Economic Policy Reforms

Going for Growth

INTERIM REPORT

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Economic Policy Reforms 2016

GOING FOR GROWTH
INTERIM REPORT

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Going for Growth *was launched in 2005 as a new form of structural surveillance complementing the OECD's long-standing country and sector-specific surveys. In line with the OECD's 1960 founding Convention, the aim is to help promote vigorous sustainable economic growth and improve the well-being of OECD citizens.*

This surveillance is based on a systematic and in-depth analysis of structural policies and their outcomes across OECD members, relying on a set of internationally comparable and regularly updated policy indicators with a well-established link to performance. Using these indicators, alongside the expertise of OECD committees and staff, policy priorities and recommendations are derived for each member and, since the 2011 issue, six key non-member economies with which the OECD works closely (Brazil, China, India, Indonesia, Russian Federation and South Africa). From one issue to the next, Going for Growth *follows up on these recommendations and priorities evolve, not least as a result of governments taking action on the identified policy priorities.*

Underpinning this type of benchmarking is the observation that drawing lessons from mutual success and failure is a powerful avenue for progress. While allowance should be made for genuine differences in social preferences across OECD members, the uniqueness of national circumstances should not serve to justify inefficient policies.

In gauging performance, the focus is on GDP per capita, productivity and employment. As highlighted in the past and again in this issue, this leaves out some important dimensions of well-being. For this reason, Going for Growth *regularly features thematic chapters dedicated to these other dimensions, and increasingly looks at the side effects of growth-enhancing priorities on other government policy objectives.*

Going for Growth *is the fruit of a joint effort across a large number of OECD Departments.*

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Editorial
Restoring healthy growth: policies for higher and more inclusive productivity

A pickup in global growth remains elusive, almost eight years after the financial crisis erupted. The recovery in advanced economies is still muted, particularly in the euro area and Japan, while growth has slowed in emerging-market economies (EMEs). Trade and investment remain weak, while jobs and wage growth have been disappointing. Financial markets are increasingly volatile as capital searches for both yield and safety. Getting back to healthy and inclusive growth calls for urgent policy response, drawing on monetary, fiscal, and structural policies working *together*: On the one hand, demand policies alone will not restore sustainable growth; but on the other hand, policies to strengthen competition and innovation, spur job creation, and repair financial systems to fund investment will only yield results if there is enough demand.

This 2016 *Going for Growth* report underscores the importance of synergies among policies in designing policy packages. Policy coherence across a broad range of reform objectives such as product market competition, labour mobility and financial market robustness is critical to create an environment conducive to innovation and resource reallocation, which are crucial to reverse the widespread slowdown in productivity and the rise in inequality.

Productivity – a central ingredient in the pursuit of wellbeing – has been decelerating in a vast majority of countries, with the slowdown going back to around 2000, at least in advanced economies. While this may partly reflect measurement issues, a common set of unsettling trends lie behind the aggregate slowdown: the dispersion of productivity growth across firms within industries, the decline in the growth rate of investment in knowledge-based capital, and the reduction in the pace of business creation. These trends are outcomes from problems in the basic policy environment – market competition and innovation, labour market institutions, financial structure and robustness – which also contribute to unfavourable trends in income distribution.

In addressing the productivity and inclusiveness challenges, governments need to keep in mind the basic policies that underpin these developments, and hence the need for coherent policy packages. Start with narrowing the productivity gap across firms, which requires a better diffusion of innovations from leading to lagging firms. Since leading firms are mostly multinationals, the intensity of cross-border connections via trade, FDI, global value chains and the mobility of skilled labour is crucial for the diffusion of knowledge and technologies from these globalised "frontier" firms to national firms.

Giving international trade a fresh boost requires that recent multilateral agreements in this area be forcefully implemented but also that efforts be made to further reduce barriers in the form foreign ownership restrictions or preferential treatments of domestic suppliers

with respect to public procurement, taxes and subsidies. In several EMEs – notably Brazil, India and Indonesia – barriers to infrastructure investment need to be addressed to significantly improve the transport and logistic services that underpin cross-border trade.

Next, consider improving knowledge diffusion and making the most of new technologies, which necessitates synergic investments by lagging firms in various forms of knowledge-based capital such as R&D, skills and organisational know-how. Despite the need to revive investment in knowledge-based capital, the incidence of innovation policy reforms appears to have steadily fallen in recent years, as documented in this report.

Furthermore, for reforms in the area of innovation to pay off, firms need the right incentives to strive for the development of new and better-quality products at lower costs. Strong product market competition provides such incentive. In this regard, the decline in business start-ups in advanced economies could be a sign that barriers to entry, including through the financial system, have been creeping up and hence that the strength of competition is eroding.

Re-examination is needed of competition policy, bankruptcy legislation and product market regulations to facilitate entry and exit, and to provide a level playing field between new firms and incumbents. As emphasised in this report, pro-competition reforms are particularly needed in services where the scope for both job creation *and* productivity gains remains large. This is especially true for Germany, Japan and Korea where the gap in productivity between services and manufacturing is the largest among advanced economies, but also for China as the economy goes through a challenging rebalancing from manufacturing to services.

Deeper global integration and the growing reliance on intangible forms of capital stresses the importance of collective policy approaches in the areas of competition law enforcement, regulatory harmonisation, basic research and the taxation of mobile capital. One major achievement in 2015 has been the global agreement on a list of measures to limit tax avoidance by multinationals through the so-called Base Erosion and Profit Shifting (BEPS) action plan elaborated under the auspices of the G20 and the OECD.

In addition to fostering competition, product market reforms also facilitate the reallocation of resources from low- to high-productivity firms. The efficiency of resource allocation would be further enhanced with measures to reduce barriers to labour mobility, notably those linked to housing markets. In turn, to ensure that resource reallocation truly serves wellbeing, workers need to be better equipped and offered real opportunities to adapt skills. Adult learning programmes should thus focus more strongly on skills complementarity with technological progress so as to help to reduce skills mismatch and to facilitate adaptation to the rapid change in the nature of tasks associated with specific jobs. Improving the matching of skills to jobs raises productivity and reduces inequality.

Sustained growth and job creation are the best ways to improve income distribution, since the low- income and less-skilled bear the brunt of economic downturns. A challenge for several advanced economies – in particular those facing persistently high unemployment such as France, Italy and Spain – is to shift social protection from specific jobs to individuals so as to better support the process of jobs and firms turnover that underpins dynamic, growing economies. Reforms in this area will help to improve job opportunities for youth and low-skilled workers, particularly hard hit by unemployment. For emerging economies, stronger social protection is needed to reduce informality and inequality, while fostering domestic consumption.

Strong employment growth is critical to ensure that growth benefits all segments of society, but it is not sufficient. In several countries, a large and rising share of the growth benefits have accrued to high-income households, while income at the bottom has been stagnant for many years. In the United Kingdom and in particular the United States, reforms to provide better access to high-quality education for students from disadvantaged backgrounds combined with measures to make the tax system more efficient and equitable would help to make growth more inclusive. In some countries such as Italy and Korea, household income has not kept up with GDP gains over the past two decades. Chapter 3 of this report explores the channels through which the income generated through GDP is transmitted to households.

Given the breadth and evolving nature of the growth and inclusiveness challenges facing advanced and emerging economies, the slowdown in the pace of structural reform documented in this report is deeply concerning. While the pace of reform should be accelerating to restore sustainable and equitable growth, the pace of reforms appears to have steadily declined since 2011-12. While some countries have made considerable efforts, many have taken very little action and countries with ambitious reform programmes, such as in India, Japan and Turkey face significant political challenges and the risk of losing momentum. Progress has been made on the G20 action plan to raise reform efforts, but much remains to be fully implemented.

Given the weak demand environment, structural reform packages that promote productivity should focus as well in design on maximising short-run growth gains. Chapter 2 of this report reviews the issues and evidence on the impact of reforms introduced in a difficult economic conjuncture for their outcomes in terms of both productivity and income distribution. Reform strategies that put more weight on shifting the composition of public spending towards investment, facilitating the entry of new firms in services, and reducing barriers to labour mobility are most likely to boost activity in the short term, with the support of demand policies and a repaired financial sector. More vigorous reform efforts from euro area countries with a large current account surplus would also help to ensure that the current growth pick-up in that region does not succumb to internal divisions and external headwinds. All countries contributing collectively to reform efforts and to supportive demand improves the prospects for a return to higher productivity and more inclusive growth both at home and in the global economy.

Catherine L. Mann
OECD Chief Economist

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AUS	Australia	AUD	ISL	Iceland	ISK
AUT	Austria	EUR	ISR	Israel	ILS
BEL	Belgium	EUR	ITA	Italy	EUR
BRA	Brazil	BRL	JPN	Japan	JPY
CAN	Canada	CAD	KOR	Republic of Korea	KRW
CHE	Switzerland	CHF	LUX	Luxembourg	EUR
CHL	Chile	CLP	LVA	Latvia	LVL
CHN	China	CNY	MEX	Mexico	MXN
CZE	Czech Republic	CZK	NLD	Netherlands	EUR
DEU	Germany	EUR	NOR	Norway	NOK
DNK	Denmark	DKK	NZL	New Zealand	NZD
ESP	Spain	EUR	POL	Poland	PLN
EST	Estonia	EUR	PRT	Portugal	EUR
FIN	Finland	EUR	RUS	Russian Federation	RUB
FRA	France	EUR	SVK	Slovak Republic	SKK
GBR	United Kingdom	GBP	SVN	Slovenia	EUR
GRC	Greece	EUR	SWE	Sweden	SEK
HUN	Hungary	HUF	TUR	Turkey	TRL
IDN	Indonesia	IDR	USA	United States	USD
IND	India	INR	ZAF	South Africa	ZAR
IRL	Ireland	EUR			

Note: EU refers to the average of 21 European Union members of the OECD.

