic Outlook* includes more emphasis on financial issues and will (a) look at investment from multiple angles, KBC, globalisation, energy, and (b) income and employment distribution. ECO's medium term forecast has been increased from 5 to 50 years, with greater emphasis on risks around the main projections and alternative scenarios.

10. The NAEC perspective is also being integrated in the forthcoming revision of the *OECD Innovation Strategy*, which will provide a much more integrated and coherent perspective on the role of innovation for strong, green and inclusive growth. Furthermore, closer integration of analysis and evidence on innovation policies with the OECD's overall narrative on well-being will make possible trade-offs and synergies more evident and will help tackle them.

11. The Environment Directorate is ***broadening the analysis of environmental policies on economic outcomes*** beyond productivity growth – such as investment, employment, trade patterns (in particular the pollution haven hypothesis), FDI, entry/exit and firm location – to better understand the full economic impacts and channels of transmission.

12. The Directorate for Financial and Enterprise Affairs' work in the ***area of international regulatory co-operation*** reflects the need to respond to the challenge of increased complexity and growing global interconnectedness. Its new flagship publication "*OECD Finance and Business Outlook*" (to be published June 2015) will also reflect NAEC work on investment, finance linkages and global interconnectedness.

Measurement and Data

13. Work on ***Job Quality*** will examine trends over time and look in more depth at the links between quality and quantity of jobs, and on whether poor quality jobs are a stepping-stone into better quality jobs. ***Job quality*** as well as ***job quantity*** has been featured in OECD Employment Outlook 2014, Chapter 3. STD and ELS will continue work on ***job quality*** with the improvement of indicators and the extension to emerging economies.

14. In its statistical work EDU is focusing ***increasingly on distributional data and analysis*** rather than country averages, for example the distribution of education and skills data over various social categories, or the regional within-country variation of education and skills data;

15. The Statistics Directorate is stepping up its ***measurement of inequalities*** (e.g. health inequalities, jointly with ELS, as well as wealth inequalities) which will significantly enrich the analysis of inequalities, hitherto largely confined to income inequalities.

16. The ***measurement of trust*** covers new ground in terms of its scope and methodology and it will be crucial to analyse the role of trust in institutions for successful implementation of reforms.

Modelling Advances

17. The advances in NAEC projects examining ***environment and inequality*** have led to the extension of ENV's modelling toolkit (to incorporate multiple households, look at economic feedbacks of environmental pressures), which provide important extensions to our modelling capacity going forward.

18. The Trade and Agriculture Directorate are increasingly resorting to microdata with new TiVA (trade flows in value added terms), STRI (detailed, sector and country level account of barriers to trade in services), and Trade Facilitation Indicators (detailed country-level data on administrative impediments to trade across more than 130 countries). These newly developed databases are being integrated into a new *OECD trade model (METRO)* that will enable analysis of existing as well as new forms of "murky protectionism." METRO will also give more consideration of, and linkages to, micro-simulation models, e.g. to generate "early estimates" of development in income distribution. Developing multiple baselines in scenario analysis may be useful to become better equipped to deal with different future outcomes.

ANNEX IV. TENTATIVE TIMELINE FOR PROJECT DELIVERABLES *

based on the list of projects in Annex 1 of the NAEC Interim Report [C/MIN(2013)2]

STATUS	A. REFLECTION & HORIZON SCANNING	B. POLICY TRADE-OFFS & COMPLEMENTARITIES	C. INSTITUTIONS & GOVERNANCE
FINALISED	<p>A1 - The crisis: Drawing lessons from history and past policy experiences</p> <p>A2 - Forecasting in time of crisis: post-mortem of OECD projections</p> <p>A3 - The role of the financial system in the crisis and reforms required to promote sustainable growth</p> <p>A4 - Fostering long-term investment and responding to the challenges of ageing and longevity</p> <p>A5 - New approaches to SME and entrepreneurship financing: broadening the range of instruments</p> <p>A6 - How much scope to achieve growth- and equity-friendly fiscal consolidation?</p> <p>A7 - Applying new tools and approaches for better policy making (scaled back, described as B15)</p>	<p>B1 - New approaches to analysing multi-dimensional well-being: trade-offs and synergies</p> <p>B2 - Measuring and assessing job quality (<i>additional outputs to be delivered end of 2015</i>)</p> <p>B3 - Assessing the effects of distribution of skills and key related institutional variables on multi-dimensional well-being outcomes</p> <p>B4 - Do policies that increase GDP per capita also increase median income?</p> <p>B5 - Assessing the transitional costs and distributional consequences of structural reforms</p> <p>B6 - Closing the loop: how inequality affects economic growth and social cohesion?</p> <p>B10 - Environmental policies and economic performance</p> <p>B11 - Trade-offs and synergies between environment and inequality</p> <p>B12(a) - Increasing the resilience of economies to exogenous shocks (Micro resilience)</p> <p>B12(b) – Increasing the resilience of economies to exogenous shocks (Finance and resilience)</p> <p>B13 - OECD@100: global trends and policy challenges</p> <p>B15 - Ensuring productivity growth and innovation in the long run</p>	<p>C1 - Revisiting the social contract: rebuilding trust for sustained economic recovery</p> <p>C2 - Assessing the vulnerabilities of social institutions, and policy responses to enhance resilience</p> <p>C5 - Promoting inclusive growth through better regulation</p> <p>C6 - Implications of globalisation for competition</p>
BY END 2015		<p>B7 - Analysing growth and equality trade-offs in taxation</p> <p>B8 - Trade-offs and synergies between globalisation, innovation and inequality (scaled back)</p> <p>B14 - Long-term scenarios for food and agriculture</p>	
AFTER 2015		<p>B9 – Cost of Inaction and Resource Scarcity: Consequences for Long-term Economic Growth/Benefits of Action</p>	

* Project titles in **BOLD** designate project that have summaries provided below. Summaries of other projects are work in progress. Projects **C3** - Can health become an even bigger part of the economy without undermining fiscal sustainability, **C4** - Assessing immigrant characteristics and links to labour market performance and **C7** - Securing tax revenues in a globalised economy are on hold.

ANNEX V. PROJECT DESCRIPTIONS AND OUTCOMES

A1: Origins of the crisis: Drawing the big picture

- **Theme of the project**

The Great Recession has prompted a variety of explanations...

The financial crisis of 2008 precipitated a global economic crisis and lengthy periods of recession across the OECD. A number of factors led to the crisis. Significant global capital flow imbalances added to asset price instability. Especially the growing funds of institutional investors contributed global imbalances and the shadow banking industry helped to transform these flows into a housing bubble. This was alleviated by substantial moral hazard on part of many actors (such as credit rating agencies, risk-taking investment banks and short-term investors) and by institutional failures of weak regulatory policy.

...requiring co-ordinated and comprehensive policy responses

Systemic failures, spill-over effects and rampant contagion highlighted the interconnections that characterise the global financial (and economic) system. In learning the lessons of the crisis, policy makers require comprehensive approaches to respond to multiple failures and enhanced co-ordination between governments and regulatory agencies.

- **Results of the work stream**

A long-term decline in inflation...

The secular decline of inflation in the 1990s triggered the structural reduction of policy and short term interest rates in major industrialised countries. This lowered borrowing costs and contributed to excessive leverage ratios and a high dependence of many investors on wholesale markets.

...coupled with large inflows of capital into the US...

The large inflow of capital from emerging Asia to the United States depressed long-term interest rates. As a result European and US investors increasingly invested in securitised bonds. This development amplified risks on the asset side of the balance sheet of many financial institutions, undermining the assets' notional book value.

...created a high liquidity environment where financial risks were often mispriced

The combination of a willingness of intermediaries to accept higher risks with the desire of many households to increase their leverage created the conditions for increased lending and borrowing. With subdued real income growth, cheap credit became a substitute for rising incomes. Securitised bonds and the rise of the shadow banking industry fuelled the capacity of the banking system to expand credit. Safe ratings for securitised bonds created a false sense of security but these ratings were a product of flawed underlying models.

... to be matched by a significant institutional failure in these economies

Regulatory institutions failed to recognise the tensions that were building up in financial markets. Many shadow banking instruments were not covered by regulatory requirements and associated risks were insufficiently understood by regulators. Regulatory capture and the lack of co-ordination across jurisdictions led to light-touch regulation and inadequate supervision of financial markets.

- **New approaches and policy implications**

The increasingly interconnected nature of the financial sector...

Factors such as the increasing interconnectedness of the financial sector, the complexity of financial products, and the inadequate oversight and regulation of the financial system were central in triggering the crisis. The shock to the world economy fundamentally eroded trust in governments and market institutions and brought into question the validity of

analytical tools. Against the backdrop of an uncertain economic environment, rebuilding trust will be the most important yet the most delicate task for policy makers.

...calls for more co-ordination and co-operation...

Earlier crisis resolution efforts – such as low policy rates – have in all likelihood contributed to the build-up of tensions that preceded the current crisis. Expansionary monetary policy was initiated following the crisis to prevent an excessive reduction of liquidity. In the years since, unprecedented actions have been taken by central banks, especially through quantitative easing programmes. This is uncharted territory as there is no experience on which to consider the likely long-run effects of unconventional monetary policy. In order to prevent adverse economic effects, particularly in emerging markets, when the extraordinary post-crisis measures are brought to an end, an unprecedented level of co-ordination and co-operation across jurisdictions will be required.

...an urgent need for wide-ranging surveillance and monitoring mechanisms

International capital flows have, in many cases, been clearly misguided into unproductive investments. The urgent need for large scale surveillance and monitoring mechanisms of international imbalances, including of gross financial flows, is an important lesson from the crisis.

A policy regime that focuses on inclusive growth is critical,...

Rising inequality was a feature of many economies in the lead up to the crisis. Of course, financial crises can and do occur in more equal societies, but diminishing inequality can help to reduce some of the major macroeconomic tensions that heightened the intensity of the recent crisis. A move towards a policy regime that focuses on inclusive growth is therefore crucial.

Greater policy efforts are required to channel institutional funds to more productive activities,...

The rise of institutional investors together with their specific investment requirements fundamentally changed the structure of demand for investable assets. This stimulated the production of complicated and ultimately risky financial products. Greater research efforts should investigate how these institutional funds can be effectively channelled into productive activities.

...regulate the shadow banking sector and prevent excessive risk taking ...

Excessive risk-taking and flawed incentives figure prominently in the explanation of the crisis, the rise of shadow banking enabled actors to bypass regulatory requirements, and the post-crisis clean-up featured bail-outs of financial institutions. Proper incentives must be restored by enhancing owners' stake in their businesses, risk taking curbed and public money reimbursed by the bailed-out institutions.

...strengthen regulatory agencies to foster co-operation and better information-exchange, while avoiding regulatory arbitrage

The high degree of financial interconnectedness transformed national crises into a global systemic one. Banks in the European periphery became too big to save, leading to an unhealthy entanglement of sovereign and financial risks. An important lesson of the crisis therefore is that multinational financial conglomerates need multinational supervision and resolution mechanisms. A new regulatory landscape that requires more co-operation and more information-exchange between regulatory agencies is required in order to avoid regulatory arbitrage.

- **Project papers**

Ramskogler, P., (2014), 'Origins of the crisis: Drawing the big picture?' http://www.oecd.org/naec/NAEC_Origins-of-the-Crisis_ENG.pdf

Paul Ramskogler (2015), "Tracing the origins of the financial crisis", OECD Journal: Financial Market Trends. DOI: <http://dx.doi.org/10.1787/fmt-2014-5js3dqmsl4br>

A2: OECD Forecasting during and after the financial crisis: a Post Mortem

- **Theme of the project**

The recent crisis, its length and characteristics, were largely unexpected ...

The Great Recession presented strong challenges to economic forecasters. The crisis, its timing, depth, and ramifications proved exceptionally difficult to project. In addition, tensions and imbalances that were building in the lead up to the crisis, and their impact on real activities were not fully appreciated. Forecasters underestimated the depth of the interconnections between the financial sector and the real economy, the complexity of cross-country connections, and the implications of these factors once the crisis began.

... so the OECD conducted a post-mortem on its forecasting work ...

The OECD "post-mortem" was a primarily stock-taking exercise assessing the performance of OECD projections for GDP growth and inflation over the period 2007-2012. The objective of the exercise was to learn lessons from the cross-country differences in projection errors and to identify necessary changes to OECD forecasting models and procedures in order to better inform policy advice.

... to assess its performance and learn lessons for the future

The growth projection errors were also compared to those since the early 1970s. The OECD forecasts during the recent crisis were no worse than those during the crisis of the early 1970s, a period of sharp inflation and oil price shocks which posed similar difficulties for accurate global forecasting.

- **Results of the work stream**

Projections repeatedly overestimated growth...

On average, GDP growth projections for the period 2007-2012 over-estimated growth, both at the height of the financial crisis in 2008 and in the subsequent recovery. The projections for the vulnerable euro area economies exhibited the largest errors. Errors in the projections for the BRICS were, on average, similar to those for the typical OECD member country.

...underestimated inflation...

Despite growth being weaker than expected, inflation projections underestimated the actual rate during 2007-2012, especially for the OECD member countries in Europe. One possibility is that the extent of spare capacity in the economy may have been overestimated. Similarly, there may have been a weaker-than-expected impact of economic slack on wages and prices, or an underestimate of the impact of the post-crisis indirect tax increases in many countries. This is consistent with the findings of Project C2, which suggests that some social institutions in Europe worked well in minimising income loss.

...underestimated the fall in trade, the size of capital flight, the negative impact of rigid regulation and the repeated deterioration in the euro area...

Growth forecasts performed worse typically in countries that had greater exposure to trade and higher levels of foreign bank presence, and therefore felt the crisis contagion faster and more sharply. This suggests that the projections failed to fully reflect the importance of economic complexity and global financial interconnectedness. Growth projections were also overoptimistic during the recovery in countries where banks had lower pre-crisis capital ratios and where post-crisis non-performing loans have risen sharply.

There was also greater volatility and larger errors in the growth estimates for countries with tightly regulated product and labour markets. This may reflect insufficient attention being paid to the extent to which tighter regulation affects resource reallocation and dampens economic efficiency during the recovery phase.

The errors in the euro area economies during the 2010-12 stemmed largely from the repeated (and necessary) conditioning assumption for the forecast that the euro area crisis would dissipate over time and that sovereign bond yields would not rise further. There is little evidence that the forecast errors stemmed from a tendency to underestimate the impact of fiscal consolidation.

...consistent with other International Organisations

Importantly, the difficulties and errors of growth and inflation forecasting were widespread across private sector forecasters and other International Organisations (IOs). The OECD projection errors in terms of magnitude, direction, and profile, were strikingly similar to others.

- **New approaches / Policy Implications**

New forecasting procedures have been established...

The challenges encountered in forecasting in the recent crisis have led to changes in forecasting techniques in the OECD, drawing on OECD experience and in consultations with experts from the IMF, World Bank, European Commission and European Central Bank. These improvements are ongoing.

... the monitoring of near-term developments has been enhanced...

Enhanced monitoring of near-term market developments is conducted and considered along with statistical techniques, private sector perspectives, and complementary models.

... better account is taken of international linkages...

The forecasting process has become more centralised, so that global economic developments and cross-country spillover effects are reflected consistently in the projections for individual countries.

... financial market developments are factored in...