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Executive summary

Global growth prospects remain clouded in the near term, with emerging-market economies losing steam, world trade slowing down and the recovery in advanced economies being dragged down by persistently weak investment. These near-term concerns arise against the background of a widespread deceleration of productivity gains, with the downward trend going back to early 2000s – at least in advanced economies – and with little signs of revival. The growth slowdown observed among emerging-market economies over the past couple of years also raises questions about their capacity to further closing the income gap vis-à-vis most advanced countries. The case for structural reforms, combined with supporting demand policies, remains strong to sustainably lift productivity and the job creation that will promote improvements in equity.

Going for Growth offers a comprehensive assessment to help governments reflect on how policy reforms might affect their citizens' wellbeing and to design policy packages that best meet their objectives. The *Going for Growth* framework is instrumental in helping G20 countries to monitor their efforts to fulfil the pledge made in 2014 of boosting their combined gross domestic product (GDP) by 2%, and to adapt their growth strategies accordingly.

This interim report reviews the main growth challenges faced by OECD and selected non-OECD countries and takes stock of progress over the past year or so in adopting structural policy reforms to address them (Chapter 1). This is examined in light of the thrust of the country-specific priorities identified in the 2015 issue of *Going for Growth*. The potential implications of growth-enhancing reforms for inclusiveness and macroeconomic rebalancing are also discussed, with a focus on public finance consolidation, the narrowing of current account imbalances, and the reduction of income inequality.

The report also reviews the issues and evidence on the impact of reforms implemented in a context of persistently weak demand as well as under different cases regarding the availability or effectiveness of macroeconomic policies in supporting the reforms (Chapter 2). Finally, the report provides an assessment of the link between income generated from GDP and income distributed to households (Chapter 3). In particular, it examines how the main channels through which GDP growth is transmitted to the household sector have evolved over the past two decades across OECD countries.

Policy reform challenges

- In devising reform strategies to sustainably improve the wellbeing of a majority of citizens, governments around the world need to address deep structural weaknesses that the crisis laid bare, but which in many cases originated well before.
- The global slowdown in productivity growth has been characterised by the widening of the dispersion of productivity growth across firms within industries, in particular

between frontier firms – essentially multinational enterprises which have maintained steady productivity growth – and all other firms that operate well within the productivity frontier. Removing barriers that stifle entrepreneurship and limit the capacity of firms to make the most of knowledge and technological diffusion is a reform priority.

- Reducing unemployment continues to be a major challenge for many countries, particularly so in Southern and Central European countries where long-term unemployment remains particularly high. Other countries have been facing relatively high rates of labour market withdrawals (e.g. United States), low labour force participation of women (Korea and Japan) or a high incidence of informal employment (most emerging-market economies). Addressing these labour market challenges is a priority to make growth more inclusive.

Progress achieved in 2015

- Even though progress is made in tackling some of the main challenges, the slowdown in the pace of reforms observed in 2013-14 has continued in 2015, even after taking into account measures that are in the pipeline but that have yet to be fully implemented.
- The pace of reforms has varied both across countries and policy areas.
  - It continues to be generally higher in Southern European countries (in particular Italy and Spain) than among Northern European countries. Outside Europe, countries where a relatively high number of measures related to *Going for Growth* recommendations have been taken include Japan among advanced economies, and China, India and Mexico in the case of emerging economies.
  - Relatively more actions have been taken to lift the labour force participation of women and to improve educational outcomes, while fewer actions are observed in the areas of innovation policy, public sector efficiency or product and labour market regulation.
- In countries where income inequality is a particular concern, the majority of actions taken on policy priorities are likely to help narrowing the income distribution. However, recent actions taken to boost growth are unlikely to help countries with largest current account deficits to narrow their external imbalances.

Reforming in a context of weak demand

- Against the background of subdued global economic prospects, there is a good case for prioritising reforms that in addition to stimulate employment and productivity, can best support activity in the short term.
  - Aside from raising investment in public infrastructure, these include reductions of barriers to entry in services sectors with pent-up demand, reforms of benefit entitlements in the areas of health and pension, as well as reforms of housing policies and job-search assistance programmes to facilitate geographic and job mobility.
  - Increasing the short-term payoff from structural reforms also requires that remaining financial sector dysfunctions be addressed so as to improve the flow of credit to households and firms with limited access to financial markets.
  - In the euro area, a greater synchronisation of reforms would also help reduce the transition costs by giving greater scope to monetary policy to mitigate the potential rise in real interest rates resulting from persistently low inflation.

- ❖ Countries with very limited budgetary room may have to prioritise on high short-term returns or on low-cost measures and ensure that others are financed through means that are as friendly as possible to employment and growth.

GDP growth and aggregate household income

- Real GDP has tended to grow by more than real household income in the majority of OECD countries between the mid-1990s and 2013.
- This growth gap is partly due to factors having little policy traction, in particular the fact that consumption prices (which include VAT) have tended to rise relative to production prices over the period under consideration, the only exceptions being commodity exporters such as Norway, Australia and Canada.
- The household income share of GDP, simply defined as the ratio of nominal household disposable income over nominal GDP, has been stable over the period under consideration and on average across OECD countries. This average stability masks heterogeneity in both the level and evolution across countries, with a large decline observed in Austria and Korea and a large increase in the Slovak Republic and Finland.
- Developments in the household income share of GDP can be assessed by looking at the profile of households' labour, capital and secondary (i.e. net government transfers) income share of GDP. A large number of countries have experienced a concomitant decline in the labour share of GDP and in the share of capital income going to households, suggesting that a rising share of profits has been retained by the corporate sector instead of being redistributed to the household sector.
- Yet, there are no clear links between the changes in income distribution between the household, corporate and government sectors of the economy on the one hand, and the rise in income inequality within the household sector experienced by many OECD countries, on the other.

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Chapter 1

Overview of structural reforms in the policy areas identified as priorities for growth

This chapter reviews the main growth challenges faced by OECD and selected non-OECD countries and takes stock of the progress made since 2015 in the adoption and implementation of structural policy reforms to address these challenges. Progress is assessed on the basis of actions taken in response to Going for Growth policy recommendations. The chapter also discusses the potential effect of the reforms on policy objectives other than GDP growth, in particular public finance consolidation, narrowing current account imbalances and reducing income inequality.

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Overview of structural reforms in the policy areas identified as priorities for growth

Main findings

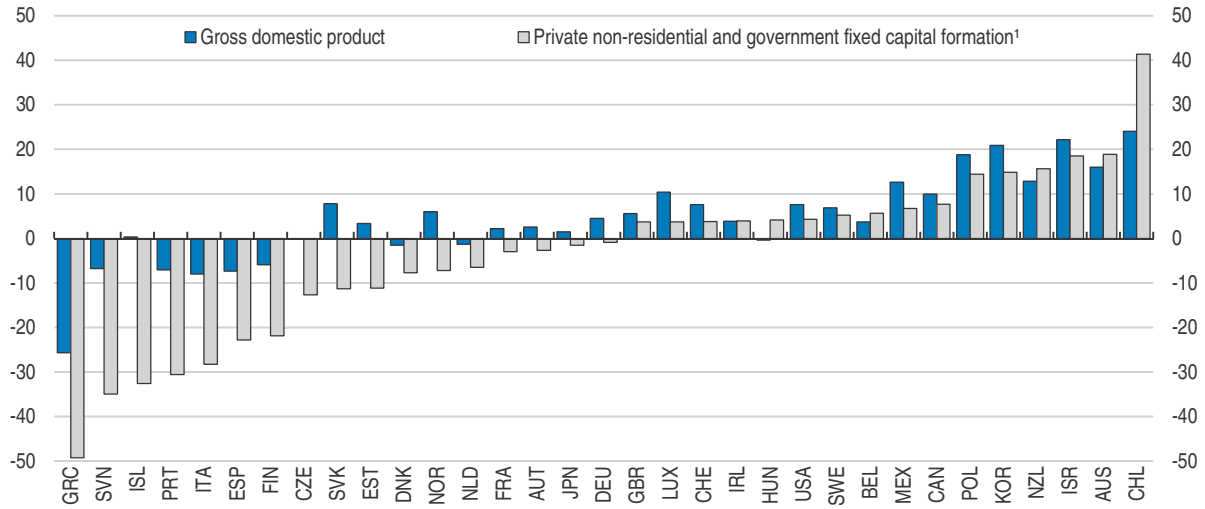
- The slowdown in the pace of reforms observed in 2013-14 has continued in 2015, even after taking into account measures that are in the pipeline but that have yet to be fully implemented.
  - On average across advanced economies, about 14% of the reform recommendations found in *Going for Growth* have been fully implemented in 2015, while another 36% are in the process of implementation.
  - For emerging economies, fewer recommendations have been fully implemented in 2015 but initial steps have been made on around 44% of recommendations.
  - The share of implemented recommendations has generally been higher in Southern European countries (in particular Italy and Spain) than in Northern European countries.
  - Outside Europe, countries where a relatively high number of measures related to *Going for Growth* recommendations have been taken include Japan among advanced economies and China, India and Mexico in the case of emerging economies.
- The intensity of reforms has also varied across policy areas. Relatively more actions have been taken to lift the labour force participation of women, reduce the labour tax wedge and to improve educational outcomes, while fewer actions were observed in the areas of innovation policy, public sector efficiency or labour market regulation.
- Against the background of weakening global economic prospects, there is a good case for prioritising reforms that in addition to stimulate employment and productivity, can best support activity in the short term.
  - Aside from higher investment in public infrastructure, these include reductions of barriers to entry in services sectors with pent-up demand as well as reforms in the area of housing policies and job-search assistance to facilitate geographic and job mobility.
  - Countries with very limited budgetary room may have to prioritise on high short-term returns or on low-cost measures and ensure that others are financed through means that are as friendly as possible to employment and growth.
- In countries where income inequality is a particular concern, the majority actions taken on policy priorities are likely to help narrowing the income distribution.
- Recent actions taken to boost growth are unlikely to help the countries with largest current account deficits to narrow their large external imbalances.