There is a greater focus on financial market developments, both in the projections and in empirical analysis, including macroeconomic models.

... with an enhanced focus on risk assessments

Reflecting the underlying uncertainty of forecasts, more information is now provided on the distribution of risks around the central projections. Quantitative scenario analyses are also being used more frequently to illustrate alternative outcomes and their global implications.

- **Project papers**

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A3: The role of the financial system in the crisis and reforms required to promote sustainable growth

- **Themes of the project**

Improving framework conditions for strengthening the global financial

The rising weight of emerging economies in international capital markets and increased global financial integration makes it important to deal with distortions affecting international capital flows. In the long run, dealing with the resulting global investment-savings imbalances could benefit not only developed countries, but also emerging markets.

The banking system was at the core of the global financial crisis that was spurred by under-pricing of risk, poor micro-prudential regulation, excessive leverage and too-big-to-fail business models. Appropriate calibration of banks' leverage requirements and structural banks reforms are essential in addressing these problems.

Non-bank financial intermediaries, especially institutional investors, are playing, and will have to play, an increasingly important role in financing high-risk or long-term projects and in meeting the challenges of financing the needs of ageing populations. This calls for a strong framework that is supportive of non-bank financial intermediaries' contribution to economic performance.

Designing and building institutions

Post-crisis financial sector institution building includes structural bank reforms that take in to account the riskiness of banks' business models, creating central clearing counterparties (CCPs) with adequate risk management and capitalisation to face the high risks associated with large-scale derivative trading, and strengthening stock market infrastructures in a way that they provide finance to support the long-run growth of companies, especially small caps, and help to reverse the trend away from equities.

Improving price discovery in financial markets

Accurate price signals are essential for financial markets to mobilise savings and allocate credit efficiently across the economy. Work for NAEC has focused on two issues in particular, pricing longevity risk and price discovery in capital markets. Regarding the former, suitable instruments and government support to improve standardisation, liquidity and transparency, and regulation will be required. Regarding capital markets, an efficient and fair price discovery formation is seen as a prerequisite for investors' confidence in the integrity of the markets and their incentives to identify and support long-term performance. This has been undermined by some fundamental changes in the structure of secondary market over the last decades. The impact has been more pronounced for equity markets where electronic trading is more prevalent. However, the increasing use of corporate bond markets by non-financial companies in the aftermath of the financial crisis makes it also important for policy makers and regulators to have access to a comprehensive analysis of the secondary market structure for corporate bonds. Better and internationally-co-ordinated market conduct rules and regulations, where appropriate, are needed to improve price discovery and fairness in both trading and hedging markets.

- **New approaches**

New work streams that will deepen work on the trade-offs and complementarities that NAEC has identified

Work to improve financial intermediation and make the financial sector more resilient and supportive of growth will continue with a focus on enhancing long-term investment finance (including SME finance), improving banks' business models, and enhancing the role and functioning of capital markets as a channel for financing growth. A review of the OECD Codes of Liberalisation will be an opportunity to clarify treatment of capital flow restrictions with a declared "macro-prudential" intent and to update it in light of present day's requirements for capital flow management.

The revised Principles of Corporate Governance will contain a new chapter on institutional investors, stock markets and other intermediaries, which aims to address issues like corporate access to finance, the complexity of the investment chain and the functioning of stock exchanges. Addressing risks stemming from potential financial institution misconduct revealed in the aftermath of the global financial crisis. The new OECD Trust and Business Project will take a multi-stakeholder, multidisciplinary approach to analysing new ways to bridge the implementation gap in the application of

international standards for business conduct, levelling the playing field for business.

Finally, a new OECD Business and Finance Outlook will improve monitoring of upcoming issues, relevant data collection and foster dissemination and raise awareness of issues at stake across a wider audience.

Utilising new databases

New databases in a variety of areas, including macro-prudential capital controls, corporate bond markets and bank distance-to-default indicators, have been developed.

- **Policy implications**

Need for a comprehensive approach ...

There is a need for a comprehensive approach to improve the resilience, stability and transparency of financial systems. This includes appropriately calibrating financial regulation to strengthen the banking sector and foster the use of capital markets for financing the real economy, developing and supporting the improvement of market infrastructure, raising financial literacy and awareness of investors and financial consumers and enhancing their protection, improving regulatory oversight, and closing data gaps.

... and the design of a well-balanced the regulatory framework

However, in designing the regulatory framework of the new financial landscape, policy makers need to balance stability and growth. Financial regulation needs to be carefully designed and critically evaluated with a view to allowing useful financial innovations while avoiding undue risk-taking.

... while developing new sources of finance

Going forward, policy makers need to take a three-pronged approach to develop a sound and comprehensive system that serves the need of the real economy: restoring banks' health to improve bank lending, supporting the development of capital market finance, and preserving open and orderly capital movements regimes.

- **Project papers**

NAEC financial stream paper & references therein:

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De Crescenzo, A., A. Ott, A. Palerm (2015), "Currency-based measures targeting banks: a delicate balance between national regulation of risk and financial openness", OECD Working Papers on International Investment, upcoming.

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Isaksson, M. and S. Çelik (2013) "Who Cares? Corporate Governance in Today's Equity Markets", OECD Corporate Governance Working Papers No.8.

OECD (2009), The Financial Crisis: Reform and Exit Strategies.

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OECD (2014), Levelling the International Playing Field Between Public and Private Business: What have we Learnt so Far?, Background Report to the 2014 Meeting of the Council at Ministerial Level.

OECD (2015a), "SME finance in a post-crisis financial landscape", OECD Business and Finance Outlook 2015, OECD Publishing (forthcoming).

OECD (2015), OECD Business and Finance Outlook 2015, OECD Publishing (forthcoming).

A4. Fostering long-term investment and responding to the challenges of ageing and longevity-ageing and risk contribution

- **Theme of the project**

Uncertainty about future improvements in life expectancy is a lasting challenge related to ageing...

The main driver of population ageing (e.g. increase in the average age of the population) is improvements in mortality and life expectancy. The "baby boom" is a temporary factor, while improvements in life expectancy are permanent (barring wars and/or epidemics). Future improvements in mortality and life expectancy are, however, uncertain. Hence, longevity risk stems from the uncertainty about future improvements in mortality and life expectancy.

... that increases longevity risks for pension systems, in particular

Pension systems are vulnerable to longevity risk insofar as long-term promises are fixed in nature, as any increase in life expectancy lengthens expected payments. For pension plans (e.g., defined contribution) where retirement income is linked to the financial performance of funds accumulated by plan members, longevity risk lies with individuals; in this respect, the impact of longevity risk on funded pensions may lead individuals to poverty as they may not accumulate enough funds to finance retirements that may turn out to be longer than planned. The solution in this context is to have individuals buy annuity products that can offer a steady stream of retirement income. The "[OECD Roadmap for the Good Design of Retirement Saving Plans](#)" recommends default partial annuitisation to provide protection from longevity risk in pension arrangements, whereby benefits depend on the amount of assets accumulated instead of a promised retirement income. Partial annuitisation of the payout phase introduces, however, risks for annuity providers.

...which call for enhanced risk management within pension funds and annuity providers

Pension funds and annuity providers need suitable financial instruments to be able to hedge longevity risk. This in turn may encourage the supply of annuities.

- **Results of the work stream**

Pension funds and annuity providers can use different instruments to manage their longevity risk.

The types of financial instruments to manage longevity risk available include buy-ins and buy-outs and longevity hedges. The latter can take the form of forwards contracts (payments at maturity, no up-front disbursements), longevity bonds (regular payments, coupons, up-front disbursement) and longevity swaps (regular payments, no up-front disbursements).

Buy-outs and buy-ins simply transfer all the longevity risk to other actors...

Buy-ins and buy-outs are not long-term capital market solutions because they are about transferring the entire risk instead of allowing longevity risk to be hedged (different institutions may want to hedge different shares of their longevity risk).

... while longevity hedges reduce the risk exposure of pension funds and annuity providers.

Forward contracts and longevity swaps are relatively more attractive risk hedging products than longevity bonds because they do not require upfront funding. Longevity swaps are more useful than forward contracts in managing longevity risk as they provide for regular payments, compared with only a single payment at maturity for forward contracts. Longevity swaps based on survival rates are more attractive than similar contracts based on mortality rates because the former are more closely linked to the actual longevity experience of pension funds and insurers.

There is, however, a potential misalignment of incentives between hedging parties and investors.

Private investors are interested in standardised longevity hedges (indexed-based hedges), while the pension funds and annuity providers are more interested in individualised longevity hedges (bespoke longevity hedges). Insurance companies and reinsurers, by acting as intermediaries, bundling into pools the individual hedges pension funds and annuity providers desire, and selling standardised hedges to private investors, can play a role in helping develop capital

market solutions for hedging longevity risk.

- **New approaches**

The project assessed the longevity risk to which pension funds and annuity providers may be exposed by reviewing standard mortality tables used in different countries and identifying policies that could be adopted to mitigate this risk.

Standardisation, liquidity and transparency are needed to manage and hedge longevity risk.

Up-to-date mortality tables as well as realistic assumptions that include future mortality and life expectancy developments would help in estimating the amount of longevity risk. Better risk management could be reflected in capital reserving requirements to provide incentives to pension funds and annuity providers to use longevity hedges. It may be crucial that regulatory systems worldwide allow pension funds and annuity providers that hedge their longevity risk to have lower capital requirements than those that do not hedge their longevity risk. Reference points for pricing longevity risk and some publicly available information could be used by potential market participants to enter the market.

- **Policy implications**

Governments can play an important role in encouraging standardisation and transparency...

Regulation could encourage the use of mortality tables which include stochastic forecasts of future improvements in life expectancy, as well as regular updates. Governments could develop a reliable longevity index to encourage standardisation and transparency to mitigate the misalignment of incentives between hedging parties and capital market investors.

...and in developing capital market solutions.

Governments could also consider issuing longevity indexed bonds (LIBs) to provide liquidity, standardisation, and benchmarking for pricing. Government issuance of LIBs doesn't necessarily mean that governments have to take on all the longevity risk extant in the market from annuity providers and/or pension funds. That may be far from advisable as governments already hold on their balance sheets a lot of longevity risk from their PAYG-financed public pensions. The actual idea of issuing LIBs is that governments will jump-start the market by absorbing a small proportion of the longevity risk and will bring in the positive effects mentioned above.

- **Project papers**

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OECD (2014), OECD Pensions Outlook 2014, Chapter 1, OECD Publishing.

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A5: New approaches to SME and entrepreneurship financing: broadening the range of instruments

- **Theme of the project**

The recent crisis has worsened existing access to finance problems for SMEs ...

The 2008-09 global financial crisis profoundly changed the business environment for SMEs and entrepreneurs, and access to finance was particularly affected. In many OECD countries, the crisis exacerbated the financial constraints typically experienced by SMEs, mainly as a result of information asymmetries in financial markets, and financial resources dried up for the most dynamic enterprises.

... which still rely mostly on tighter debt finance ...

Across the OECD countries, bank lending is still the most common form of external finance for SMEs. Banks, however, are facing more rigorous prudential rules, especially following the Basel III regulation on higher capital bank ratios. This has led to a modified banking business model, which may lead to a new business environment with tighter availability of credit.

- **Results of the work stream**

Vulnerability of SMEs to the changing role of banks suggests a need to broaden their sources of finance...

The crisis has in fact only exacerbated a long-standing access to finance problem for SMEs and small-scale entrepreneurs. The need to strengthen capital structures and decrease dependence on borrowing has become more urgent. Some of the immediate policy responses to the crisis have increased firm-leverage by incentivising further increases of debt.

... towards asset-based instruments...

Now, increasingly complex and interconnected financial markets offer opportunities to serve the needs of the SME sector. SMEs have already been making greater use of asset-based finance for their short and medium-to-long term financing needs. Such financing instruments (e.g. asset-based lending, factoring, leasing) are provided not on the basis of the firm's own credit standing but on the value of specific assets (including account receivables, inventory, machinery, equipment, and real estate), which makes them suitable for firms and markets that suffer from large information asymmetry. A key advantage of such source of financing is that firms can access cash faster and under more flexible terms than through conventional secured lending, regardless of their balance sheet position and future cash flow prospects.

... corporate bonds and other alternative debt instruments, ...

The potential of alternative debt instruments in the capital markets to finance SME investment is starting to be recognised. Such debt instruments, for instance corporate bonds, differ from traditional bank lending in that investors rather than banks provide the financing. Unlike equity financing they do not dilute the ownership of the company. They are particularly attractive in the current low interest rate market environment for firms that have more limited access to bank lending, as SMEs do. However corporate bond issuers typically require the borrower to have a certain size, established credit history, and limited volatility on revenues and earnings. Regulatory frameworks may need to change to ensure such instruments are available *en masse* for SMEs. Similarly, this is needed to enable SME loan securitisation, to enable a liquid market for these bank assets, and turn bank loans into a larger SME source of finance.

... and altogether alternative financial sources

Some new and alternative sources of finance that tap into private individuals' financial resources, such as crowdfunding and peer-to-peer lending, have taken off the ground, but are very small in scale to make a real difference for capital-constrained SMEs. Seed funding and private equity investment have developed substantially in recent decades, and provide an increasingly important source of funding for small, young, and innovative firms that promise a potentially very high return, but also present a high risk. There are also some opportunities for public listings of SME equity, but the markets are currently very small.

New approaches / Policy Implications

SME financing challenges can be addressed by first improving their financial knowledge and skills...

To overcome the challenges of limited access to finance, SME skills in financial literacy and knowledge of various sources of finance, as well as business and strategic planning, need improvement. This can be done by training and mentoring, where the public sector can have a role.

... designing effective regulation to balance financial stability and novel financial channels ...

The regulatory framework is a key enabler for the development of instruments that imply a greater risk for investors than traditional debt finance, from asset-based financing to equity financing. Regulatory bodies need to be aware of new financing models emerging in the private sector, recognise the need to allow for liquid securities that minimise the risk of SME lending while remaining vigilant for possible excesses, and incentivise investors to take a long-term view.

... improving information infrastructures...

Addressing the information asymmetries in the markets should be a priority in the development of a viable financing ecosystem for SMEs. The public sector can help by increased public engagement and direct interaction of investors and firms, brokerage and match-making agencies. In this respect the public sector can help linking SMEs back to private sector resources that have retreated from the informationally-opaque SME sector due to the crisis. Such efforts need to go further, however, to develop comprehensive mechanisms of information exchange and expose those SMEs that are viable investment opportunities.

... and improving the evidence base

Ultimately, to devise appropriate policies the evidence base of SME financing needs and the uptake of alternative financial products, has to be enlarged.

- **Project papers**

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A6: How much scope is there to achieve growth and equity friendly fiscal consolidation

- **Theme of the project**

Post-crisis fiscal consolidation is still necessary

Despite sustained efforts in recent years to rein in budget deficits, many OECD countries still require substantial public finance consolidation. This need results from debt accumulated before the crisis and expanded during it to rescue banks and support aggregate demand. Moreover, long-term pressures on public spending will intensify with changing demographics and rising pension and health care costs.

Consolidation strategies can have wide-ranging effects...

Fiscal consolidation complicates the task of achieving other policy goals. In most cases, it weighs on demand in the short term. If the selection of consolidation instruments receives too little attention, it can also slow the process of global rebalancing, undermine long-term growth and exacerbate income inequality. It is therefore important for governments to adopt consolidation strategies that minimise these adverse side-effects.