Introduction

Global growth is set to disappoint in the near term, with emerging-market economies losing steam and the recovery in output and employment in advanced economies remaining uneven. While labour market weaknesses are still a major challenge for many countries, a key contributing factor across a majority of them has been the slowdown of productivity growth, reflecting both weak investment in physical capital (machines and equipment, physical infrastructure) and poor growth in multi-factor productivity. In most advanced countries, the recovery in non-residential investment is lagging behind that of GDP, substantially so among European countries (Figure 1.1). Lingering doubts about the strength and sustainability of domestic demand, a difficult access to finance and subdued growth prospects for the world economy are weighing down on investment (OECD, 2015a).

Figure 1.1. **Investment is lagging behind the recovery of GDP in most European countries**

The difference between the 2014 and 2008 levels, as a percentage of the 2008 level



1. The last available year is 2013 for Switzerland and Chile; 2012 for Mexico.

Source: OECD, *Economic Outlook Database*.

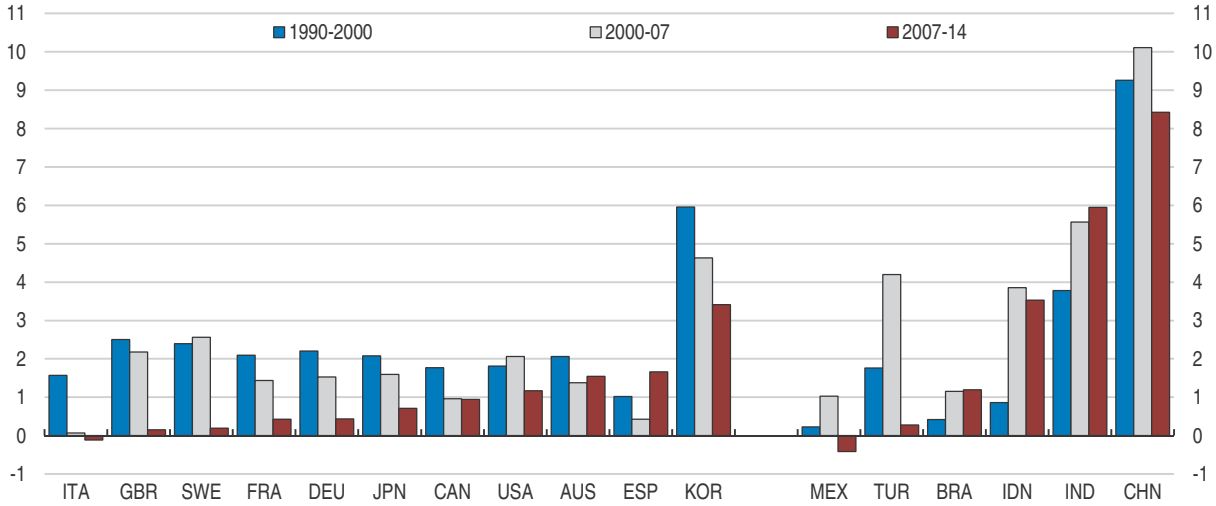
StatLink http://dx.doi.org/10.1787/888933323716

While the weakness of investment coincided with the crisis, the slowdown in multi-factor productivity among advanced countries goes all the way back to the early 2000s (Figure 1.2), an indication that deep structural weaknesses may cast a shadow on future growth prospects. The contributing factors deserving most attention include a slowdown in the diffusion of innovation from firms at the technological frontier – mostly multinationals which have enjoyed steady productivity growth – to lagging firms, weaker investment in knowledge-based capital and a decline in the pace of business start-ups (OECD, 2015b). Yet, in many OECD countries facing stagnant or falling working-age population and declining returns to higher education, the role of innovation as a source of productivity gains and medium-term rises in material living standards will become even more prevalent. In addition, many countries are still facing high long-term unemployment or relatively high rates of labour market withdrawals, in both cases contributing to skills erosion, social exclusion and income inequality.

Against this background, the case for ambitious structural reforms, combined with supportive demand policies, remains strong to lift potential growth. The 2015 issue of *Going for Growth* identified priorities and formulated explicit recommendations to address the

Figure 1.2. **Labour productivity growth slowed even before the crisis in advanced economies**

Average annual growth rate of GDP per hour worked,[1] percentage



1. GDP per employee for non OECD countries. For Brazil, Indonesia and Mexico data refer to 1991-2000 instead of 1990-2000.

Source: OECD, *National Accounts and Productivity Databases* and *International Labour Organisation (ILO) Database*.

StatLink http://dx.doi.org/10.1787/888933323721

key challenges. In essence, recommendations have been made i) to develop skills and knowledge-based capital, underpinned by the quality and inclusiveness of the education system, ii) to improve policy settings in competition and innovation to facilitate the entry of new firms and the smooth reallocation of capital and labour towards the most productive firms and sectors, iii) to make growth more inclusive by removing obstacles to higher employment and labour force participation of underrepresented groups such as women, youth, low-skilled and older workers and by encouraging faster reallocation to new jobs and ensuring that workers can up-grade skills.

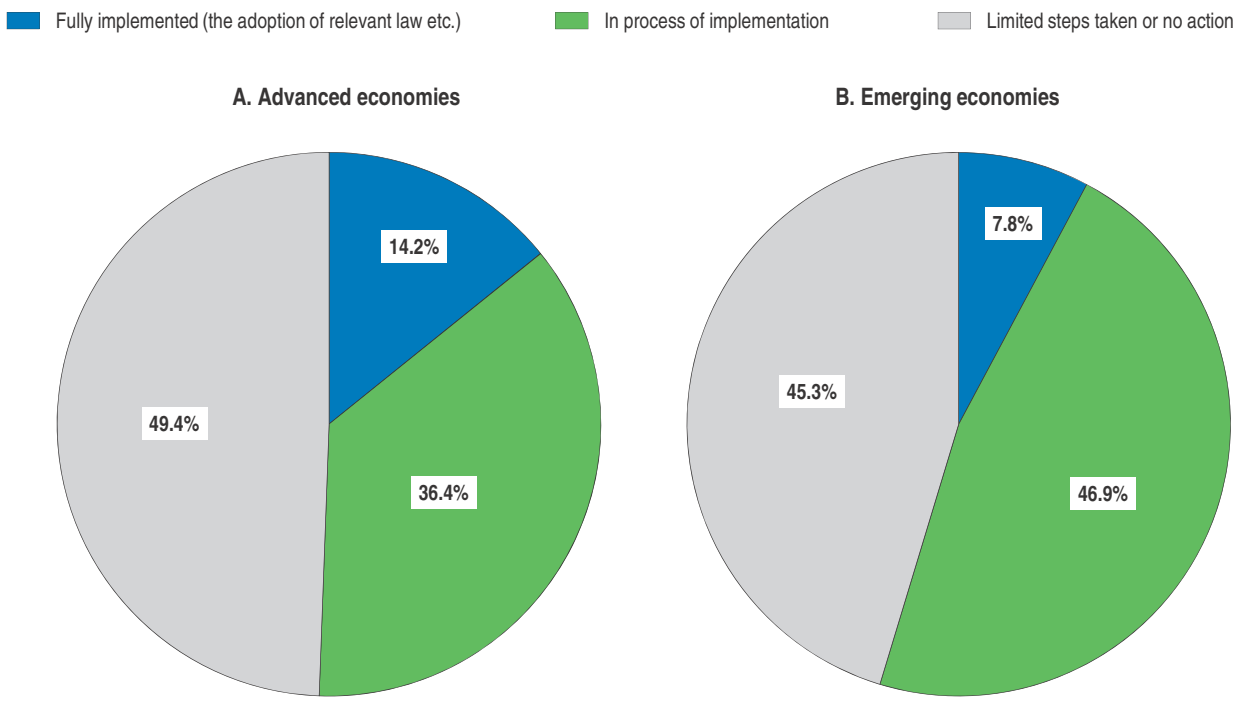
This chapter reviews the main growth challenges faced by OECD countries and selected non-OECD economies and takes stock of actions taken that relate to policy recommendations on reform priorities laid out in the 2015 issue of *Going for Growth*. The priorities are selected with a view to improving material living standards through employment and productivity gains. The policy areas covered include product and labour market regulations, tax and benefit systems, rules affecting foreign trade and investment, education and training, as well as innovation. The chapter specifically evaluates the extent to which the countries have addressed such reform priorities, mainly focusing on the actions taken in 2015. The implementation of reforms is defined as the introduction of relevant laws and decrees or appropriate measures (such as budgetary provisions) put in place for the reform to come into effect. It does not, however, evaluate how effectively those legislations or measures are enforced in practice.

The next section provides a global overview of the reform momentum in 2015 compared to previous periods. The subsequent section discusses the main challenges faced by countries and reviews actions taken on policy recommendations to address these challenges, with a special focus on developments that have taken place in 2015. The final section discusses the possible impact of recommendations on other important policy objectives, namely the reduction of income inequality as well as of budgetary deficits and current account imbalances.

A global overview of the progress on reform priorities

On average across advanced economies, about 14% of the reform recommendations found in the 2015 issue of *Going for Growth* have been fully implemented (that is, they were met with relevant legislation or significant budgetary provision) in 2015, while 36% were in the process of implementation (Figure 1.3 panel A). For emerging economies, although the share of the *Going for Growth* recommendations that have been fully implemented remained lower than in advanced economies, a higher proportion (44%) was in the process of implementation (Panel B). Taken at face value, these numbers indicate a marked slowdown in the pace of reforms in 2015 relative to the pace observed during the period 2013-14 (Figure 1.4, "fully implemented actions"). However, considering that legislative intensity can vary significantly from one year to the next, caution is needed in comparing the pace reported in one year (2015) relative to the pace averaged over a two-year period.[1] Still, even if one takes into account not only the policy measures fully implemented but also the ones in the process of implementation – which may or may not end up as fully implemented – the pace of reforms would remain below that of the past two years (Figure 1.4, "full-implementation of in-process measures").

Figure 1.3. **About 50 % of the *Going for Growth* recommendations have been implemented or are in the process of implementation**



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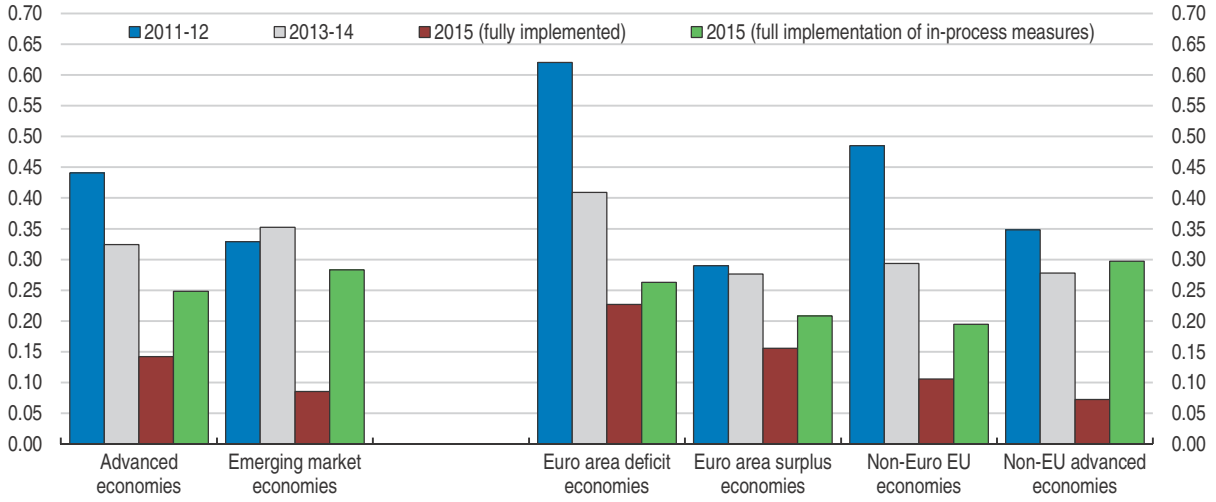
The actual pace of reform is more likely to lie somewhere between these two cases, confirming the slowdown of the reform momentum observed since the peak of 2011-12. The deceleration is most apparent in euro area economies, where it is now similar to the pace observed elsewhere. Furthermore, the pace of reform in the euro area (current account) surplus economies continues to be substantially below that of euro area deficits economies.

Figure 1.4. **The pace of reform has decelerated in 2015**

The share of implemented *Going for Growth* recommendations[1]

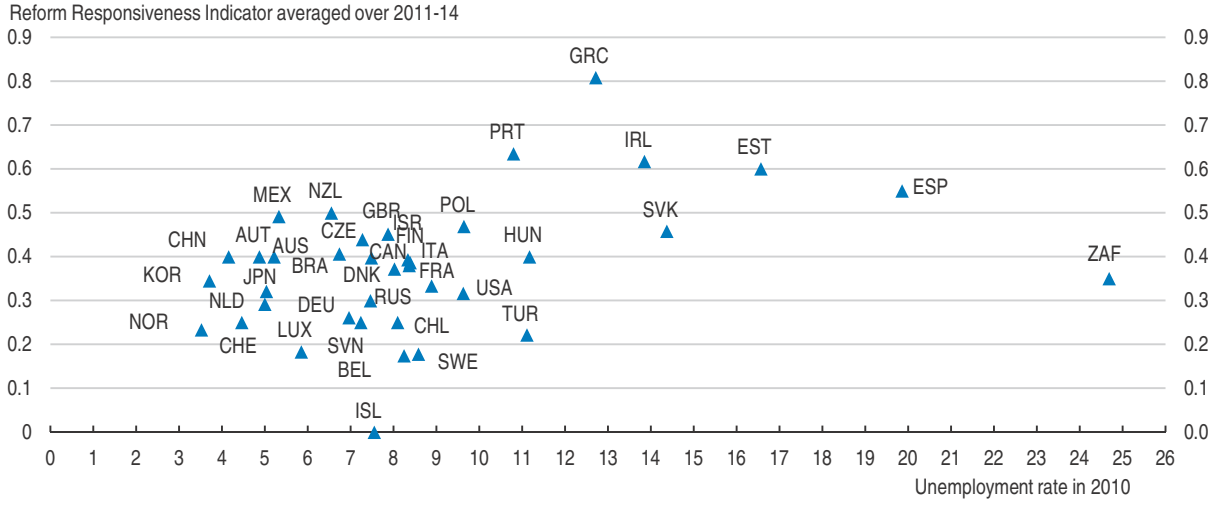


1. The chart illustrates the pace of reform in previous periods captured by the indicator of reform responsiveness (RRI) and the estimated level of responsiveness in 2015 based on two different scenarios to ensure comparability with previous two-year periods. See the *Going for Growth* 2010 issue for an explanation on RRI, and the main text on how the hypothetical RRI is computed. Following Ollivaud and Schwellnus (2013), the euro area surplus economies are defined as the euro area members for which the current account surplus was on average larger than 1% of GDP over the period 2000-05 (Austria, Belgium, Germany, Finland, Luxembourg and the Netherlands). The euro area deficit economies include the remaining members of the OECD euro area (France, Estonia, Greece, Ireland, Italy, Portugal, the Slovak Republic, Slovenia and Spain).

StatLink http://dx.doi.org/10.1787/888933323740

While in the aftermath of the crisis, the responsiveness to *Going for Growth* recommendations tended to be higher in countries that faced more difficult macroeconomic conditions – in particular a very high unemployment rate (Figure 1.5) – such relationship has been less apparent more recently: a high responsiveness has been observed across countries facing diverse macroeconomic conditions.

Figure 1.5. **The pace of reforms has been faster in countries facing hardest macroeconomic conditions**



Source: OECD, *Going for Growth* 2013, 2015 and *Labour Force Statistics Databases*.

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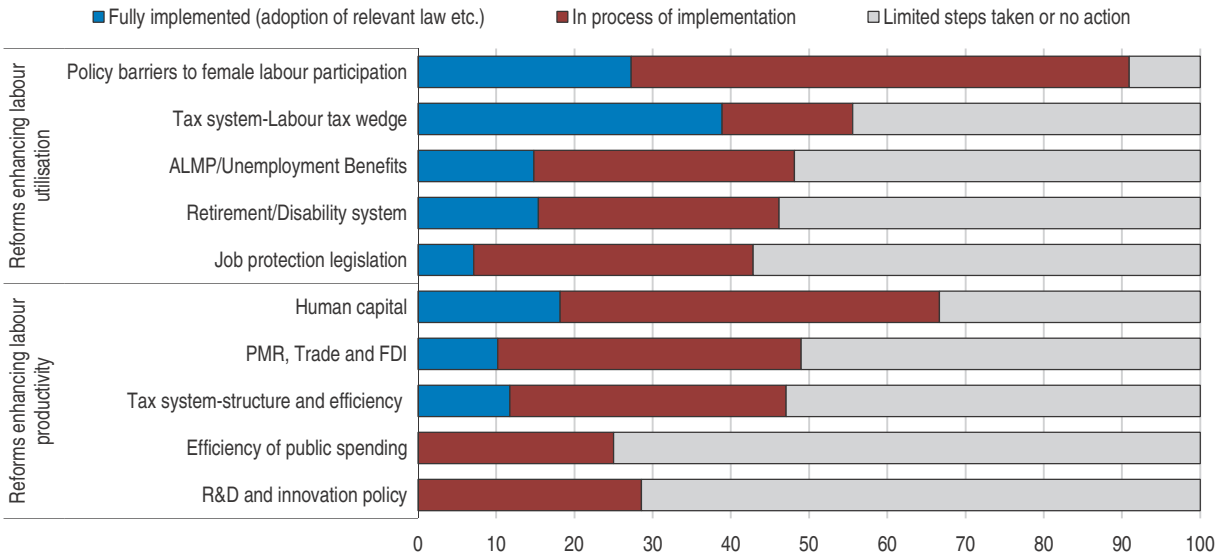
There is also notable heterogeneity in the responsiveness to *Going for Growth* recommendations across the main policy areas. Among the reforms that boost employment, the largest share of recommendations with actions implemented or in the process of implementation is observed in the area of barriers to the labour force participation of women, where action has focused on improving access to childcare services. On the other hand, labour taxation, especially on low-wage earners, is the area where the share of fully implemented recommendations is the highest. In the case of reforms that enhance labour productivity, the area where most action has taken place is education, with an emphasis on upgrading the contents of vocational training, improving teaching quality via revised curriculum and new evaluation system, or increasing provision of early childhood education. In contrast, relatively few actions have been taken in the areas of labour market regulation – where more substantial actions had been seen during the past few years – as well as in the area of innovation support and product market regulation (Figure 1.6).