... requiring complementary policies

The project analyses near and long-term consolidation needs of OECD countries and proposes consolidation strategies that take into account other policy goals as well as country-specific circumstances and preferences. This approach assesses consolidation strategies in terms of their growth, distributional and budgetary consequences. Where very large consolidation is needed, there will likely be harmful tax increases and spending cuts, which need to be complemented with additional policies to improve efficiency.

- **Results of the work stream**

The approach considers fiscal consolidation policies ...

The study proposes a structured way of selecting fiscal-consolidation instruments consistent with growth, equity and global-rebalancing objectives. Potential instruments include reductions in public spending (subsidies, public investment, healthcare and education spending) and social expenditure (unemployment benefits, sickness and disability spending, pensions), and increases in taxes (income tax, corporate income tax, property tax, environmental tax, consumption tax).

... and their short and long-run trade-offs with growth and equity objectives

Consolidation instruments can be ranked according to their effects on short- and long-term growth, income distribution and current accounts.

In the short term, all the selected instruments are estimated to have a negative effect on growth, and the majority have a negative effect on equity (with the exception of subsidy cuts, and personal corporate, and property tax cuts). In the long run however, these effects may differ. For instance, fiscal consolidation instruments such as spending cuts in pensions, sickness and disabilities payments as well as unemployment benefits, may boost long-term growth but at the expense of equity. Country policy settings and complementary policies also strongly influence these effects.

- **New approaches and policy implications**

Thinking about the side-effects of fiscal consolidation polices...

Ranking consolidation instruments based on their consequences for growth, equity and the current account makes it possible to optimise country-specific consolidation strategies. These packages start with the most desirable instrument and move down the ranking until consolidation needs are satisfied.

... can highlight appropriate instruments ...

The study indicates that half of OECD countries can fulfil their short- to medium-term consolidation needs with well-ranked instruments only. Well-designed packages therefore seem capable of allowing consolidation without compromising growth and equity.

Almost another half of OECD countries can achieve more than half of the required consolidation with well ranked instruments.

Finally, three countries (Japan, United Kingdom and the United States) are simulated to implement more than half of their short-to-medium-term consolidation needs through badly ranked instruments. This implies that their consolidation efforts are likely to involve substantial adverse side-effects. They can reduce these adverse side-effects by using well ranked instruments more intensively than the simulations conservatively assumed.

... to manage long-run fiscal consolidation...

Despite facing generally stronger consolidation needs in the long than the short term, twenty countries would manage to reach stable debt levels of around 60% of GDP by relying on well-ranked instruments alone. In the simulated packages with a long-term horizon, six countries use some poorly ranked instruments but can nonetheless achieve more than 50% of their adjustment compared to well-ranked instruments. Finally, a few countries would have to implement considerable consolidation in the long run and would have to rely on poorly-ranked instruments (with greater adverse effects on long-term growth and equity objectives).

On average across countries, spending cuts would constitute 41% of short- to medium-term and 65% of long-term consolidation packages. Tax hikes would account for the rest of the required consolidation.

... while structural policies can ameliorate harmful side effects

In many simulations, countries choose fiscal instruments that can be detrimental to growth or equity. Nevertheless, potential trade-offs between consolidation and other policy objectives can be mitigated by exploiting the scope for efficiency gains through structural reforms.

For instance, introducing tuition fees in higher education coupled with means-tested grants or loan guarantees can improve public finances, possibly spur growth by encouraging tertiary schooling completion and help to correct the regressive impact of public spending on tertiary education. On the tax side, the growth impact of raising tax revenues can be reduced by closing loopholes and by broadening the tax base (by curbing fraud and evasion) rather than by increasing tax rates.

- **Project papers**

Cournède, B., Goujard, A., Pina, A., (2013), "How to Achieve Growth- and Equity-friendly Fiscal Consolidation?: A Proposed Methodology for Instrument Choice with an Illustrative Application to OECD Countries", *OECD Economics Department Working Papers*, No 1088, OECD Publishing. DOI: <http://dx.doi.org/10.1787/5k407lwvzkkh-en>

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B1: New approaches to analysing multi-dimensional well-being: trade-offs and synergies

- **Theme of the project**

Achieving higher economic growth is a means rather than an end in itself...

One of the main lessons from the crisis is that it partly reflected a reductionist view about the ultimate ends of policies, namely achieving higher economic growth rather than improving broader living standards and wellbeing. Inclusive Growth seeks to redress this by putting the promotion of broad-based gains in multidimensional living standards, across the population at large, at the heart of policy making. As such policies should, ideally be assessed according to how they actually enhance (or detract from) multidimensional living standards, on average and across different population groups.

...as growth without progress in well-being and improvement in living standards is not sustainable

Policies that deliver growth but do not improve the well-being of the majority of members in a society will not be sustainable over the long term in both political and economic terms. For example, the lack of improvement in well-being outcomes for the median person may have contributed to the crisis through higher consumption, higher debt, vulnerability and financial instability.

- **Results of the work stream**

Assessing the policy determinants of various well-being dimensions

The core of this project is to estimate well-being functions for different dimensions of the *Better Life Initiative*. Some of these dimensions are modelled as a function of the other outcomes and of important contextual (and proxy) variables (such as the rate of GDP growth). The analysis is conducted at the level of both aggregate well-being outcomes for different countries (cross-sectional and over-time) and for measures of inequalities in the distribution of these outcomes across the population.

Discussing policy trade-offs

Policy trade-offs may exist between several dimensions of well-being and require to measure gains in well-being in a common (monetary) scale to evaluate the optimal policy packages for promoting Inclusive Growth. The monetisation of non-material dimensions, such as health or employment, will be completed using various methodologies.

Identifying the main drivers of well-being

Another aspect linked to the monetisation of well-being dimensions is to identify the most important drivers of Inclusive Growth over both the long and short run. For instance, preliminary results show that progress in longevity is at least as important as growth of household income from a well-being perspective.

- **New approaches**

Changing the conversation: putting Inclusive Growth at the core of policy discussions

The project helps moving Inclusive Growth to the centre of the policy radar, by measuring people's preferences between various life domains that correspond to specific areas of policy intervention (e.g. education, jobs, health, and others). Taking stock of the methodological framework and policy discussion described in the OECD (2014) report "All on Board: Making Inclusive Growth Happen", these measures may inform policy by suggesting, along with other criteria, what are the key issues in a country and the related priorities for action. At a later stage, these measures will also enable analysis to identify and quantify the impact of different policies on multidimensional living standards for distinct population groups, which will in turn allow for policies to be judged on the extent to which they can contribute to making growth more inclusive.

- **Policy Implications**

Shaping an Inclusive Growth agenda

Revising economic policy from the perspective of maximising Inclusive Growth rather than productivity growth raises several important issues: i) the existence of trade-offs between several dimensions of well-being (e.g. increasing tax wedge can reduce income inequalities but at the same time slow down economic growth); ii) trade-offs and optimal policies may differ across population groups; iii) local institutions and policies may have some influence on the set of optimal policies. The set of inclusive growth measurements and indicators is ultimately a key tool to be used in assessing all areas of economic policy research and advice in light of these three issues. The project intends to provide an integrated policy agenda that would improve the framework presented in the OECD (2015) report "All on Board: Making Inclusive Growth Happen in China".

Assessing well-being policies will highlight political feasibility

Another aspect linked to well-being policies is political feasibility. Policies that aim to improve economic efficiency but significantly reduce people (subjective) well-being may not be feasible from a political perspective. The project sheds light on the acceptance of policy reforms from the people's perspective by looking at the subjective well-being cost of reforms.

- **Project papers**

Murtin, F., Boarini, R., Cordoba, J., and Ripoll, M. (2015), "Beyond GDP: Is There a Law Of Shadow Price?", *OECD Statistics Directorate Working Paper*, forthcoming.

Boarini, R., Fleurbaey, M., Murtin, F., and P. Schreyer (2015), "From Subjective Well-being to Living Standards Measurement", *OECD Statistics Directorate Working Paper*.

Diaz, M. and F. Murtin (2015), Socio-economic Inequality in Living Standards, *OECD Statistics Directorate Working Paper*, forthcoming.

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OECD (2015), *All on Board: Making Inclusive Growth Happen in China*, OECD Publishing, Paris.

B2: Measuring and assessing job quality

- **Theme of the project**

The jobs people hold are a crucial determinant of well-being

The job a person holds is one of the most powerful determinants of well-being, as most people spend a substantial part of their time at work and are employed for a significant part of their life. Broadly speaking, job quality reflects a combination of several dimensions of working life including labour earnings, work-related economic security and the quality of the workplace. Job quality not only affects individual well-being and that of the households in which they live, but also labour force participation, productivity and aggregate economic performance. It thus supplements the traditional focus on assessing labour market outcomes by considering not just quantity (i.e. the number of jobs created) but also the quality of jobs.

- **Results of the work stream**

Job quality focuses on three key dimensions...

1. **Earnings quality** refers to the extent to which employment contributes to the material living standards of workers and their families.
2. **Labour market security** captures the risk of job loss and its consequences for workers and their families.
3. **Quality of the working environment** captures non-economic aspects of job quality and includes factors such as the nature and content of work performed, working-time arrangements and workplace relationships. Demanding jobs that are characterised by time pressures or physical health risks, combined with insufficient resources to accomplish specific duties, undermine the well-being of workers.

...with new data on job quality across the OECD...

There is plenty of variation amongst OECD countries across the three dimensions of job quality. There are countries (such as Denmark, Finland, Germany, Luxembourg, the Netherlands, New Zealand, Norway, Sweden and Switzerland), which do well on at least two of the three indicators. Others (Australia, Austria, Belgium, Canada, the Czech Republic, France, Ireland, Israel, Italy, Japan, Korea, Mexico, Slovenia, the United Kingdom and the United States) display average performance. Another group of countries do relatively poorly on at least two dimensions (Estonia, Greece, Hungary, Poland, Portugal, the Slovak Republic, Spain and Turkey).

...as well as across socio-demographic groups

Looking at job quality across socio-demographic groups provides new insights on labour market inequalities by shedding further light on the nature and depth of the disadvantages faced by some population groups. It appears that young and low-skilled workers score less well on all three dimensions of job quality especially when compared to highly-skilled workers. For women, a gender gap exists in terms of earnings quality and employment, but there are no significant differences in labour market security and women tend to work in better quality work environments than men.

There appears to be no trade-off between job quality and job quantity

Across countries it does not appear to be the case that better job quality is achieved at the cost of fewer jobs. Countries that perform well in terms of overall job quality also tend to perform well on job quantity (as measured by the employment rate), and vice versa. It is less clear cut for countries with intermediate performance in overall job quality.

- **New approaches and policy implications**

The concept of job quality is increasingly recognised ...

Despite the importance of job quality, the debate on jobs and employment has most often focused on quantity measures, with less attention paid to job quality per se. Where job quality measures were developed in the past, they reflected the multi-dimensional nature of the issue by having too many indicators, which rendered them unusable in a

policy setting. OECD has gone further in developing a clear conceptual framework with policy-making in mind.

... as an important dimension of labour market performance and well-being

Although the concept of job quality is intrinsically related to the concept of workers' well-being, measurement efforts on job quality and people's well-being have developed in parallel rather than in an integrated fashion. The key contribution of the OECD work on job quality is to integrate these agendas in a consistent conceptual framework for defining and measuring job quality. In order to ensure that indicators of job quality are conceptually sound and relevant for policy, the framework provides three guiding principles. These are to: i) focus on outcomes experienced by workers as opposed to drivers of job quality; ii) derive indicators from data on individuals which enable the examination of the distribution of outcomes rather than just averages, and iii) emphasise the objective features of job quality.

Therefore, policy makers should focus more systematically on job quality

The difficulty of pursuing job quality in policy work is partly due to its multidimensional character. This means that it can be conceptualised in many different ways, with varying definitions and approaches to measurement. OECD has taken a pragmatic approach that focuses on those aspects of job quality that are most important for well-being and policy and has attempted to measure the concept in a comparable way across individuals and across countries. While there remain methodological and measurement challenges and policy uncertainties, policy makers need to consider job quality as a viable policy outcome, especially because preliminary OECD work suggests that job quality is consistent with and does not compromise job quantity.

- **Project papers**

Hijzen, A., Saint-Martin, A., Falco, P., Inanc, H., Menyhert, B., (2014), "Chapter 3 – How good is your job? A framework for measuring and assessing job quality?", *OECD Employment Outlook*, [DELSA/ELSA/WP5\(2014\)3](#)

Hijzen, A., Garnero, A., (forthcoming), "Chapter 4: The quality of working lives: Earnings mobility, labour market risk and long-term inequality", *OECD Employment Outlook*, [DELSA/ELSA/WP5\(2015\)4](#)

Cazes, S., Falco, P., (forthcoming), "Chapter 5: Enhancing job quality in emerging economies", *OECD Employment Outlook*, [DELSA/ELSA/WP5\(2015\)5](#)

B3: Assessing the effects of distribution of skills and key related institutional variables on multi-dimensional well-being outcomes

- **Theme of the project**

Educational attainment is linked to income and inequality

Human capital (or endowments in skills and knowledge) has long been recognised as a crucial factor determining the growth potential of the economy. Human capital is strongly linked to individuals' income, particularly via formal tertiary education. The importance of human capital for economic performance will only grow in future years, as knowledge and skills drive innovation, productivity and ultimately growth.

But skills-biased technological change is also a major driver of inequality. This is not only because specialised skills are scarce and attract higher pay, but also because the returns to formal education and generic skills may differ relative to their associated productivity improvements.

OECD's PIAAC survey sheds light on these links

The Programme for the International Assessment of Adult Competencies (PIAAC) Survey provides essential data to analyse the connections between labour income (as measured by wages) and educational attainment, as well as literacy and numeracy proficiency.

- **Results of the work stream**

The relationship between skills and inequality is complex...

As the share of highly-educated individuals in the labour market expands, inequality may initially increase but eventually it will likely diminish, as the share of low-educated workers declines thus boosting their relative wages.

The returns to skills or education vary along the skills distribution. Indeed, one explanation for rising earnings inequality is that technological change has been skill-biased, causing a larger increase in the returns to education in the upper part of the skills distribution. A more dispersed range of skills can lead to a more stratified distribution of earnings, assuming remuneration keeps pace with productivity (and to the extent that skills increase productivity). At the same time, the link between skills (or productivity) and earnings is mediated by labour market institutions, and associated factors such as minimum wages, the degree of unionisation, and the rules governing wage bargaining.

...with small returns to general skills proficiency...

The PIAAC survey provides data on the distribution of skills proficiency and wages. The data indicate that general skills attract small rewards in the jobs market.

...and high returns to specialist knowledge acquired through formal education

On the contrary, formal education commands a large premium due to a signaling effect. Furthermore, in countries with more rigid labour markets, wages increase mechanically with age and seniority, contributing to the persistence of wage inequality.

Formal education thus has a significant impact on inequality. Returns to education are in general much higher at the top than at the bottom of the educational attainment distribution. The labour market rewards specialised skills obtained through tertiary and graduate education.

- **New approaches**

PIAAC data enables an examination of the connections between skills and inequality

PIAAC surveys assess the availability of some of the key skills for knowledge-based and technology-driven economies. Not only does the survey provide details on the formal educational attainment of individuals, but also their literacy,

numeracy and problem-solving skills. Combining such disaggregated data from PIAAC with additional household income data makes it possible to establish the distribution of skills and wage inequalities and any relationships that may exist between them. Such relationships can be observed across the entire set of distributions, which can provide evidence in support of policies that promote educational attainment at the bottom versus the top end of the distribution, or formal educational attainment versus general skills proficiency, in terms of generating skills for growth as well as for income equality.

- **Policy implications**

In more unequal countries, family background influences adult outcomes...

Both skills and wage dispersion differ a great deal across countries in the PIAAC sample. The relationship between the different measures of skills and wage inequality is generally weak. At the same time, a strong positive correlation (for both proficiency and wages) is found between the extent of inequality and the strength of the parental educational gradient, suggesting that family background exerts a larger impact on adult outcomes in more unequal countries. This finding should be a cause for concern. However the strength of the relationship differs widely across countries.

...while in all countries higher returns to tertiary education increase income inequality...

Increasing years of education tend to increase inequality because the returns to education are much higher at the top than at the bottom of the distribution. The inequality-enhancing effects of education are present only when the increase in education takes place through a rise in the share of tertiary-educated individuals. The returns to proficiency, in contrast, are smaller, and tend to flatten out above the median, which implies that an increase in the average level of proficiency does not lead to higher overall wage dispersion.

Consistent with previous findings in the literature, differences in the way personal characteristics are rewarded in the labour market account for a large share of the observed cross-country differences in wage dispersion. Differences in completed years of education and in returns to education, matter much more than differences in skill endowments.

...which indicates that labour market institutions play a role in explaining international differences in earnings inequality

It is beyond the purpose of this project to directly assess the relative role of institutions versus market forces in explaining wage inequality. However, the fact that, even after controlling for direct measures of proficiency, the returns to formal education continue to play a very prominent role, suggests that labour market institutions are a crucial factor in explaining the observed international differences in earnings inequality by affecting the way in which particular sets of skills are rewarded.

- **Project papers**

Paccagnella, M. (2015), "Skills and Wage Inequality: Evidence from PIAAC", OECD Education Working Papers, No. 114, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/5js4xfgl4ks0-en>

Van Damme, D., (2014), 'How closely is the distribution of skills related to countries' overall level of social inequality and economic prosperity?' *OECD Education working paper, No 105*, [EDU/WKP\(2014\)4](#)

B4: Do policies that increase GDP per capita also increase median income

- **Theme of the project**

Using different measures of income...

GDP per capita is the most widely used measure of living standards, as well as a target headline indicator for policy-oriented analysis. Yet, on its own GDP per capita falls short of accurately measuring people's wellbeing, even from a narrow material living standard perspective. For example, over the last two decades, GDP per capita has in most OECD countries grown faster than households' disposable income per capita. Analysis of household disposable income data enables a better assessment of households' economic resources, on average and across the distribution.

...can help document income disparities...

Income inequality has been steadily widening in most OECD countries during the past decades. According to a traditional measure, the Gini coefficient, income inequality has risen by 3 percentage points on average across countries from the mid-1980s to the late 2000s. Furthermore, the ratio of the top-to-bottom income decile, another conventional metric, reached a three-decade high in 2010.

However, developments in income inequality have not been uniform across countries. In fact, between the mid-1990s and the late 2000s, OECD countries experienced "inequality convergence": inequality in household disposable income has tended to fall in the most unequal countries and to rise in the most equal ones.

...and illustrate the distributional consequences of pro-growth policies

With household-level data, it is possible to empirically assess the effects of structural policies not only on economic growth but also on income inequality. It is therefore possible to design policies while considering the trade-offs and complementarities between growth and equity.

- **Results of the work stream**

There are many factors which drive income disparities ...

The divergence of GDP from aggregate household income can be explained by a decline in the progressivity of tax and benefits systems, a rising share of GDP being distributed in the form of profits (as opposed to wages) and a growing share of profits being saved by corporations and re-distributed in the form of capital gains rather than interest or dividends.

The trend toward more inequality is largely driven by skills-biased technological change. This drives up wages of high-skill workers relative to medium and low-skill workers, inducing higher wage inequality and job polarisation. Such trends are likely to persist in the future.

...and some pro-growth policies may affect inequality

Some pro-growth policies that raise GDP through faster productivity may contribute to technology-driven inequality. For instance, reforms that boost innovation widen the wage distribution among employed workers. Other policies that promote labour force participation and job creation also widen the wage dispersion. However, because they contribute to raising employment – not least among lower-skilled workers – such reforms can have a neutral effect on the dispersion of household disposable income, or even reduce such dispersion. Finally, a number of reforms unambiguously reduce wage dispersion and household income inequality.

- **New approaches**

Household-level data exposes evolving inequality trends...

Relying on a richer array of household income micro-based indicators allows for producing new evidence of the various patterns of differences in income distributions across countries and over time. For example, this reveals the extent to which stability in overall income inequality masks compensating changes between e.g. the lower and upper halves of the income distribution. Also, it allows for highlighting whether contracting inequalities coexist with increasing poverty.

...enabling an assessment of the distributional effects of pro-growth policies

Focusing on the effects of policies not only on growth and employment but also on the income distribution is a new way of evaluating and designing pro-growth policies. With this assessment of potential policy trade-offs and complementarities, different countries can implement tailored policy reforms, taking into account societal preferences and aversion to inequality as well as short-term budgetary and political constraints.

A number of pro-growth structural policies have been shown to boost long-term levels of GDP per capita and consequently via this channel, household disposable income. There is limited evidence that growth-enhancing policies raise inequality of disposable incomes in the long run. In fact a limited number of these policies are found to potentially reduce inequality, suggesting that there may be policy synergies and growth and equality objectives can be achieved simultaneously.

However, little is currently known on the short run the effects of pro-growth policies on inequality. More work is needed in the area. In the short-run, there could be policy trade-offs between growth income equality.

- **Policy implications**

Well-designed policies which aim to promote competition and remove labour market frictions can foster complementarities...

Many pro-growth policies are found to deliver stronger income gains for households at the lower end of the distribution, hence to curb income inequality. Such is the case of reducing regulatory barriers to domestic competition, trade and FDI, stepping-up job-search support and activation programmes and tightening unemployment benefits for all categories of jobseekers.

...while trade-offs exist elsewhere between growth and equity objectives

Conversely, a tightening of unemployment benefits for the long-term unemployed only is found to lift GDP per capita and average household incomes but also to reduce disposable incomes at the lower end of the distribution, an indication that it may raise inequality. Reducing minimum wages relative to median wages could also raise concerns as this depresses disposable incomes on average and for the median household, though not necessarily for households at the lower end of the distribution.

Given the need in many countries to tackle rising inequalities, priority should be given to policy packages which both reduce income dispersion and boost growth. It is particularly important to raise the earnings potential of the low-skilled and promote the labour force participation of women and marginalised groups.

- **Project papers**

Causa, O., S. Araujo, A. Cavaciuti, N. Ruiz and Z. Smidova, (2014), "Economic growth from the household perspective: GDP and income distribution developments across OECD countries", *OECD Economics Department working paper, No 1111*.

Causa, O., A. de Serres and N. Ruiz, (2014) "Can pro-growth policies lift all boats? An analysis based on household disposable income", *OECD Economics Department working paper, No 1180*.

OECD (2015), "Growth and Income Inequality: Trends and Policy Implications," *OECD Economics Department Policy Notes*, No. 26, April 2015.

B5: Assessing the transitional costs and distributional consequences of structural reforms

- **Theme of the project**

Growth in GDP per capita has not fully trickled down to household incomes ...

On average across OECD countries and between the mid-1980s and the late 2000s, growth in GDP per capita has not fully trickled down to household incomes. It has also been unequal, as growth in household disposable incomes has been weaker at the lower end of the income distribution. Aside from statistical issues, these trends could be due to economic factors reflected in increasing income transfers from the household to the corporate and public sectors. Measurement limitations include under-reporting of top incomes as well as non-inclusion of capital gains in available survey-based household income data. Economic factors include a trend decline in the progressivity of tax and transfer systems, a rising share of GDP being distributed in the form of profits (as opposed to wages) and a growing share of profits being saved by corporations and re-distributed in the form of capital gains rather than interest or dividends.

... in this respect income distribution effects of pro-growth policies are important

Growth-enhancing reforms can be distinguished according to whether they are found to generate an increase or a reduction in disposable income inequality, in addition to boosting average GDP growth.

- **Results of the work stream**

Many structural reforms have complementary results with regards to growth and equity objectives...

The long-term gains in average household income from reforms are generally close to those in GDP per capita. This reflects the fact that GDP per capita is a key driver of average household disposable income in the long term. There is little evidence of policy trade-offs between efficiency and equity in the long run, and even relatively frequent occurrences of policy synergies. These results may reduce concerns associated with potential negative reform effects on household material living standards and inequality.

... but some reforms present short term trade-offs between growth and income distribution especially at the lower end

A number of reforms have a differential impact on household income and GDP per capita – especially those at the lower end of the distribution. Short-run effects may deviate from long-run complementary equilibrium effects identified in this project, which calls for assessing the dynamic effects of reforms on household disposable incomes and income inequality. In the short-run, some reforms are likely to increase income inequality even if this would vanish or even revert in the long-run. Associated welfare implications may need to be taken into account in the reform process.

- **New approaches**

Considering distributional effects represents a fundamental shift in thinking about the effects of structural reforms

The central income concept used throughout the project has been that of household real disposable income, as this is the best proxy of households' economic resources comparable internationally and across the income distribution. Broadening the policy perspective from GDP per capita to household incomes allows for tracing the distribution effects of structural policies on households incomes, in addition to their economic growth enhancing properties. This represents a fundamental shift in thinking about and assessing the outcomes of structural policies.

- **Policy implications**

Complementarities exist when policies deliver returns to the poor and middle class that are higher than average economic growth ...

The project results point to several cases of long-term policy synergies between the growth and equity objectives, such as reducing regulatory barriers to domestic competition, trade and FDI, stepping-up job-search support and activation programme. These structural reforms are indeed found to deliver stronger income gains for households at the lower

end of the distribution compared with the average household and can thus be viewed as helping to narrow inequality in disposable incomes.

... while policies with trade-offs achieve the opposite and may result in higher inequality

Shifting from income taxation to property and consumption taxes, boosting ICT investment and tightening unemployment benefits for the long-term unemployed are found to lift incomes of the lower-middle class by less than GDP per capita – the latter reform is even found to reduce disposable incomes of the lower-middle class, a clear indication that it may raise inequality. Reducing minimum relative to median wages could also raise concerns as it is found to depress disposable incomes on average and for the median household, though not for households at the lower end of the distribution.

- **Project papers**

Causa, O., A. de Serres and N. Ruiz, (2015) "Structural reforms and income distribution", *OECD Economics Policy Papers, No 13*

B6: Closing the loop: how inequality affects economic growth and social cohesion

- **Theme of the project**

Economic theory suggests inequality can affect economic growth in ambiguous ways

With inequality increasing in most OECD countries over the last years, assessing its economic impact has clear policy relevance. Theoretically, inequality might affect economic growth in both positive and negative ways. On the one hand, larger income disparities generate an incentive to work harder, study longer, and take greater risks, all of which can lead to more economic activity and growth. In presence of borrowing constraints, however, more inequality means that the wealthy are better able to take advantage of economic opportunities than the poor. Poor children may be unable to spend as long in education, thereby harming their future earnings potential. Poor people may also find it difficult to invest in new opportunities. As a result, inequality acts as a drag on growth.

- **Results of the work stream**

Higher inequality can lower economic growth...

Econometric analyses based on new data for the OECD suggest that income inequality has a negative and statistically significant impact on subsequent (medium-term) growth. The evidence indicates that what matters most is the income gap between lower-income households and the average. The negative effect of inequality on growth is driven not just by the poorest income decile but actually by the bottom 40% of income earners. The analysis also provides little backing for the claim that redistributive policies result in lower economic growth, although, not all redistribution is necessarily equally good for growth.

...via the human capital accumulation channel...

The analysis evaluates one prominent channel through which inequality is supposed to affect growth: the human capital accumulation theory. According to this theory, inequality undermines education opportunities for disadvantaged individuals, lowering social mobility and slowing human capital accumulation. Analysis based on micro data from the Programme for the International Assessment of Adult Competencies (PIAAC) Survey shows that increased income disparities within countries depress skills development among individuals with poorer parental education backgrounds, both in terms of the quantity of education attained, and in terms of its quality (i.e. skill proficiency). Educational outcomes of individuals from richer backgrounds, however, are not affected by inequality.

- **New approaches and policy implications**

Tracing the human capital channel through which inequality affects growth ...

Income inequality undermines growth by limiting investment opportunities, particularly in education, for those at the bottom of the income distribution. By weakening skill-acquisition, inequality lowers a country's growth potential. Moreover, it creates a vicious circle where limited educational opportunities transform into limited job opportunities and low lifetime earnings which perpetuate income disparities lowering social mobility. The case for limiting or – ideally – reversing the long-run rise in inequality is not only that our societies will become less unfair, it is also that they will become richer and more mobile.

...can suggest appropriate "win-win" policies.

The policy strategy for tackling rising inequalities while promoting economic growth and social mobility requires a policy package). One policy avenue involves reforms to tax and benefit policies to prevent low-income households from falling further back in the income distribution, while maintaining the right incentives to work and invest. Another one requires improving access to public services, such as high-quality childcare and education and training, particularly by young and adult individuals from low-income groups, or access to health.

Promoting inclusive employment and access to public services will guarantee the "double dividend".

Another important element of the policy tool kit is active promotion of inclusive employment. Increasing employment can contribute to sustainable cuts in income inequality while promoting growth, provided that employment gains occur

in jobs that offer career prospects. A key policy challenge therefore is to facilitate and encourage access to employment for under-represented groups, such as youths, older workers, women and migrants.

... as policies that enhance access to opportunities to youth and over the working life

Successful policies therefore need to take account of the fact that in unequal societies low socio-economic groups are likely to have underinvested in formal education. Accordingly, strategies to foster skills development should include improved job-related training and education for the low-skilled (on-the-job training) and better access to formal education over their working lives.

- **Project papers**

Cingano, F. (2014), "Trends in Income Inequality and its Impact on Economic Growth", OECD Social, Employment and Migration Working Papers, No. 163, OECD Publishing. DOI: <http://dx.doi.org/10.1787/5jxrjncwxv6j-en>

[http://www2.oecd.org/oecdinfo/info.aspx?app=OLIScoteEN&Ref=DELSA/ELSA\(2014\)11](http://www2.oecd.org/oecdinfo/info.aspx?app=OLIScoteEN&Ref=DELSA/ELSA(2014)11)

B7. Analysing growth and equality trade-offs in taxation

- **Theme of project**

Taxes differ in their distortive effects on growth ...

The 2008 joint CTP and ECO tax and economic growth project investigated how tax structures can best be designed to support GDP per capita growth. The analysis suggested a tax and economic growth ranking order according to which corporate taxes are the most harmful type of tax for economic growth, followed by personal income taxes and then consumption taxes, with recurrent taxes on immovable property being the least harmful tax. Other pro-growth tax reforms include tax base broadening (although certain tax base narrowing measures such as R&D tax provisions were found to be pro-growth) and, in some countries, a reduction in the top marginal personal income tax rates.