Figure 1.6. **Reform intensity has been highest in the areas of education and of full-time labour force participation of women**[1]

Share of implemented recommendations, percentage



1. The chart summarises the share of recommendations made in *Going for Growth* 2015 by the status of their implementation. Full implementation refers to the adoption of relevant laws or equivalent measures.

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Yet, the weak global economic prospect calls for a stronger and more broadly-based reform efforts across countries, not least to improve confidence and prop up investment. The case is particularly compelling for reforms that in addition to stimulate employment and productivity can best support demand in the short term. Aside from a shift in the composition of public spending towards infrastructure investment, this includes reductions of barriers to firm entry in services sectors with pent-up demand as well as reforms in the areas of housing market policies and job-search assistance that can facilitate geographic and job mobility, thereby easing frictions in the reallocation of resources.

A welcome initiative promoting concerted actions to step up the intensity of reforms across major economies has been launched in November 2014 by G20 governments, which have committed to raise their collective GDP by 2018 by an additional 2% through an

ambitious package of structural measures and macroeconomic policies (see Box 1.1). The structural policies were assessed by the IMF and OECD as contributing more than 2% to G20 GDP by 2018 relative to the baseline if fully implemented. According to the joint assessment by the International Monetary Fund, OECD and World Bank, G20 countries are making progress towards implementing their commitments but more effort is needed for the full and timely implementation that would be needed to meet the GDP objective.

Box 1.1. **G20 Growth strategy and its implementation**

In November 2014, the leaders of G20 countries agreed to "ambitious but realistic" policies with the aim to lift the G20's collective GDP by at least 2% above the trajectory implied by the existing policies over the coming five years. All G20 countries submitted Growth Strategies (GS) that consist of macroeconomic policies to stimulate demand in the near term and structural reforms to lift employment and productivity through stronger competition, trade, as well as public and private investment. A wide range of reforms in product and labour markets, investments in public infrastructure, tax reforms and innovation policies were included in the GS.

This process brought a new level of ambition to global economic cooperation in this area. It was based on a clear quantitative target and backed up by specific and detailed reform commitments. While the process is member-led and based on peer review, it has been supported by analysis from international organisations including the OECD. This included an initial assessment of the policy priorities, based in part on *Going for Growth*.

Many measures committed by G20 countries in their GS overlap with reform priorities recommended in *Going for Growth*. Examples of such measures include regulatory reforms to reduce administrative burdens to business activities, increase spending on active labour market policies, vocational training and childcare service, and opening up service sectors to foreign competition.

This process was also supported by a joint quantification exercise by the IMF and the OECD that estimated the impact of the specific policy commitments. This estimated that the full implementation of GS would raise the G20's collective GDP by 2.1 per cent by 2018.

The OECD, together with the IMF and World Bank, is also supporting G20 countries to track progress on the commitments and has provided a quantitative assessment of impact of measures implemented before the 2015 G20 Summit in Antalya, Turkey.

Assessment of reform progress by country groups

This section reviews the main challenges and actions taken by countries on priorities identified in *Going for Growth*. For this purpose, the review of actions taken is organised around groups of countries sharing similar challenges and priorities (Box 1.2).

Group 1: Countries with extremely high long-term and youth unemployment (Greece, Ireland, Italy, Portugal, Slovak Republic and Spain)

Those countries, particularly hard hit by the crisis, have seen a recovery in output (with Greece being a notable exception) as a substantial reduction in unit labour costs improved their competitiveness. However, their unemployment rate remains painfully high, in particular the incidence of long-term and youth unemployment, which is the

Box 1.2. **Country grouping by common challenges**

For the purpose of this review, countries are grouped according to the common nature of the most pressing challenges as identified in the 2015 issue of *Going for Growth* and summarised here in the following set of tables. Challenges are examined at a level that allows for groupings that are as meaningful as possible, though some degree of arbitrariness remains inevitable. Many countries may be confronted with a similar challenge such as, for instance, high and persistent unemployment. But beyond this broad challenge, countries are also distinguished according to the more specific structural factors and policy weaknesses perceived to be contributing the most to that particular challenge. The country groups are shown in the table below.

With many countries sharing a great deal of challenges, there are some "borderline" cases, i.e. countries that could legitimately belong to another group than the one assigned in this exercise. For instance, Finland has been grouped with Austria, Belgium, France, Luxembourg and Slovenia on the basis of challenges such as low labour force participation of older workers and persistently high unemployment. However, it could also be seen as belonging to a group comprising mainly of Nordic countries.

Similarly, a few countries only share part of the characteristics on their group. For example, persistently high unemployment is not as big a concern in Austria as it is for other countries in the group. In fact, one country – Iceland – could not be fitted in any group and is not covered in the report. The European countries form four groups, while the rest of the OECD and BRIICS account for another four groups. The EU as such is not considered as a country and not covered in this report, although it is given recommendations in the *Going for Growth*.

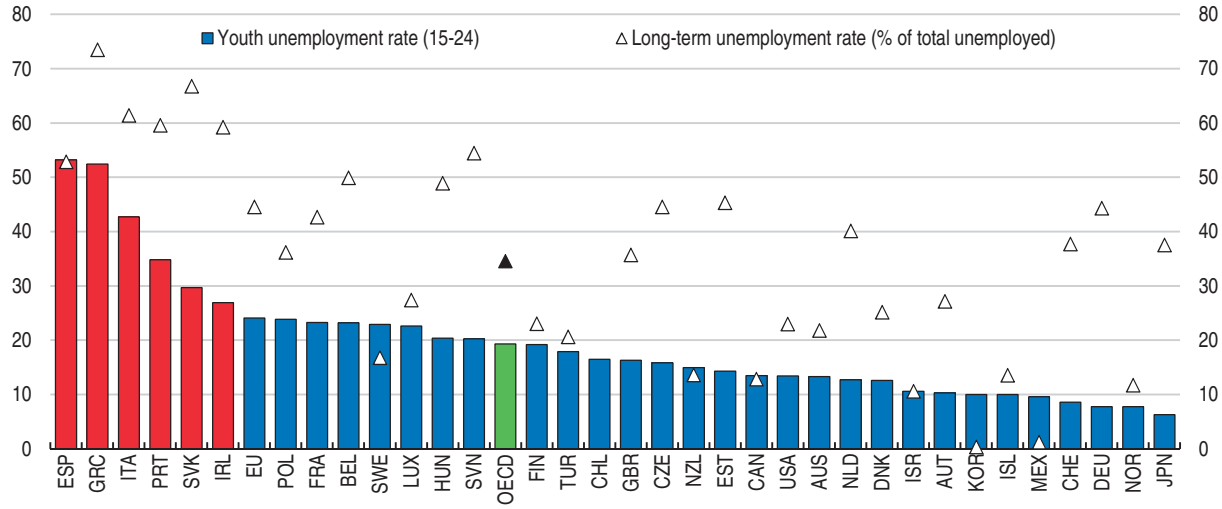
For further details on the identification and selection of reform areas as well as underlying empirical literature, see past issues of *Going for Growth*.

Country Group	Countries	Main challenges	Strengths
Group 1	Greece, Ireland, Italy, Portugal, Slovak Republic, Spain	Extremely high youth and long-term unemployment	Past labour market reforms improved cost competitiveness
Group 2	Czech Republic, Estonia, Hungary, Israel, Poland, Latvia	Large productivity gap vis-à-vis advanced OECD countries	High cost competitiveness and strong manufacturing base
Group 3	Denmark, the Netherlands, Norway, Sweden	Low average working hours and risks in housing markets	Highest productivity level among the OECD countries
Group 4	Austria, Belgium, Finland, France, Luxembourg, Slovenia	High unemployment and early exit from labour market	High productivity levels
Group 5	Australia, Canada, New Zealand, Switzerland, United Kingdoms, United States	Sluggish productivity growth and low return to KBC investment	Relatively flexible product and labour markets
Group 6	Germany, Japan, Korea	Low productivity in services sectors and limited full-time labour participation by women	Good manufacturing export performance and relatively low unemployment
Group 7	Chile, China, Mexico, Russian Federation	Large productivity gap vis-à-vis the advanced OECD countries	Large room for catch-up and strong manufacturing base or abundant natural resources
Group 8	Turkey, Brazil, Colombia, Indonesia, India, South Africa	High labour informality, infrastructure shortages and low educational attainments	Large room for catch-up and high population growth

highest among OECD countries (Figure 1.7). Such high long-term unemployment undermines long-run growth through skills erosion and reduces the prospect of career building and social mobility for affected youth, with the risk of a further widening of income inequality (OECD, 2015c).

Figure 1.7. **Youth unemployment rate and the share of long-term unemployed remain very high**

Percentage, 2014[1]



1. Data for long-term unemployment for Korea refer to 2013.
Source: OECD, *Labour Force Statistics Database*.

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Addressing youth and long-term unemployment requires the mobilisation of a broad range of policies…

The most pressing agenda for these countries is to mobilise a broad range of policies to improve job opportunities for the unemployed and to facilitate their return to work. Furthermore, reforms that raise productivity must be pursued to ensure mid- to long-term recovery in output and employment. All countries in this group should extend and improve the effectiveness of active labour market policies (ALMPs), in particular those related to job-search assistance, training programmes and hiring subsidies. Resources allocated to ALMPs in comparison to the caseloads are well below OECD average in those countries.

Recent policy actions in this area include:

- As the part of the *Jobs Act*, Italy has established the Active Labour Market Policies Agency (*Agenzia Nazionale per le Politiche Attive del Lavoro* or ANPAL) that coordinates ALMPs implemented by local authorities and those by the authority of the Ministry of Labour. Measures to ensure more effective monitoring and evaluation of ALMPs are also in the pipeline.
- Portugal launched in April 2015 the 43 million Euro programme "Reactivar" that seeks to improve job prospects for the long-term unemployed over 30 years of age by financing internships in the private sector during six months.
- The Slovak Republic implemented subsidies to support the first jobs for youth under 29. Furthermore, it is engaging in several reforms to enhance the effectiveness of ALMPs such as establishing a first point contact in Public Employment Services that allows more individualised job-search support or reallocation of labour officers in order to reduce the caseload per officer by half.

- Spain launched a new activation programme targeted at the long-term unemployed. It also introduced a reform of vocational training programmes that focuses on the specific needs of firms, while opening to competition the provision of training programs. The quality control of activation measures were also strengthened.

Other important labour market reforms recommended to those countries would enhance the effectiveness of ALMPs. They include expanding the coverage of unemployment benefits to workers not covered (Greece, Italy and Portugal), narrowing the gap in job protection between regular and non-regular workers (Italy and Spain) and increasing the flexibility of wage formation by reducing further the administrative extension of sectorial bargaining (Portugal and Spain). These countries have been quite active in those areas in recent years: notably Spain and Portugal have been engaging in reforms of employment protection and wage bargaining systems (OECD, 2014a and 2014b). Most recently, Italy introduced a new employment contract with a less costly dismissal procedure, along with the new social insurance for employment extending its coverage while making benefits conditional on participation in active labour market programmes.

… together with reforms that increase educational attainment and employability of youth.

Raising graduation rates from higher education – while ensuring that the skills acquired better match labour market needs – will also improve youth employment prospects and long-run productivity growth. Common priorities include raising the quality of compulsory education and tertiary education by improving autonomy and accountability of schools and universities. A particularly important related reform is to increase the provision of vocational education and training (VET) with a better curriculum and participation of employers and, beyond schooling, to improve access to job-related training.

Recent policy actions in this area include:

- In Spain, the reform of vocational training programmes mentioned above provides life-long training opportunities for employed workers.
- The Slovak Republic introduced a new funding system for secondary vocational schools which allocates funds according to the performance of students in the labour market.

Reducing administrative burdens and entry barriers to specific sector would contribute to job creation and competitiveness

Reducing the regulatory barriers to entry as well as the compliance costs associated with complex regulations can stimulate business expansion and job creation. The employment gains can be particularly rapid in industries with large pent-up demand and low entry costs (such as some professional services) (See Chapter 2). Stronger competition also fosters the reallocation of jobs from lower- to higher-productivity firms within sectors, thereby improving the allocation of skills (OECD, 2015b; Adalet McGowan and Andrews, 2015). The productivity gain expected from improving the matching between workers' skills and the skills level required for their job is particularly large in some of these countries (Figure 1.8). Stronger product market competition would also facilitate labour market reforms (Blanchard and Giavazzi, 2003). This allows for lower unit labour costs which translate into lower prices, improving competitiveness as well as real wages in these countries.

Table 1.1. **Reform priorities for countries with high long-term and youth unemployment**

	GRE		IRL		ITA		PRT		SVK		ESP	
	R[1]	A[1]	R	A	R	A	R	A	R	A	R	A
Unemployment benefits/social protection and ALMPs												
Make UB conditional on work availability and job-search criteria/reinforce activation					✓	•						
Taper UB along duration/reduce age-bias in UB/reduce progressively the combined generosity of UB and other social benefits (i.e. reduce spikes in marginal effective tax rates)			✓				✓					
Expand the coverage or level of UB/social protection and social services	✓				✓	•	✓					
Strengthen resources for job-search assistance and training whilst improving targeting of ALMPs	✓		✓		✓	•	✓	•	✓	•	✓	•
Focus on well-targeted training programs/requalification	✓		✓				✓		✓	•	✓	•
Strengthen monitoring and evaluation of PES	✓				✓	•	✓				✓	
Job protection												
Ease EPL on regular workers to narrow the gap with respect to non-regular workers and tackle labour market duality					✓	•					✓	
Minimum wages and wage bargaining systems												
Reduce or eliminate administrative extension of collective wage agreements							✓				✓	
Human capital												
Early childhood education												
Expand access to quality childcare and early education/ improve targeting			✓	•					✓	•		
Primary and secondary education												
Improve curricula and evaluation	✓				✓	•						
Other recommendations (reduce dropout, reduce inequality in educational outcomes and opportunities)							✓		✓			
Tertiary education												
Increase university autonomy and accountability or specialisation by institutions	✓								✓		✓	
Introduce/raise tuition fees flanked by income-contingent loans/mean-tested grants, Improve targeting of means-tested financial assistance					✓				✓		✓	
Expand access to and effectiveness of apprenticeships and VET and their relevance to labour market needs					✓		✓		✓	•	✓	•
Expand access to and effectiveness of lifelong/job-related education and training							✓		✓		✓	•
Reduce economy-wide regulatory burdens												
Reduce administrative burden on start-ups/complexity of regulatory procedure	✓		✓						✓	•	✓	•
Reduce the scope of public ownership/state intervention	✓	•			✓				✓			
Ease business exit/bankruptcy procedures					✓	•						
Reduce sector-specific regulatory burdens												
Network sectors (energy, transport, telecoms)			✓				✓		✓		✓	•
Retail trade and professional services	✓		✓	•			✓		✓		✓	
R&D and innovation												
Increase public support/Improve targeting of public support/evaluate grant programs			✓						✓	•		
Increase and/or reform indirect R&D support – tax incentives, seek balance between direct and indirect support							✓		✓	•		
Strengthen collaboration between research centres/ universities and industry			✓				✓		✓	•		

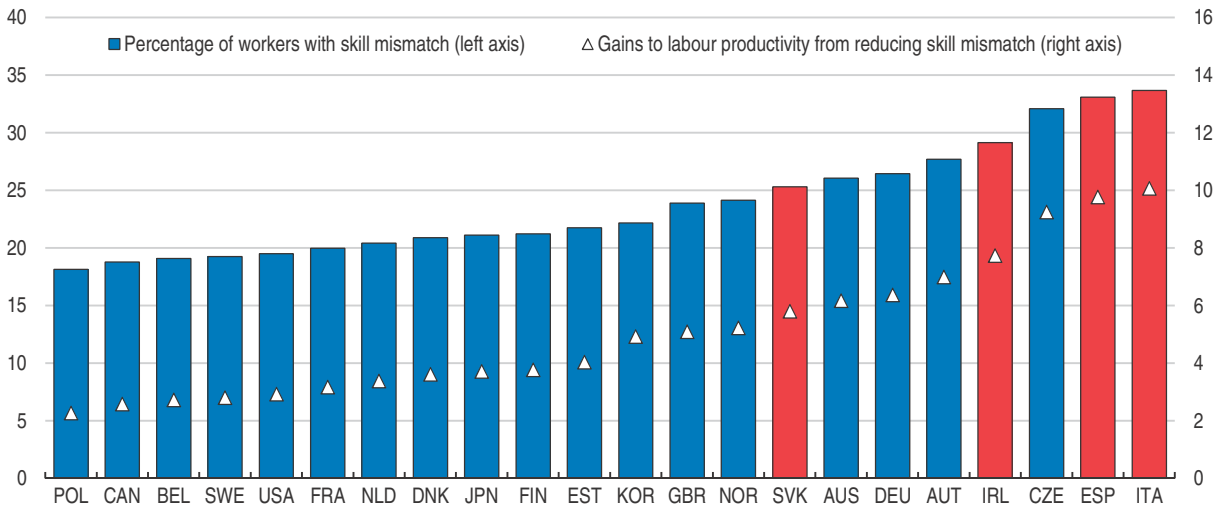
1. R stands for recommendation in that area, A stands for any actions that are implemented or in the process of implementation.

Recent policy actions taken in this area include:

- Ireland introduced the Legal Service Regulation Bill which would establish an independent regulator for the legal profession.
- Italy introduced relevant decrees aimed at improving the efficiency in the civil courts and at streamlining bankruptcy procedures.
- Spain is implementing the Market Unity Law that addresses internal market fragmentation for product and service markets and simplifies business licencing and other administrative burdens. It also took steps to liberalise passenger transport in railways.

Figure 1.8. **A significant share of workers face skill mismatch, implying a large scope for productivity gains**

Percentage of workers with skill mismatch and implied gain in productivity from reducing mismatch, selected OECD countries,[1] 2011-12



1. The figure shows the percentage of workers who are either over or under-skilled and the simulated gains to allocative efficiency from reducing skill mismatch in each country to the best practice level of mismatch. The figures are based on OECD calculations using OECD, *Survey of Adult Skills* (2012). Data for Greece and Portugal are missing.

Source: M. Adalet McGowan and D. Andrews (2015), "Labour Market Mismatch and Labour Productivity: Evidence from PIAAC Data", OECD *Economics Department Working Papers* No. 1209.