... as well as in their effects on income inequality...

Inequality in household disposable incomes has increased in most OECD countries in recent decades. Overall, the redistribution achieved by “in kind” and especially “cash” transfers has been twice as large as through taxes. In the last decade, however, tax and transfer policies in many countries have not countered the increases in market income inequality. Current fiscal consolidation efforts, which will have to continue in many OECD countries in order to bring down government debt to sustainable levels, as well as increasing (especially pension, health and other age-related) spending pressures as a result of ageing populations, may reduce the scope for transfer policies to lower inequality. In light of this, governments may want to turn to the tax system and enhance its role in redistributing more income from the richer to the poorer.

... leading to the need for a comprehensive look at tax design for inclusive, sustainable and resilient growth

While the Tax and Economic Growth project focused on tax design from an efficiency perspective, tax systems have an important role in strengthening equity as well. CTP’s NAEC project is in the process of developing a “*tax design for inclusive, sustainable and resilient economic growth*” narrative which reconciles these two perspectives. While the idea of “inclusive and sustainable” economic growth is certainly related to long-held notions of managing trade-offs between efficiency and equity, and taking advantage of complementarities where possible, it also places more emphasis on a more dynamic definition of equity – and the role the tax system can play in achieving this objective – which looks at policy impacts over the individual’s life-cycle and on the importance of a fairer distribution of opportunities for individuals to participate in the labour market, develop and deploy skills and contribute to society and for businesses to compete on a level playing field.

Political economy considerations are important in the implementation stage

The Tax and Economic Growth project and its recommendations have been very successful in helping countries to put their economies on a higher economic growth path through tax reform. Yet, many country Delegates have indicated that the recommended reforms are difficult to implement from a political economy perspective, also because the recommendations do not necessarily contribute to reducing inequality. CTP’s current NAEC work on an overall tax narrative has therefore received a lot of support from Delegates to the Working Party No.2 on Tax Policy and Tax Statistics from the Committee of Fiscal Affairs.

“Tax and Inclusive Economic Growth” Follow-up project in 2016

There is a need and interest to revisit the tax and economic growth work. Additional empirical analysis would aim at identifying tax reforms in OECD countries that have been successful in achieving inclusive and sustainable economic growth. The previous empirical analysis could be extended with additional data on, for instance, environmentally related taxes, taxes on capital income at the personal level, innovation, skills, efficiency of the tax administration in collecting tax revenues and the degree of tax compliance, and would aim at including the lessons learned from current OECD work on the linkages between inclusiveness and economic growth. (It is important to note that this analysis would require first building new tax policy indicators such as effective tax rates on household savings). Instead of focusing on GDP per capita, the empirical analysis could aim at focusing on tax design to stimulate economic growth which is beneficial for median households. The aim of the empirical analysis would be to further develop the “tax design for inclusive, sustainable and resilient economic growth” narrative in order to offer better-targeted tax policy advice to countries which would allow them to face their current and future challenges. If resources were to be found, CTP is planning to start working on such a “Tax and Inclusive Economic Growth” project in 2016.

- **Preliminary tax policy recommendations**

It is too early to present final tax policy “lessons learned” from the project, but possible tax policy recommendations include (it should be noted that recommendations will differ across countries and will vary with, for instance, the country’s tax system which currently is in place):

- *Increases in VAT rates (if any) should be accompanied with VAT base broadening* – in particular the removal of reduced VAT rates on expenditure such as restaurant food, hotel accommodation and cultural goods that benefit the rich substantially more than the poor. Additionally, targeted cash transfers to compensate low-income households could be introduced to accompany such a reform.
- If environmental excise taxes on heating fuels or electricity are to be increased these should be accompanied by targeted cash transfers to compensate the poor.
- Accounting for inclusiveness, sustainability and resilience goals also strengthens the case for *a shift from income taxes towards (certain types of) property taxes*. In particular, this is due to the ability of property taxes to address distributional goals.
- *There might be a case for increasing the taxation of personal capital income*, potentially with a mild degree of progressivity, as a result of the strengthening in rules for (automatic) exchange of information for tax purposes between tax administrations.
- In addition to, or together with tax mix changes, there is significant scope for improving the underlying design of the PIT and SSC system to reduce their negative impact on growth while addressing distributional, sustainability and resilience goals. This includes lowering average tax wedges faced by low income workers and the removal of tax expenditures that are ineffective in meeting the desired objectives.
- Countries may want to *implement more skills-friendly tax systems*, for instance through increased support for (re-) training of workers and the unemployed.

- **Project Progress and Expected Completion Date**

The CTP team is currently in the process of preparing a paper on “The tax design for inclusive, sustainable and resilient economic growth”. This paper will be presented at the November 2015 meeting of the Working Party No.2 on Tax Policy and Tax Statistics from the Committee of Fiscal Affairs, with the aim of publication as an OECD Taxation Working Paper by the end of 2015.

B8: Trade-offs and synergies between globalisation, innovation and inequality

- **Theme of the project**

Globalisation and trade have been implicated as contributors to the rise of income inequality ...

Income inequality has been on the rise in several countries since the beginning of the 1990s and globalisation and trade have been seen as having contributed to this increase. Openness to trade facilitates a number of economic mechanisms that can be held responsible for increasing wage inequality, such as unequal returns to factors of production, exposure to competition, and others.

... with growing participation in global value chains (GVCs) and offshoring seen as key culprits

The mechanisms that propagate income inequality within countries are numerous: they include factor returns and greater competition as pointed out above, but also taxation, access to education, skill-biased technological change, and employment or welfare policies. While the majority of these mechanisms are not necessarily linked to globalisation, the growing participation of firms in global value chains (GVCs) and in particular the practice of offshoring (defined as using foreign value added to produce exports) has prompted questions as to the effects of globalisation and trade on income inequality.

- **Project results**

Significant data and methodological efforts underpin investigations into the links between GVCs and inequality...

Work on data collection and manipulation has led to the incorporation of employment estimates in the OECD Trade in Value Added (TiVA) database. It has also enabled the linking of data on activities of foreign affiliates of multinationals to the TiVA database. Further methodological work has been completed to advance this research agenda and link investment data to the TiVA database.

... and show that participation in GVCs plays a relatively small role in wage inequality...

The data suggests that whilst some emerging countries have experienced reductions in wage inequality, most developed countries have seen their wage inequality rise. Participation in GVCs, however, appears to have played a small role in this process and has certainly not been a main driver. On aggregate and controlling for other factors, countries which engaged more widely in GVCs through offshoring tended to have lower levels of wage inequality.

... with the nature of GVC participation influencing the relationship with wage inequality

It is the nature of GVC participation that matters. A greater degree of low-skill task offshoring is associated with lower levels of wage inequality. Thus the gap between the wages of low and high skilled workers is reduced as the wages of low skilled workers rise faster than those of high skilled workers. This may be as a result of a positive productivity effect, where workers focus on tasks that they are most efficient at and also increase the productivity of firms. However, engaging in high-skill task offshoring is likely to boost high-skill labour productivity relative to low-skilled workers and thus contribute to increasing the wage gap between them.

Importantly, the results show that low-skilled labour is traded within value chains more intensely than high-skilled labour, hence the observation of the recent net positive effects of GVC participation on wage inequality.

- **Project papers**

Gonzalez, K. L., (2015), "Trade, Global Value Chains and wage-income inequality" [TAD/TC/WP\(2014\)13/REV2](#)

B9: Cost of Inaction and Resource Scarcity: Consequences for Long-term Economic Growth/Benefits of Action (CIRCLE project)

- **Theme of the project**

Environmental degradation and economic growth are linked...

Further degradation of the environment and natural capital can compromise prospects for future economic growth and human well-being. The *OECD Environmental Outlook to 2050: Consequences of Inaction* (OECD, 2012) projected that, without more ambitious policies, by 2050 the costs and consequences of inaction on climate change, biodiversity loss, water scarcity and air pollution could be significant. More ambitious policies are needed to reconcile economic growth with the conservation and sustainable use of the environment and natural resources. The Outlook, however, presented a one-way analysis of the impacts of socioeconomic developments on the environment as the available tools did not allow for a two-way analysis that included the environmental and resource scarcity feedbacks to the economy.

... but the economic feedbacks from environmental degradation are poorly understood...

Broad global assessments that encompass the economic growth implications of several environmental challenges as well as resource scarcity are rare. A wide assessment can shed new light on the scale of global environmental challenges for the economy.

... and require a detailed assessment

The project aims to investigate the costs of inaction and benefits of policy action for a wide range of themes: climate change, air pollution, the land-water-energy nexus, water stress and water pollution, biodiversity and ecosystem services, and natural resource scarcity.

- **New approaches**

CIRCLE provides an integrated systems approach to environment-economy linkages...

The CIRCLE project is designed to avoid a silo approach by taking a broad perspective that looks at the interactions (trade-offs and synergies) between different environmental issues. Where possible, regional and sectoral aspects are considered, using large-scale quantitative frameworks, including the in-house dynamic general equilibrium model ENV-Linkages, to describe the economies and linkages between sectors and regions.

A novel approach is used to link environmental degradation directly to the various drivers of economic growth, such as labour productivity and capital accumulation. This general equilibrium modelling approach will be based on harmonising with other models that can provide better insights into the biophysical aspects of environmental degradation, such as changes in crop yields and health impacts of high concentrations of air pollutants.

...and contribute to a better understanding of long-term economic growth

The project will allow for improved growth projections that include feedbacks from the environment. Such improved projections can address some of the major systemic risks stemming from environmental degradation and resource scarcity.

- **Project progress**

The project contains a modelling track...

For the themes of climate change, air pollution and the land-water-energy nexus, quantitative analyses will be published in the 2015-16 biennium. A background paper and a preliminary report, both on climate change, have been published. An updated report on climate change is expected to be published in Q4 2015. Reports for the economic consequences of air pollution and the land-water-energy nexus are expected in 2016.

...and a scoping track...

Background papers are in preparation for water-economy linkages, biodiversity and ecosystem services, and issues related to resource scarcity: critical materials in the OECD, the extended land-water-energy-materials nexus and transformation to a circular economy. These scoping papers will provide insights into the possibilities and bottlenecks in quantitatively assessing the economic feedbacks for these environmental themes in the next biennium.

...and integration across themes

A harmonised baseline for the analysis across all themes has been developed, and a report on the multiple benefits of integrated policies for climate change and air pollution is planned for 2016.

- **Possible emerging areas of policy recommendations**

Climate change will lower economic growth, but policies can reduce the most important risks

The climate change report provides a new detailed quantitative assessment of the consequences of climate change on economic growth. It focuses on how climate change affects different drivers of growth, including labour productivity and capital supply, in different sectors across the world. As indirect effects of climate change across sectors and economies are strong, an integrated analysis of all sectors and regions is used to shed light on the macroeconomic consequences of climate change. The sectoral and regional analysis shows that while the impacts of climate change spread across all sectors and all regions, the largest negative consequences are projected to be found in the health and agricultural sectors, with damages especially strong in non-OECD countries in Africa and Asia. By 2060, global macroeconomic costs of climate change are projected to be in the range of 1.0% to 3.3% of GDP, but uncertainties are large. Early policy action is warranted to avoid the lock-in of large damages in the short and medium run and high risks of crossing tipping points. Governments should align policies for adaptation and mitigation, and take sectoral damages into account, to avoid the largest negative consequences and reap the most cost-effective opportunities to confront climate change.

- **Expected completion date**

The project will continue at least until the end of the biennium (Q4, 2016), but given the ambition of the project, it is envisaged that further related work will be carried out in the next biennium.

- **Project papers**

I. Sue Wing and E. Lanzi (2014), "Integrated assessment of climate change impacts: Conceptual frameworks, modelling approaches and research needs", *OECD Environment Working Papers*, No. 66. DOI: <http://dx.doi.org/10.1787/5jz2qcsrvzx-en>.

R. Dellink, E. Lanzi, J. Chateau, F. Bosello, R. Parrado and K. de Bruin (2014), "Consequences of climate change damages for economic growth – a dynamic quantitative assessment", *Economics Department Working Paper No. 1135 (ECO/WKP(2014)31)* and *ENV/EPOC/ (2014)3*.

B10. Environmental policies and economic performance

- **Theme of the project**

Environmental policies contribute to long-term well-being ...

Environmental policies address well-being and sustainability objectives in the long run, affecting firm and household behaviour. The purpose of such policies is to achieve environmental objectives that markets fail to deliver, by making environmental externalities more costly in order to change both producer and consumer behaviour. Thus more stringent environmental policies imply higher costs for environmentally-harmful behaviour.

... but can have ambiguous effects in the short term ...

A number of design features of environmental policies, such as stringency, predictability, flexibility, competition-friendliness, matter for economic outcomes. Theory, however, suggests the effects on economic performance are ambiguous.

... with more empirical evidence required to inform the debate

The empirical evidence on the impact of environmental stringency is sparse and context-specific. This has made it difficult to draw firm policy conclusions.

- **Results of the work stream**

New indicators highlight rising environmental policy stringency...

The OECD has developed a new composite indicator of environmental policy stringency, in the form of a quantitative index. While only a proxy under further development, it enables comparisons of stringency between countries, across time, as well as between policy instruments.

The new data suggests that environmental policy stringency has increased significantly in the OECD over the past two decades. Countries tend to opt for similar policy instruments but there are differences in the stringency of groups of market and non-market based instruments. While the United Kingdom, Poland and Australia tend to employ more stringent market-based instruments, Finland, Germany and Austria resort to relatively more stringent non-market based environment policies.

... with little or no permanent effect on multifactor productivity in the long run...

Environmental policy tightening has no permanent effect, positive or negative, on multifactor productivity growth (MFP). In fact, evidence suggests that all productivity effects tend to disappear within five years or less.

No lasting harm to productivity levels is found at the macroeconomic, industry or firm levels. On the contrary, a tightening of environmental policies is followed by a temporary increase in productivity, leading to an overall improvement in production efficiency for a large share of manufacturing industries.

At the macro level, the anticipation of an environmental policy tightening may also temporarily slow productivity growth – possibly due to increased investment in preparation for an expected policy change. Productivity levels subsequently rebound due to the temporary acceleration of growth rates.

The temporary effects on productivity growth are not conditional on the stringency of environmental policies already in place, but may depend on the flexibility of the environmental policy instruments. In particular, market-based instruments tend to have a more robust positive effect on productivity growth.

... but with some potential efficiency-enhancing effects at the firm level in the short run

While on average the effect of policy stringency is neutral, there is evidence for productivity changes between and within economic sectors. Most advanced sectors and firms gain in productivity, while less productive firms experience negative effects. This may be because larger and more productive firms can adapt more easily to a changing policy

environment. They have more advanced technologies and more resources to invest in changing production technology. They may, however, also outsource environmentally harmful or less efficient production.

- **New approaches**

This is a first attempt to systematically measure environmental policy stringency...

To fill the gap of reliable comparative measures of environmental policy stringency (EPS), selected environmental policy instruments, primarily related to climate and air pollution, are scored and aggregated into composite EPS indexes. Two EPS indexes are created, one for the energy sector and an extended one to proxy for the broader economy. They cover most OECD countries from the 1990s to 2012, the first-series of its kind.