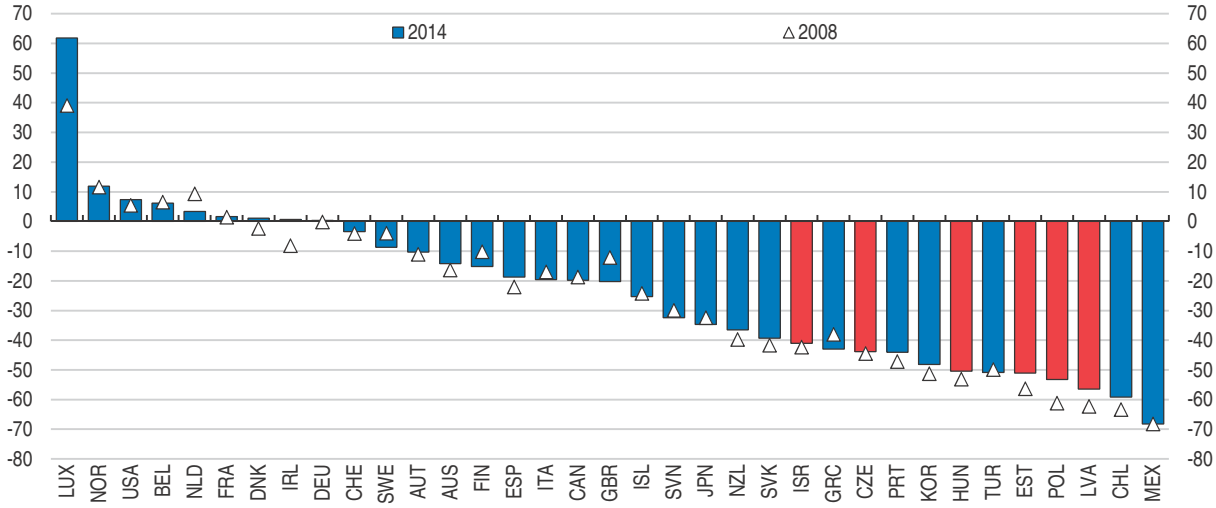
StatLink http://dx.doi.org/10.1787/888933323785

Group 2: Countries with a large labour productivity gap vis-à-vis *OECD average (Czech Republic, Estonia, Hungary, Israel, Poland and Latvia)*

Those countries have most recently enjoyed relatively strong growth led by household consumption and exports. They also benefit from strong trade linkages with more advanced European economies, in particular in the case of the Czech Republic, Slovak Republic and Hungary, which are deeply integrated into their global value chains. Israel boasts a competitive and innovation-intensive manufacturing sector. However, the gap in labour productivity *vis-à-vis* the upper half of OECD countries remains large and with the exception of Poland, convergence has been slow or even stalled since the crisis (Figure 1.9). Weak productivity in the protected sectors accounts for much of productivity gap and slow catch-up, especially in Israel (OECD, 2016).

Figure 1.9. **The productivity gap remains large with ample room for catch-up**

Percentage difference in GDP per hour worked *vis-à-vis* the upper half of OECD countries



Source: OECD, *National Accounts, Productivity and Economic Outlook Databases.*

StatLink http://dx.doi.org/10.1787/888933323792

While these countries are considerably more competitive than other European countries in terms of labour costs, this advantage is expected to wane as their wage level is likely to rise with their further economic development. In order to remain competitive, they must therefore reinvigorate productivity growth via a wide range of reforms in product and labour markets, investment in human capital and innovation.

Regulatory reforms to boost competition and entrepreneurship

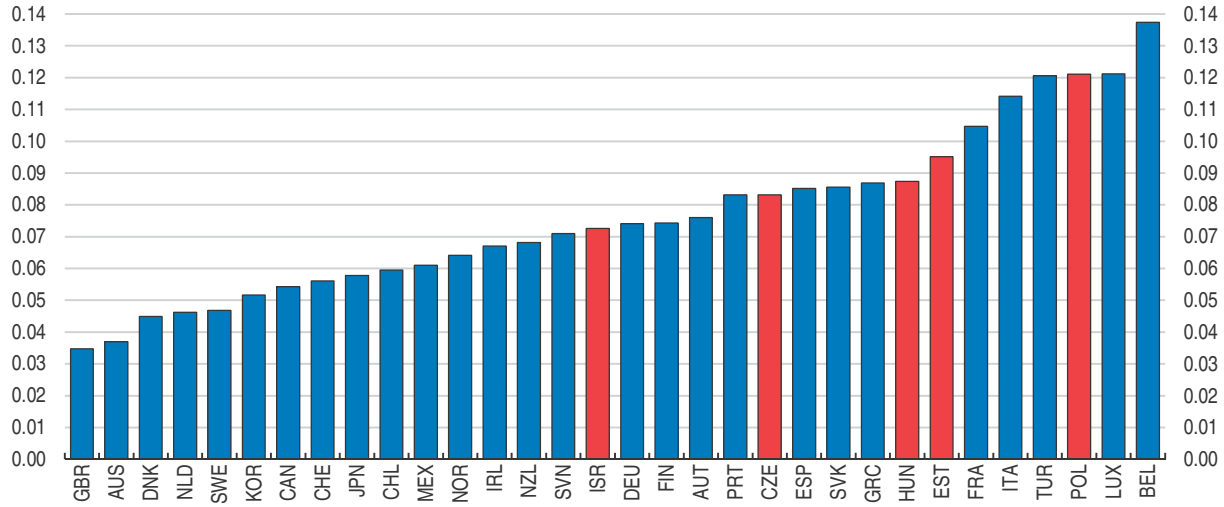
In the product market, those countries are recommended to remove red tapes across the board (Hungary and Israel), reduce the scope of public ownership (Czech Republic, Poland and Latvia), and to lower entry barriers in network industries and professional services (Czech Republic, Hungary, Israel, Poland and Latvia). Easing the strictness of regulation in network industries (e.g. energy, telecommunications and transport) as well as in retail and professional services would improve productivity and competitiveness in downstream sectors, not least manufacturing, which use services from these upstream industries as inputs for their own production (Bourles et al., 2010). This "knock-on" effect of regulation in upstream industries on manufacturing through input-output linkages is particularly strong in several of the countries of this group (Figure 1.10). Furthermore, such product market reforms would put greater emphasis on new firm entry as a means to strengthen competition, encouraging incumbents to increase innovation efforts to protect their market shares.

Recent actions in this area include:

- Poland introduced a law facilitating seaport customs clearance and compliance to tax laws and information obligations, lowering thereby trade barriers. It also enacted laws stipulating further reductions of entry barriers in professional services while improving the legal framework for corporate restructuring.
- Latvia introduced a law requiring specific measures to improve the governance of state-owned enterprises.

Figure 1.10. **Regulations in non-manufacturing sector have significant impact on the manufacturing sector**

The indicator of regulatory impact on manufacturing sector,[1] index scale from 0 to 1, 2013



1. The figure compares the impact of regulation in upstream network industries (ETCR) as well as in retail and professional services, on manufacturing sector. The impact indicator is computed using the 2013 definition of PMR indicator and domestic input-output coefficients (except that of Korea which uses US input-output coefficient) and normalised across countries as an index that takes a value between 0 (minimum value across observations) and 1 (maximum value). Data for Latvia are missing.

Source: Égert and Wanner (2015), "The Regulatory Impact Indicator: the 2013 Vintage", OECD *Economic Department Working Papers*, forthcoming.

StatLink http://dx.doi.org/10.1787/888933323807

Higher investment in human capital and innovation capability

Ensuring a sufficient supply of skilled workers is essential for these countries to retain and upgrade their comparative advantage in manufacturing. Raising the quality of tertiary education and vocational education and training (VET) is of particular importance in smooth school-to-work transition and skills development.

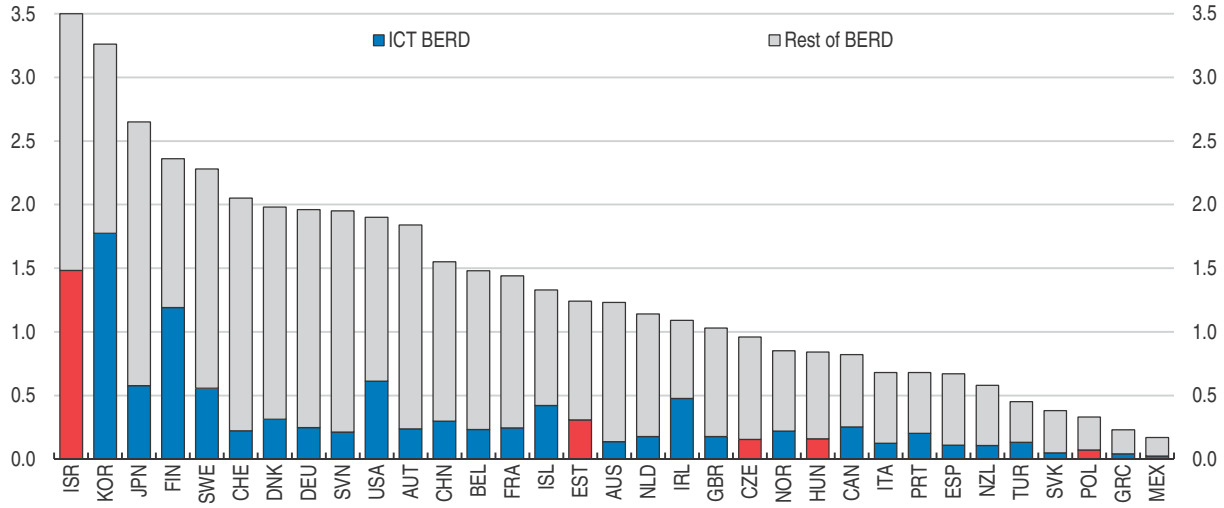
Recent policy actions in this area include:

- The Czech Republic made an amendment to the Higher Education Act, aimed at increasing the quality of higher education by reforming the accreditation of institution and study programmes.
- Estonia approved a law introducing quality standards and increasing the visibility of adult training. A system for labour market monitoring and forecasting will be operational in 2016. It also introduced a new grant system for university students which offers flexible conditions and strengthened support to students of poor socio-economic background.
- In Hungary, the transition from secondary to upper-secondary vocational school has been facilitated and the share of practice-oriented training in VET programmes has been increased.
- Poland implemented measures to engage employers to provide more workplace training for secondary vocational education, such as an obligation for vocational university programmes to contain at least a three-month apprenticeship or for companies operating in special economic zones to collaborate with schools to develop their educational programmes.