... and to think about the productivity implications of environmental policies

The indicators simplify the multidimensional reality of environmental policy, as they only relate to climate and air pollution. This is, however, a first step to measuring the stringency of policies internationally and to consider their implications for productivity. In this respect such measures and the way they are employed represent a significant advancement to the academic and policy literature on the topic to date.

- **Policy implications**

Policy stringency can improve productivity if policies provide incentives for an efficient reallocation of capital

The design of environmental stringency policies is crucial. Such policies should be pursued together with measures that lighten regulatory and administrative burdens and in this way both environmental and economic objectives can be achieved.

Stringent environmental policies can enhance productivity if policies are coupled with measures to allow a swift reallocation of capital towards more productive firms. To this end, policies that encourage competition and reduce barriers to entry and exit should be pursued.

The Burdens on the Economy due to Environmental Policies (BEEP) indicator provides evidence on the anti-competitive bias of some aspects of environmental policies. The indicator highlights that the economic effects of environmental policies vary considerably across countries, not all of which is related to the stringency of those policies.

- **Project papers**

Albrizio, S., Botta, E., Kozluk, T., Zipperer, V., (2014), "Do environmental policies matter for productivity growth? Insights from new cross-country measures of environmental policies" [ENV/EPOC/WPIEEP\(2014\)3/FINAL](#)

B11: Trade-offs and synergies between environment and inequality

- **Theme of the project**

Removing energy subsidies enhances economic efficiency and environmental outcomes

Energy subsidies are not only harmful to the environment, because they encourage greater use of fossil fuels, but they are also costly and they distort the production structure and the consumption decisions of households.

Equity outcomes can be achieved if flanking policies make the reform progressive...

Fossil fuel subsidies are often justified as a redistributive form of support for the poor. However subsidies are a poorly targeted instrument for achieving this objective. This is because energy subsidies are either directed at energy sources that the poor do not consume, for instance gasoline, or sources the poor have no access to, i.e. electricity.

...as evidenced by the phase out of subsidies in Indonesia

As a G20 member, Indonesia pledged in 2009 to rationalise and phase out certain fossil fuel subsidies. Modelling work suggests that there are economic efficiency gains and environmental benefits to be reaped from such a reform and that redeploying the savings from subsidy removal can reduce inequality.

Removing energy subsidies presents an efficiency-equity trade-off because it is detrimental to poor households

In absolute terms in Indonesia, middle and high-income households receive a larger proportion of subsidies than low-income households. In relative terms, however, poor households receive greater monetary benefit, as energy subsidies are more evenly distributed than income. Consequently, the direct effect of the subsidy phasing out is to exacerbate income inequality.

Redistribution schemes of varying degrees of efficiency can ameliorate this...

The phasing out of energy subsidies was simulated under three stylised redistribution schemes: direct cash payment on a per household basis, support to labour incomes, and subsidies on food products. While there are other possible public uses of the savings from subsidy removal, such as deficit reduction, education and healthcare funding, these affect income redistribution indirectly and thus were not considered in the simulations.

...to improve both GDP and welfare...

The modelling results indicate that if Indonesia were to remove its fossil fuel and electricity consumption subsidies, it would achieve real GDP gains of 0.4% to 0.7% in 2020, depending on the redistribution scheme applied. Direct cash transfers perform best in terms of GDP gains. The aggregate gains for consumers in terms of welfare are higher, with a range from 0.8% to 1.6% in 2020. This result is derived from the gains from trade if the subsidy abolition is multilateral.

... as well as environmental outcomes

In addition to income and welfare gains, removing energy subsidies is projected to significantly reduce harmful emissions in Indonesia, by over 10% by 2020 in the scenarios considered.

- **New approaches**

A novel analytical framework examined the distribution effects of multiple scenarios ...

This project featured a modelling approach in which three strands of effects were studied – macroeconomic, environmental and distributional. It is therefore illustrative of the multidimensional frameworks that the OECD is beginning to exploit in its analysis. A computable general-equilibrium model simulates the interactions between economic activities, including energy-related activities across sectors and regions. The model also incorporates the links between economic activities and greenhouse-gas emissions while a specific module assesses the consequences

of policy shocks for different household groups.

... utilising household-level budget survey data

The data used in the model covers more than 10,000 Indonesian households, each with its own preferences. The baseline consumption level and income patterns of each household are based on a household budget survey, in this case the 2007 Indonesia Family Life Survey.

- **Policy Implications**

Economic, environmental and social objectives can be pursued simultaneously...

A multidimensional modelling strategy to assess the effects of policies reveals a number of important distributional effects. Energy subsidy removal and the resulting redistributive mechanisms affect not only economic growth and environmental pollution, but also income inequality.

... but care must be taken to carefully design redistributive schemes

The simulations suggest that poor households bear the brunt of energy subsidy removal. To counteract this, direct cash transfers or to a lesser extent, food subsidies are an efficient redistributive scheme. However, redistributive policies such as compensatory payments proportional to labour income disproportionately benefit higher income households, because such schemes exclude the poorer households who depend on earnings from the informal sector.

- **Project papers**

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DOI: <http://dx.doi.org/10.1787/5js4k0scrqq5-en>

[http://www2.oecd.org/oecdinfo/info.aspx?app=OLIScoteEN&Ref=ENV/EPOC/WPCID\(2014\)8/FINAL](http://www2.oecd.org/oecdinfo/info.aspx?app=OLIScoteEN&Ref=ENV/EPOC/WPCID(2014)8/FINAL)

B12 (a): Increasing the resilience of economies to external shocks (Finance and inequality)

- **Theme of the project**

The substantial expansion of the financial sector ...

The financial sector has expanded considerably in the OECD countries since the 1970s and especially in the United States. Credit provided by bank and other financial intermediaries has reached almost 200% of GDP in the United States and 110% in the OECD on average. Econometric investigations indicate that, while financial expansion is an engine of growth when starting from low or moderate levels, further expansion from the high levels observed in OECD countries generally harms growth.

... has imposed significant costs on the real economy ...

Excess credit, mispricing of risky financial instruments, and lax regulation led to the deep financial crisis of 2008 and the subsequent recession. The impact on the real economy has been severe. Unemployment rose throughout the OECD and economic growth fell while flows of new lending and borrowing dried up. Weak investment in the medium to long term can lead to secular stagnation.

... and necessitates a reconsideration of the future role of finance

Widespread bank difficulties since 2008 required large bailouts with taxpayers' money while the need to fight the recession following the financial bust also proved very costly for public finances. These costs for governments as well as the economic hardship associated with the recession have raised questions about the future role of finance and its institutions (bank, non-banking savings and credit institutions, sovereign wealth funds, private investment funds and others).

- **Results of the work stream**

A healthy financial system will avoid excesses ...

An appropriately run financial system will have strong capital buffers to reduce the need for costly government intervention in a time of low liquidity. The Basel III framework was developed with this in mind; but further work remains necessary in particular to reduce governments' implicit support for too-big-to-fail institutions.

The financial regulatory environment requires reform. Financial supervision needs to take a more comprehensive approach. Systemic risks need to be monitored better, as well as distributional effects from credit expansion.

The high wage premium in the financial sector contributes to income and gender-pay inequality. Compensation reforms will be important to counter this.

... and favour a balanced composition of financial instruments

OECD countries have currently tax systems that encourage corporate funding through loans rather than equity. This creates a debt-bias in firm financing. Excess in debt funding creates instability and can be bad for growth. An expansion in equity financing has a positive association with growth in the long run. These results apply on average across the OECD and to most countries individually.

A well-functioning financial system relies on trust in the economy due to the illiquid nature of banking assets and the presence of leverage. Trust in turn requires accountability and transparency. An important element to creating trust in finance is to end policies that create moral hazard, such as implicit guarantees for large institutions deemed too-big-to-fail. This limits financial excess and eventually restores efficient credit provision and investment.

- **New approaches**

Considering the distributional effects of finance is a novel approach

The work re-assesses the contribution of finance to growth and stability, but it makes important contributions to our understanding of the effects of finance on growth and income distribution, as well as highlighting reforms of financial regulation and other policy areas for a better-performing financial sector.

- **Policy implications**

Short term trade-offs need to be considered to ensure long-term stability ...

Ultimately, there is no trade-off between a sound financial sector and robust growth in the long-term. In the short-term, however, some measures to curb financial growth and potential financial excesses can have negative implications for growth. Their judgement needs to be balanced against the long-term benefits for growth, stability and income distribution.

Econometrically, financial expansion has been positively associated with increases in economic inequality. The high level of pay in the financial sector is an important factor behind this link. Similarly, significant gender imbalances at the top of financial institutions contribute to widening gender pay differences. This means that the gender imbalance in the sector needs to be addressed, compensatory policies need to be put in place and the size of the financial sector needs to be regulated.

Evidence from this work suggests that even relative to disposable income, low-income households have less credit than higher-income households. In this way the uneven distribution of credit in financial systems unable or unwilling to lend to low-income customers contributes to income inequality.

- **Project papers**

Cournède, B., O. Denk and P. Hoeller (2015), "Finance and inclusive growth", *OECD Economic Policy Papers*, No. 14, OECD Publishing.

Cournède, B. and O. Denk (2015), "Finance and economic growth in OECD and G20 countries", *OECD Economics Department Working Papers*, No. 1223, OECD Publishing.

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B12 (b): Increasing the resilience of economies to external shocks (Finance and resilience)

- **Theme of the project**

Growth-promoting policies can influence macroeconomic instability ...

Growth-promoting policies can play a role in shaping the vulnerability and resilience of an economy. Such policies can affect the vulnerability of an economy, amplify or dampen shocks, and influence the persistence of their effects. For instance financial openness and deepening are a source of transmission and propagation of shocks.

... but the welfare implications can be understood by looking at microeconomic instability

The true welfare costs of economic instability can only be understood at the micro level by assessing the impact of shocks on firms, households and individuals. The project traces the type and size of volatility of micro-level variables and looks at policy trade-offs between growth, microeconomic instability and income inequality.

- **Results of the work stream**

This study examines microeconomic stability ...

Microeconomic volatility affects households and firms directly, lowering on average life satisfaction. Furthermore, volatility is much higher at the micro than at the macroeconomic level.

... at the household level ...

Aggregate level data obscures the effect of higher economic instability on household-level disposable income. Household-level instability has many underlying causes. For instance, during the Great Recession, many countries that suffered large macro-shocks experienced little increase in micro-level instability, at least initially.

In general, household-level instability tends to be greater in more unequal countries. A possible cause is that the tax and benefits system help to ameliorate both inequality and volatility.

... at the firm level ...

Firm-level instability can indirectly generate welfare-reducing costs, but it can also reflect healthy processes of resource reallocation, which underpin creative destruction and economic growth. Firm-level instability is in general greater in countries with lower levels of employment protection, stronger contract enforcement and lower levels of public ownership.

... and at the individual level

Employee-level economic instability can take the form of changes in jobs, both in and out of employment, working-time or hourly earnings. All these forms of economic instability vary considerably across countries.

- **New approaches**

Three measures of volatility utilise different levels of data disaggregation

Volatility can be measured in three different ways at the micro level. A *rolling window* measure allows fluctuations around average growth to be measured for each individual. *Incidence of large changes* counts the proportion of individuals who are subject to significant change. *Cross-sectional measures* can be used to evaluate the dispersion of individual changes around the average. All three methods are highly correlated with each other and are tested in an econometric investigation against policy indicators and other relevant factors. The individual-level data used in this study cover 26 countries from 1994 to 2010.

- **Policy Implications**

Microeconomic volatility and inequality are tightly connected ...

Microeconomic volatility strongly affects economic welfare. Changes in the economic situation of individuals, which are difficult to predict, reduce welfare because most people are risk-averse. Furthermore, household disposable income tends to be less volatile in more equal countries. This may be explained by policies such as progressive taxes and transfers, which reduce both inequality and volatility. These two issues are intertwined because compressed earnings distributions restrain the extent to which individual income can rise or fall in the face of shocks or opportunities.

Growth-enhancing policies can heighten volatility and income inequality ...

Pro-growth reforms, such as expanding active labour market programmes, reducing employment protection for regular workers and limiting unemployment insurance, tend to boost growth for a given level of instability.

Some pro-growth reforms can exacerbate income inequality and potentially micro level volatility if their design pays insufficient attention to their distributional consequences. Reductions in progressive taxes and transfers are an important category of pro-growth reforms that raise trade-offs between growth, inequality and volatility. By contrast, reforms that make labour and product markets very fluid reforms improve stability and income inequality as well as long-term growth.

Specific structural reforms have an impact on individual-level volatility ...

Relaxing employment protection legislation for regular workers and product market regulation from very tight to moderately tight restrictions increases worker-level economic instability. However, deeper reforms which result in highly flexible labour markets and very competitive product markets bring greater individual-level economic stability (in addition to stronger growth).

More spending on active labour market policies reduces gross worker flows, presumably by improving the matching process in hiring.

Centralised and decentralised wage-bargaining systems bring greater worker-level stability in hours worked and hourly earnings than intermediate, sector-level arrangements.

Higher levels of unemployment benefits are associated with greater worker-level volatility in hours worked and hourly earnings. This link may reflect that stronger unemployment insurance facilitates risk taking in the labour market.

...and more progressive taxes can dampen large economic shocks for individual earners

Progressivity in income taxation can dampen the transmission of large changes in labour earnings to household disposable income. Social transfers also reduce the transmission of shocks from labour earnings to disposable household income, but to a lesser extent than taxes. Changes in labour earnings by other household members are also an important source of attenuation in some countries.

- **Project papers**

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Cournède, B., P. Garda and V. Ziemann (2015), "Effects of economic policies on microeconomic stability", *OECD Economics Department Working Papers*, No. 1201, OECD Publishing.

Garda, P. and V. Ziemann (2014), "Economic policies and microeconomic stability: a literature review and some empirics", *OECD Economics Department Working Papers*, No. 1115, OECD Publishing.

B13: OECD @ 100

- **Theme of the project**

The legacy of the Great Recession lingers...

More than seven years since the 2008 crisis the global economy is still running in a *low gear*. Global growth has been more than 1 percentage point below the 2000-07 period, unemployment is set to stay above pre-crisis levels in many economies, while private business investment is still just idling along.

... and long-term challenges are becoming more salient

In addition, challenging trends that pre-dated the crisis and likely to continue into the future. There are tensions and potential imbalances that can emerge from developments in a number of areas such as demography, technology, skills requirements, and increasing integration in the context of fiscal constraints, rising environmental pressures and threats to economic stability.

- **Results of the work stream**

Future growth rates will likely be lower...

In the period to 2060, global growth prospects will be mediocre compared to the past -- reflecting ageing, slower human capital accumulation and decreasing scope for catch up by non-OECD countries as their living standards converge towards those of the OECD. GDP in the OECD and the emerging G20 countries will likely grow on average by 2.7% in 2010-2060, compared to 3.4% in 1996-2010. Global GDP is expected to grow by 3% per annum 2010-2060. Faster growth in the emerging world will continue to shift the global economic balance. To sustain this lower, but still significant growth rate, deepening of human capital and a greater focus is needed on productivity driven by skilled-biased technical change.

... the global economy will be more integrated...

Global trade integration will continue and deepen, albeit at a slower pace than in the past. Non-OECD countries will capture a growing part of global trade and the trade and industrial specialisation of emerging countries will look increasingly like those of the OECD. Economic convergence will alter patterns of economic migration towards OECD countries with the risk of drying up a possible source of offset to ageing labour forces.

... and inequality will be higher ...

The growing importance of Knowledge Based Capital (KBC) will exacerbate income disparities based on skills. Earnings disparities may continue to rise sharply if well-designed redistributive policies are not implemented and private or public investment in higher education is not stepped up.

... leading to fiscal challenges ...

Greater demands on tertiary education, social insurance and pension systems, as well as health care from increasing demand for skills and ageing populations, may threaten fiscal stability.

... and environmental pressures will intensify

Without decisive action, environmental degradation will prove to be a critical challenge in the medium to long term and may hamper growth before 2060. The impact of environmental damages may reduce global GDP by 1.5% and by as much as 5% in South and South-East Asia.

- **New approaches**

An integrated modelling approach to developing long-term scenarios

The OECD@100 used a novel/multifaceted modelling approach to project current and prospective future threats to the global economy. Forward-looking scenarios are constructed using a set of interacting modules, each describing one or several key variables (this includes growth, emissions, climate and environmental damage modules, trade and specialisation module and a wage inequality module) and feeding into the others, under a common set of growth trajectories. While this approach is still largely based on the extrapolation of past trends, it has produced greater awareness and insights into the various policy linkages of an inter-connected global economy.

- **Policy Implications**

The projected changes in the world economy help structure thinking about the future and the consequent demands on policies. Of course, many of the crucial issues of the past and present will likely remain in the period to 2060. For instance, policies that enhance productivity, support equity, ensure robust public finances, and discourage overuse of natural resources, will be just as important in the future as they are today. Similarly the need to strengthen and enhance economic and political institutions will remain.

The changing economic environment spurs the need for innovative policies ...

A changing economic environment and uncertainty around future developments will likely shift the way economic policies should be pursued. For instance, as growth is increasingly driven by knowledge and skills, the growth process itself may generate tensions such as inequalities. At the same time, the scope for domestic policy to address such issues may be reduced, as the fiscal domain is squeezed, and traditional redistributive policies become more costly and difficult to implement because of increasingly mobile tax bases and cross-country spill-overs.

... to support more inclusive growth ...

Policies to encourage growth in a knowledge-intensive economy should involve reviewing intellectual property rights approaches and appropriate product and labour market settings that facilitate firm entry and exit. Furthermore, these reforms need to be complemented with focused education policies that generate high social returns and encourage life-long learning in the context of ageing societies. Better-targeted redistribution through the tax and benefits system, in addition to policies that promote equality of opportunity, reflecting the changing structure of the workforce, can potentially improve equity outcomes.

... address the rising costs of climate change ...

Front-loaded environmental policies can reduce the future costs of environmental damages. While deeper international integration of trade and investment can improve risk-sharing of potential climate damages.

... and ameliorate fiscal pressures ...

Future uncertainties related to demographic changes and productivity trends, suggest fiscal systems need to be made more resilient to shocks. Efficiency-boosting structural reforms and diversifying funding sources away from public finance will lessen the pressure on the treasuries of OECD countries. There is a dilemma in reforming the tax system. Taxes need to be levied increasingly on immobile tax bases, as the cost of taxing mobile intangible inputs increases. However this is at odds with the increasing size and role of intangibles in the future economy.

... all with better international co-operation in an increasingly multipolar world

The need for improved and enhanced international policy co-operation and co-ordination underpins the majority of the above policy areas. Economic challenges (including among others research efforts, intellectual property rights protection, productivity spillovers, mobile taxable assets, environmental degradation) in the future will not be constrained by political borders. Therefore, boosting co-operation in a wide number of areas will be crucial, even though the shift towards a multipolar world is likely to make cross-country co-operation more challenging in view of differences in priorities and preferences in the global economy.

- **Project papers**

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B14: Long-Term Scenarios for Food and Agriculture

- **Theme of the project**

Unforeseen food crisis in the second half of the last decade refuelled debate on the planet's carrying capacity

The price spikes in 2007/08 and its consequences for food security, markets and policies were largely unexpected and only partially understood. At the same time, they have refuelled a longer-standing debate on the planet's long-run carrying capacity.

Policy as well as private action is required to shape long run outcomes for food and agriculture...

A number of challenges are defining the debate on long-term developments in food and agriculture, including food security, biodiversity, climate change and others. Strategies need to be developed and implemented to improve the system's outcomes in the long run.

... but the context in which these policies will be implemented and take effect is unknown

Yet, we cannot foretell the future. Projections and the search for an optimal policy set given specific circumstances do not provide proper answer to the challenges at hand. Instead, this project aims at developing and discussing a set of alternative, contrasting and plausible scenarios for food and agriculture towards 2050, evaluating them with respect to the key challenges and opportunities implied, and identifying a range of strategies for both public and private players at different regional levels that are conducive to improved outcomes in a robust manner, accounting for the uncertainty around the scenarios.

- **Project progress**

As scheduled, this project has involved a first two-day workshop in December 2013 which developed the three scenario dimensions, including the context, the challenges and opportunities arising, and the broad policy options. It was attended by some 60 participants, including in particular officials from agricultural ministries in OECD and some non-OECD countries. The qualitative scenario storylines were developed in greater detail in early 2014 and shared with workshop participants for comments. In parallel, the quantification of various scenario aspects took place since spring 2014, resulting in a series of background documents made available to the participants of the second workshop. Similarly, several specific issue notes were prepared by external experts on topics not well captured by the economic models.

The second two-day workshop, again attended by some 60 participants, took place in September 2014. It mainly focused on the analysis of the scenario outcomes and the discussion of robust policy strategies in light of these scenario outcomes. As for the first workshop, the process was highly participatory and interactive, allowing for a high degree of engagement by the participants.

The draft final report "Alternative Futures for Global Food and Agriculture: Developing Robust Strategies" has been made available on OLIS as [\[TAD/TC/CAWP\(2015\)1\]](#) on April 29, 2015, and will be discussed at the 73rd Session of the Joint Working Party on Agriculture and Trade (JWPAT) on 22nd May, 2015.

- **Preliminary results**

The draft final report stresses the critical importance of the future of food and agriculture for the livelihood of the global population, which is bound to increase, to become wealthier, and hence to demand more and different food. At the same time, the agricultural system faces constraints in natural resources which are aggravated by the consequences of climate change.

As expectations on future developments differ widely, three scenarios were developed, focusing on i) national sovereignty and regional independence, ii) a strong shift in consumers' and citizens' mind-set towards sustainable consumption and the provision of social and environmental public goods, and iii) a reinforcement of global cooperation in trade, research and other areas. These scenarios serve for constructive discussions among stakeholders on assumptions, implications and policy strategies. They also suggest different outcomes on several key questions, including on food security, biodiversity, economic prospects for farming, livestock diseases and food safety, diet-related health and system stability.

The range of strategic action identified in the report stress the importance of fostering sustainable productivity growth, the need for soft measures to change cultures with respect to different aspects, the key role for further integration of markets both within and across countries and regions, and a consistent risk management system to deal with volatile agricultural and food systems.

- **Expected completion date**

The draft final report will be discussed by the JWPAT on 22 May 2015. Depending on comments received by Delegations, it will be revised subsequently with the aim of declassification and publication in the second half of 2015.

- **Project papers**

OECD (2015), *Alternative Futures for Global Food and Agriculture: Developing Robust Strategies*, draft report, [\[TAD/TC/CA/WP\(2015\)1\]](#).

B15: Ensuring productivity growth and innovation in the long run

- **Theme of the project**

Productivity growth has slowed in many OECD countries ...

The recent financial and economic crisis has amplified a general slowdown of productivity since the beginning of the 21st century. In addition, the slowdown in knowledge-based capital accumulation and the decline in business start-ups have been notable.

... raising concerns of a structural slowdown ...

The debate on the future of productivity has manifested itself in two polar views. A pessimistic view suggests that the slowdown is permanent that recent technological developments (i.e. ICT) are trivial compared to those that took place earlier in the 20th century (i.e. electrification; see Gordon, 2012). By contrast, technological optimists argue that the underlying rate of technological progress has not slowed and that the IT revolution still has a long way to run (Brynjolfsson and McAfee, 2011).

... that can be traced at the sectoral and firm level

Aggregate growth accounting (Section 2) can help describe productivity developments but sheds only a little light on the economic forces that shape them. More insightful approaches utilise more granular, but harder to come by data at industry or firm level. For the very long run, long-term projections and scenarios can identify relevant issues for the future of innovation and productivity.

- **Results of the work stream**

Micro data shed light on the drivers of productivity ...

The economic forces shaping productivity developments can be better understood by distinguishing between: the globally most productive firms, national frontier firms and laggard firms.

... which highlights a rising gap between firms at the technological frontier and others ...

Productivity growth at the global frontier has remained relatively robust in the 21st century, despite the slowdown in average productivity growth. Labour productivity at the global frontier, for instance, increased at an average annual rate of 3.5% in the manufacturing sector over 2000s, compared to an average growth in labour productivity of 0.5% for non-frontier firms. This rising gap raises questions about how policies shape:

1. the ability of national frontier firms to adopt new technologies developed at the global frontier; and
2. the diffusion of existing technologies from the national frontier to laggards.

... necessitating interventions in innovation, market environment, and skills development

Three policy areas appear to be of key importance: *i)* foster innovation at the global frontier and facilitate the diffusion of new technologies to firms at the national frontier; *ii)* create a market environment where the most productive firms are allowed to thrive, thereby facilitating the more widespread penetration of available technologies; and *iii)* reduce skill mismatches.

Policies to sustain productivity growth include:

- Improvements in public funding and the organisation of basic research, which provide the right incentives for researchers, are crucial for moving the global frontier and to compensate for inherent underinvestment in basic research.
- Rising international connectedness and the key role of multi-national enterprises in driving frontier R&D imply a

greater need for global mechanisms to co-ordinate investment in basic research and related policies, such as R&D tax incentives, corporate taxation and IPR regimes.

- Productivity growth via the diffusion of innovations at the global frontier to national frontier firms is facilitated by trade openness, participation in global value chains (GVCs) and the international mobility of skilled workers.

- Well-functioning product, labour and risk capital markets as well as policies that do not trap resources in inefficient firms – including efficient judicial systems and bankruptcy laws that do not excessively penalize failure – help firms at the national frontier to achieve a sufficient scale, enter global markets and benefit from innovations at the global frontier.

- A competitive and open business environment that favours the adoption of superior managerial practices and facilitates efficient firm exit facilitates the diffusion of technologies in general.

- Framework policies that reduce barriers to firm entry and exit and improve the efficiency of matching in labour markets can improve productivity performance by reducing skill mismatch.

- **New approaches**

Micro data at the firm level ...

While growth accounting techniques have been widely used to account for productivity changes, they restrict our understanding to trends of averages. The truly new empirical underpinnings of the project utilise cross-country, industry- and firm- level data to explore the structural dimensions of productivity and the multiple channels through which policies can affect it. To distinguish the firms' productivity performance and their characteristics, a harmonised, cross-country firm-level dataset was built. In addition, to observe firm and employment dynamics, a novel methodology was used to construct aggregates of confidential firm-level data from OECD member countries sources. Novel, individual data from the OECD PIAAC survey was used to explore nature and consequences of skills mismatch.

- **Policy Implications**

... suggests novel policy recommendations on firm entry and exit ...

Such data has enabled new policies to emerge that aim to support the creation and growth of young innovative firms, while allowing small but old and stagnant firms to exit the market. For instance, appropriate judicial and bankruptcy laws can help release resources trapped within inefficient firms thus supporting flow of resources will be towards more productive firms.

... on correcting skills mismatch and knowledge dissemination ...

Reforms to policies that restrict worker mobility and amplify skill mismatch (e.g. high transaction cost on buying property and stringent planning regulations) will enhance the diffusion of frontier innovations and the growth of productive firms. Reducing skill mismatch via these policies plus funding for lifelong learning will become increasingly necessary to combat slowing growth and rising inequality.

... and improving on R&D incentives and IPR protection

Innovation policies, including fiscal incentives for R&D, collaboration between firms and research institutions, and IPR protection, should be designed in a way so that they do not excessively favour applied vs basic research and incumbents vs young firms.

- **Project papers**

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Johansson, A. et al. (2013), "Long-Term Growth Scenarios", *OECD Economics Department Working Papers*, No. 1000.

Westmore, B. (2013), "R&D, Patenting and Productivity: The Role of Public Policy", *OECD Economics Department Working Paper*, No. 1046.

C1: Revisiting the social contract: rebuilding trust for sustained economic recovery

- **Theme of the project**

Trust in government has been eroded...

The recent crisis significantly eroded trust in government institutions. This was the case in the majority of OECD countries. Levels of trust declined between 2007 and 2012, with further declines till 2014 in countries most severely affected by the crisis, such as Slovenia, Spain, Portugal, Greece and Ireland. Countries that weathered the crisis, for instance Germany, Israel and Switzerland, reported higher levels of public trust in government.

...calling for a new understanding of trust, its drivers and the role of public governance

There are four main drivers of trust - culture, institutional settings, economic and social outcomes, and performance of institutions. At the *macro-level* trust relates to *political institutions and the functioning of democracy*. At the *meso-level*, trust relates to *policy making*, the ability of governments to manage economic and social issues, and to generate positive expectations about future well-being. Finally, at the *micro-level*, trust refers to the impact of government on people's daily lives through *service delivery*. This structured perspective offers a lens through which inter-related components of trust can be understood.

- **Results of the work stream**

A new framework and new metrics for understanding trust...

The OECD has developed a comprehensive and policy-focused framework for mapping trust. This helps to deepen understanding of the measures that can be taken to increase confidence in public institutions and actors. In addition, new metrics to identify the determinants of trust have been developed collaboratively between the Public Governance Committee and the Committee on Statistics and Statistical Policy.

The OECD work has proposed the following framework for analysing the drivers of trust:

- *reliability*: the ability of governments to minimise uncertainty in the economic, social and political environment of their citizens, and to act in a consistent and predictable manner;
- *responsiveness*: the provision of accessible, efficient and citizen-oriented public services that effectively address the needs and expectations of the public;
- *openness and inclusiveness*: a systemic, comprehensive approach to institutionalising a two-way communication with stakeholders, whereby relevant, usable information is provided, and interaction is fostered as a means to improve transparency, accountability and engagement;
- *integrity*: the alignment of government and public institutions with broader principles and standards of conduct that contribute to safeguarding the public interest while preventing corruption.
- *fairness*: in a procedural sense this involves the consistent treatment of citizens and businesses in the policymaking and policy implementation processes.

...are being used to tackle frontier issues in public governance

The trust approach has highlighted the need to explore governments' capacity to address complex or "wicked" challenges, and to address the long-term uncertainty of public policies. This has led to a new vision of the Strategic State, where policy frameworks are built to manage complex policy challenges, including future uncertainty.

New work is being undertaken on the role of centres of government, analysing co-ordination mechanisms, and discussing how governments can manage the full range of risks through *All Hazards approaches* and forward-looking engagement. In addition, strategic foresight can be linked to existing capacities for horizon scanning to develop anticipatory government.

- **New approaches / policy implications**

This project was an exploratory exercise which helped to identify new connections in the broader governance agenda and highlight gaps in the data that can help understand them better.

New metrics are needed to develop an indicator-based approach to monitor trust...

A stock taking of metrics has been conducted and a critical analysis has highlighted the limitations of existing measures. Therefore, new metrics need to supplement existing ones, fully engaging the statistical community as well as country experts. The outcomes of this work will be critical to support the development of further policy analysis and conclusions.

...to support countries' efforts to restore trust...

Such a data-driven framework should be used to support country-specific reform. This helps to focus on the pressure points for trust in countries and the specific policy dimensions, relating them to identifiable sectors and stages in the policy cycle. Pilot projects have been initiated with a number of countries including Korea.

...and investigate the impact of declining trust on a range of policy outcomes.

The work on trust undertaken in the context of NAEC has generated interest among several OECD policy communities. Further work is required to investigate how insufficient trust constrains policy outcomes across a number of policy domains and to understand which policy levers government can mobilise to do something about it. Such an integrated agenda requires follow-up activities at the sectoral level involving a variety of committees.

A structured approach to trust has stimulated further work on financing democracy and on justice institutions, which will further enhance OECD's broad expertise on the public sector.

- **Project papers**

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C2: Vulnerability of social institutions: lessons from the recent crisis and historical episodes

- **Theme of the project**

The economic crisis has put pressure on social protection systems...

The recent crisis was the heaviest adverse economic shock since the Great Depression affecting the majority of the OECD countries. It led to significant increases in unemployment and a decline in government revenues intensified pressure on social institutions. The structures of the welfare state in European countries have had to account for increases of unemployment of up to 15%-20% (in Spain and Greece for instance) and cumulative GDP loss relative to potential over the 5 years of the crisis (2008-2013) averaging 10-15% and up to 25% (Ireland).

... across key themes like pensions, health care provisions and unemployment insurance

Particularly hard hit were social security instruments, health provisions and unemployment insurance. These are assessed for the way they were impacted in financial terms, observing the losses they took, and adequacy terms, meaning the scope and ability to cover people in need. Public social spending had to increase to match the increased demands, but not universally across the OECD (exceptions, where the social spending trend of increase decelerated sharply are Korea, Mexico, Portugal, Greece, Hungary and Luxembourg). The severity and length of the crisis, together with the demands placed on social systems present an opportunity to conduct a 'stress test' on their performance and stability.

- **Results of the work stream**

Pension schemes withstood the crisis to varying degrees ...

The poverty rate of the elderly, after taxes and transfers, fell in most OECD countries over the period 2007 to 2010. This was largely because of automatic stabiliser effects of defined benefits pensions, as well as specific stimulus measures to counterbalance losses in individual retirement savings. The experience of members of various pension plans was diverse. Members of defined contributions plans were affected negative, in particular those close to retirement. Members of defined benefits schemes fared well, but the financial gap between available resources and future commitments already existing in such scheme has widened. Pay-as-you-go (PAYG) public sector pension schemes have weathered the crisis well, however they face long-term sustainability issues, due to ageing and uncertainties around future productivity trends.

... but the contribution base was eroded

Long periods of unemployment have resulted in lower lifetime earnings for the current working age population. This means that the contribution base of most pension schemes is lower, but also that the future retirement funds of those with precarious current employment are small.

Healthcare cuts will affect long-term costs ...

Healthcare spending has a usual upward trend in the OECD countries, which continued during the first two years of the crisis. During 2010-11, however, it stagnated for unprecedented 2 years. It declined dramatically in the countries worst hit by the crisis, such as Greece, Iceland and Ireland. The majority of reductions came from cuts in administration costs, medical goods and preventive care. The latter may cause an increase in healthcare costs in the near future. The increase in inequality as a result of the crisis has meant that access to healthcare has become more unequal and low-income households have suffered worst.

Unemployment insurance spending increased ...

Spending on unemployment insurance increased substantially. It more than doubled for 10 OECD countries in the period 2007 to 2010. There are substantial differences in the coverage of unemployment insurance schemes across countries. Where spending on unemployment insurance did not rise, considerations must be raised as to the adequacy of such schemes and the contribution to rising inequality.

... especially among the young

Young and old workers were most affected by the downturn in the business cycle. While people older than 65 were protected by pension schemes, young people, aged 18 to 25 were particularly hard hit with a more than 1.5% increase in relative poverty in the OECD average. Youth unemployment also soared, with countries worst hit being Estonia, Greece, Spain, Portugal and Italy.

- **New approaches / policy implications**

This project was a stock-taking exercise assessing the performance of social security schemes. The results shed light on the ability of the fiscal apparatus to prop up social security systems in an economic downturn.

The experience of past reforms offers lessons ...

Past episodes of reform of social institutions were reviewed, such as pension systems and their evolution in the US, UK, Sweden and Germany, and healthcare provisions in Finland among others. These provide lessons on the conditions for the success of reforms and their implementation.

... on how to build more sustainable social security systems ...

Successful reforms have been prepared long in advance by independent commissions, which helped build consensus among policy makers and the public, illustrated for instance by the German and Swedish pension reforms in the 2000s. This has allowed for reserve funds to be built up, for the public to anticipate the changes, and ultimately to boost sustainability of social security. In terms of healthcare reforms, hard budget constraints and decentralisation of financing as well as spending (as illustrated by reforms in Finland in the 1990s) helped align health provision incentives and promote sustainability. Unemployment insurance systems with a larger risk pooling mechanisms have historically provided a better balance between sustainability and adequacy in provision of cover than fragmented systems.

Providing incentives for multiple funding sources (for healthcare and pension contributions), matching social contribution to changing demographic trends (such as ageing), and taking into account unemployment support versus incentives to look for work trade-offs, can support long-term sustainability of such systems.

... which underpin social and economic stability

The social and economic environment is inevitably uncertain and policy makers have the difficult task of striking the right balance between generous provisions in times of crisis and ensuring long term sustainability of social security systems due to their intertemporal nature.

- **Project papers**

Fall, F., Pisu, M., Pareloussen J., Bloch, D., (2014) "Vulnerability of social institutions: lessons from the recent crisis and historical episodes" *OECD Economic Department Working Papers*, N: 1130, OECD, Paris

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C5: Promoting inclusive growth through better regulation

- **Theme of the project**

Regulatory policy has a role in supporting the inclusive growth agenda...

Since the crisis of 2008 there has been a shift in economic policy thinking that was focused on growth to a more nuanced set of objectives focused on improving wellbeing. Together with public expenditure and the fiscal apparatus, regulation policy is a key lever in ensuring welfare and economic prosperity. The principles and tools of regulatory policy can contribute to embedding from the outset the perspectives of multiple stakeholders in rulemaking to ensure an efficient and equitable reform process.

...via cost-benefit analysis tools, such as Regulatory Impact Assessment (RIA)

Empirical evidence, however, suggests that the potential of regulatory policy remains largely untapped. Despite progress on reform since the outset of the crisis, countries still struggle to use regulation in a strategic fashion to promote inclusive growth. A tool, such as the Regulatory Impact Assessment (RIA) can help integrate the issues of inclusive growth into a process of regulatory revision and further development. RIA is a multi-criteria analytical tool that can play a role in revealing and monitoring the trade-offs between economic, social and environmental effects of potential regulatory responses. Furthermore, it can provide the evidence needed to balance various policy objectives and manage related trade-offs.

- **Results of the work stream**

Evidence of countries using RIA to assess and monitor regulation for inclusive growth has been collected from the 2014 OECD Survey of Regulatory Indicators, publicly available RIA guidelines and country-specific assessment exercises.

RIA can support the evaluation of regulatory policy for inclusive growth by assessing the impact on specific social groups...

Many countries include the assessments of regulatory impact on specific social groups, in particular disadvantaged groups. However, the examination of some RIA examples has revealed that in the majority of countries these assessments focus only on macro groups (e.g. government, industry, total population) without analysing the effects on specific population groups.

...on gender equality...

Many countries are integrating the impacts of regulation on gender equality into RIA. However, there is heterogeneity in the countries' practices in doing so. In some cases, the examination of gender equality is enshrined in legislation. In other cases, there is no explicit requirement and gender issues are considered when relevant. In fewer cases, legislation requires gender impact analysis separate from RIA.

...on poverty...

Poverty impacts are rarely assessed in the RIA process. The limited integration of this issue may result from the fact that the poverty impact is already covered by the RIA, through the impact on social groups; or by the fact that this specific issue (impact on poverty) is a key factor only in poorer countries.

...and employment...

Similarly, few countries integrate the impacts of regulation on employment and job creation into RIA. This may be due to methodological constraints in measuring and attributing the impact. It is however quite surprising given the pressure put on policies by rising unemployment and the high level of political interest in fostering job creation.

- **New approaches and policy implications**

Most countries are at an early stage in using their regulatory management tools in a strategic manner, especially to address inclusive growth. While the assessment of distributional consequences of regulatory policy appears to be

mainstream, in the majority of cases such exercises remain do not evaluate specific impacts.

RIA may need to be broadened to support the integration of inclusive growth into regulatory policy...

To ensure that the multiple dimensions of inclusive growth are covered in regulatory policy assessment, RIA may need to be complemented with the systematic use of other tools. While other evaluation tools can be used to assess and monitor the regulatory effects on the different domains of inclusive growth, most tend to be outside the regulatory policy domain. Additional assessments can be added to regulatory policy assessment or an integrated approach can be taken, where a cost-benefit analysis is just the first step and then multiple assessment tools kick in during the process. Of course the choice of strategy will depend on needs and resources available.

...with social impact assessment (SIA) and environmental impact assessment (EIA)

An integrated assessment and monitoring approach may need to be complemented in particular with social and environmental assessment tools. Such an approach would theoretically allow for greater consideration of the trade-offs across the various policy objectives and a more coherent approach to policy making. Some academics argue however that more integrated approaches may weaken social and environmental considerations by overloading RIA procedures. However, a full understanding of the pros and cons of alternative strategies is still missing and could be the object of future research.

- **Project papers**

Kauffmann, C., Erbacci, A., (2015) 'Promoting inclusive growth through better regulation: the role of regulatory impact assessment' [GOV/RPC\(2015\)4](#)

**C6: Implications of globalisation for competition policy:
the need for international co-operation in merger and cartel enforcement**

- **Theme of the project**

Competition law enforcement preserves the integrity of the free market...

Competition law enforcement exists to preserve the integrity of free markets, undistorted by anti-competitive conduct. More vigorous competition has two main benefits: first, it protects consumers from companies that may, at times, seek or use market power to raise prices or reduce outputs. Second, it promotes productivity growth.

...not just in the OECD but globally...

Historically based within OECD countries, competition law has gone global in the last 20 years. There has been a sixfold increase in the number of jurisdictions with competition law enforcement since 1990, from fewer than 20 to about 120 today.

...but this presents challenge for co-ordination between competition authorities

The past decades have witnessed a rapid globalisation of economic activity which has significantly changed the character of the world economy. Globalisation results in large economic benefits but poses challenges for competition authorities, who must respond to anti-competitive conduct and mergers which increasingly have cross-border effects.

- **Results of the work stream**

Competition law cases increasingly have an international dimension...

There is compelling evidence that the international dimension of competition law cases has increased.

- In recent years, more than 90% of fines against cartels by the US authorities have been international. The number of cartel cases investigated in the European Union involving a participant from outside the EU has increased by more than 450% since 1990.
- Mergers and acquisitions inherently involve cross-border dimensions and multiple competition authorities when merging companies are global operators with a geographical overlap. Mergers and acquisitions with a cross-border dimension have increased about 250%-350% since 1990.

International agreement have forged consensus on the goals of competition law ...

Significant efforts have been made to ensure that jurisdictions adopt common principles and analytical approaches to assessing anti-competitive conduct and mergers. Today, despite the different wordings in national competition statutes, most authorities agree on the goals for competition law, on the principles underpinning a sound competition policy, and on the appropriate tools to investigate and assess business conduct and transactions.

...and effective co-operation between competition authorities has improved...

Co-operation has improved with the increasing number of co-operation agreements between competition authorities. These agreements are typically bilateral, with the most significant exception being the European Union's network for co-operation between competition authorities. A few competition authorities – such as those in the US, EU, Canada, Japan, the Republic of Korea and Australia – co-operate frequently but most other authorities have little co-operating on enforcement cases. Even the closest bilateral arrangements make no provision to recognise the interdependency of decisions, and lack formal mechanisms to avoid inconsistency. Rather, their value is limited to information exchange.

...but global merger cases present a particularly complex challenge...

Competition authorities can generate harmful externalities on one another's economies if the authorities disagree about the effects of a global merger. Furthermore, a decision to block a merger by a large jurisdiction effectively vetoes it. Therefore, mergers involving the largest global companies will become increasingly difficult, as multiple approvals are

required and the merger must satisfy the most cautious of investigating authorities. Administrative costs from multiple parallel investigations are high and delays in closing deals impose a variety of costs on business.

... as do global cartels

Similarly, global cartels might face parallel investigations, with some jurisdictions much better able to prosecute price-fixing behaviour than others. When the cartel has effects in one jurisdiction, but several of the firms involved are headquartered elsewhere, enforcement might be patchy and inconsistent. In some cases, in the absence of co-operation from a foreign jurisdiction, a competition authority will be unable to investigate and prosecute a global cartel.

- **New approaches and policy implications**

The harm from co-ordination failure in competition law can be substantial...

Co-ordination failure can have a number of perverse effects. In particular, (1) inconsistent international treatment of the same merger could lead to an otherwise harmless and efficient merger being blocked or a merger deemed harmful by certain jurisdictions being permitted; (2) refusal of requests to co-operate can make it difficult for competition authorities to enforce their national laws; (3) duplicative and potentially excessive amounts of information are generated by multiple jurisdictions.

Since 1995, merger deals affected by divergent jurisdictional decisions had a deal value of approximately USD 100 billion. Inability to detect global cartels could account for damages to consumers that, for some cartels, could exceed USD 100 million. Annual administrative costs from multiple merger filings of a complex transaction can easily exceed several millions USD.

...and the rationale for strengthening co-operation is increasing...

First, international business is more globalised, and there is still considerable scope for further economic integration. Secondly, there are more competition authorities (because there are more jurisdictions with competition laws), so the complexity of co-operation – which we measure by the number of pairs of authorities needing to co-operate – has increased substantially: by 53 times since 1990, for cartel cases, for example. The number of competition cases with an international dimension will continue to grow rapidly, even if the spread of competition laws now levels off as almost all major economies have competition authorities in place.

...hence new approaches to international co-operation in enforcing competition law are needed

Techniques for bilateral co-operation have improved since the mid-1990s, thanks in part to the efforts of the OECD and other international bodies, as well as through the efforts of the authorities themselves. Continuing, and deepening, the existing system of bilateral co-operation is important. However, making it work will be increasingly complex, as business becomes ever more globalised, spanning more and more jurisdictions enforcing competition law. In the face of this challenge, updating or renewing the current co-operation frameworks may be necessary. An important first step in this direction has been taken by revising the OECD Recommendation concerning International Co-operation on Competition Investigations and Proceedings in September 2014.

- **Project papers**

OECD (2014) “New Approaches to Economic Challenges – Implications of globalisation for competition policy: the need for international co-operation in merger and cartel enforcement” [DAF/COMP\(2014\)4/REV1](#)

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