With the notable exception of Israel, the intensity of business-based R&D in those countries remains below the level in advanced OECD countries (Figure 1.11). An increase in investment in innovation, especially in the ICT sector that often experiences high productivity growth and acts as an input driving productivity growth in other sector, would strengthen their competitiveness in the medium- to long-run. While a better targeting of R&D support and a stronger university-industry linkage would enhance the effectiveness of innovation system in those countries, significant actions have not yet been observed in area of innovation policy.

Figure 1.11. **The intensity of business-based R&D is low compared to advanced OECD countries**

Business based R&D as a percentage of GDP,[1] 2013



1. BERD refer to Business expenditure on R&D. Data refer to 2012 for Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Israel, Italy, the Netherlands, Norway, Poland, Portugal, Romania, Slovenia, Spain Switzerland and the United Kingdom; 2011 for Australia, Austria, Belgium, Greece, Iceland, Ireland, Mexico, New Zealand and the United States. The ICT sector is defined according to the OECD ICT sector definition based on ISIC Rev.4. Data for Latvia are missing.

Source: OECD (2015), *OECD Digital Economy Outlook* 2015, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888933323813

Growth-friendly tax reform that reduces the labour tax wedge would enhance employment

Those countries also share persistently high long-term unemployment that is partly due to the high labour tax wedge discouraging the return to work. They are thus recommended to reduce the burden of labour income taxation by relying more on less distortive taxes such as VAT, environmental and immovable property taxation. Recent policy actions in this area are:

- Estonia raised the level of tax-free allowance and will allow low-income full-time workers to apply for a tax rebate from 2017. At the same time, taxes on alcohol, fuel and gas are to be raised.
- Hungary approved a legislation that reduces its flat income tax rate from 16% to 15% from 2016.
- Poland reformed the fragmented tax and social security regimes across different labour contracts by a law that makes all civil law contracts subject to the same social security contributions up to the minimum wage.

Table 1.2. **Reform priorities for countries with a large labour productivity gap *vis-a-vis* OECD average**

	CZE		EST		HUN		ISR		POL		LVA	
	R[1]	A[1]	R	A	R	A	R	A	R	A	R	A
Reduce economy-wide regulatory burdens												
Reduce administrative burden on start-ups/complexity of regulatory procedure					✓		✓		✓	•	✓	
Strengthen the competition framework	✓				✓							
Reduce the scope of public ownership/state intervention	✓								✓			
Improve corporate governance of state-owned enterprises	✓								✓		✓	•
Reduce sector-specific regulatory burdens												
Network sectors (energy, transport, telecoms)			✓		✓		✓		✓			
Retail trade and professional services					✓				✓	•		
Reduce barriers to FDI and international trade			✓				✓	•				
Human capital												
Early childhood education												
Expand access to quality childcare and early education/improve targeting	✓	•					✓	•	✓	•		
Primary and secondary education												
Postpone early tracking	✓				✓							
Other recommendations (Improve teaching quality, reduce inequality in educational outcomes and opportunities)	✓	•			✓		✓	•				
Tertiary education												
Increase university autonomy and accountability or specialisation by institutions	✓	•							✓			
Introduce/raise tuition fees flanked by income-contingent loans/mean-tested grants, Improve targeting of means-tested financial assistance	✓		✓	•	✓				✓			
Expand access/enrolment/reduce inequalities in access			✓	•	✓							
Expand access to and effectiveness of apprenticeships and VET and their relevance to labour market needs	✓		✓	•					✓	•		
Expand access to and effectiveness of lifelong/job-related education and training	✓								✓			
Provision and regulation of public infrastructure												
Raise public and private investment in infrastructure									✓		✓	
Enhance capacity/quality in transport, energy or telecommunication/enhance connectivity			✓						✓	•	✓	
Introduce/increase/reform price signals/congestion charges and user fees			✓						✓			
R&D and innovation												
Improve targeting of public support/evaluate grant programs	✓	•	✓								✓	
Strengthen collaboration between research centres/universities and industry	✓	•	✓								✓	
Tax system – labour tax wedges												
Reduce average/marginal labour tax wedges			✓	•					✓		✓	•
Reduce labour tax wedges for low-wage workers (introduce/expand EITC)	✓		✓	•	✓	•	✓	•	✓			
Tax system -structure and efficiency												
Shift the tax burden from personal income taxes toward consumption, immovable property and the environment	✓		✓	•	✓				✓		✓	

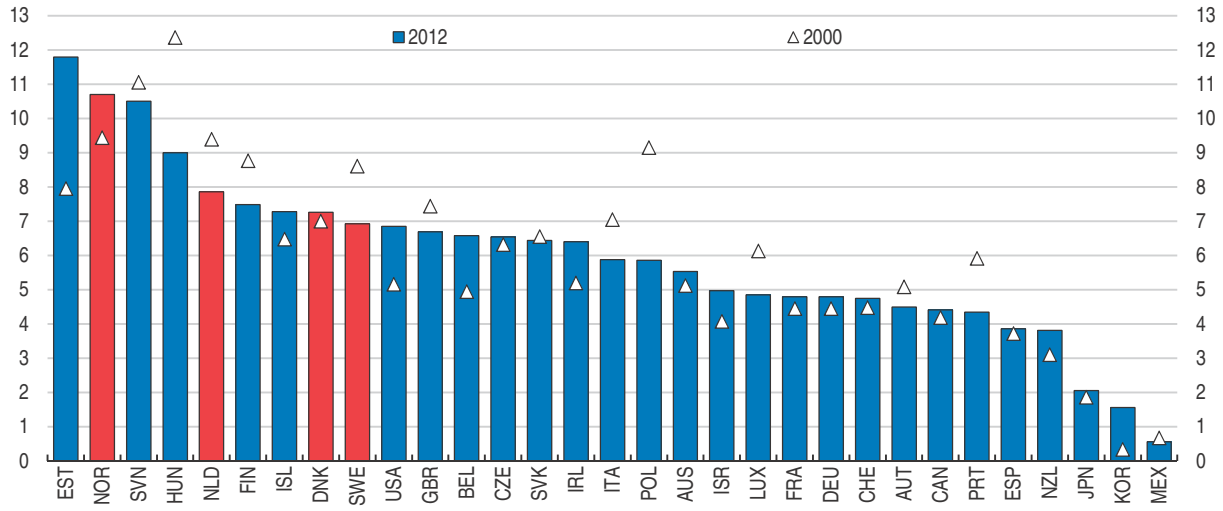
1. R stands for recommendation in that area, A stands for any actions that are implemented or in the process of implementation.

Group 3: Countries with low working hours and housing market distortions (Denmark, the Netherlands, Norway and Sweden)

These countries enjoy the highest labour productivity among OECD countries and also a relatively high employment rate thanks to strong labour force participation of women. However, their average working hours remain substantially below the OECD average and a relatively high share of working-age population are receiving disability benefits compared to other OECD countries (Figure 1.12). These indicate further room to improve labour resource utilisation. Therefore, the reform priority for these countries is to reduce the policy disincentives to work longer hours and to remain in the labour force, namely the high tax burden on labour and the generous sickness and disability benefit system.

Figure 1.12. **The share of disability benefit recipients is among the highest in OECD countries**

Percentage of population aged 20-64 years old receiving disability benefits[1]



1. Disability benefits include benefits received from schemes to which beneficiaries have paid contributions (contributory), programmes financed by general taxation (non-contributory) and work injury schemes. The last available year is 2014 for Estonia; 2013 for Australia, Czech Republic, Finland and the United States; 2010 for Spain; 2009 for Mexico; 2008 for Austria, Japan and Korea; 2007 for Canada and France; 2005 for Luxembourg. For 2000, data refer to 2004 for Poland; 2003 for Japan and Mexico; 2002 for the Netherlands; 2001 for Ireland.

Source: Secretariat updates of figures published in OECD (2010), *Sickness, Disability and Work: Breaking the Barriers: A Synthesis of Findings across OECD Countries*, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888933323821

Making work pay more while preventing early withdrawal from labour market

Countries in this group are recommended to reduce the relatively high corporate and labour income tax rates by shifting the tax burden to property and indirect taxation, such as value-added tax (VAT), and also to remove tax expenditure on owner-occupied housing. The high marginal tax wedge on labour income is hindering the work incentives of low-income households and second-income earners in the Netherlands, while it is discouraging above-average income earners to work longer hours in Sweden (OECD, 2015d). As an example of recent actions in this area, Norway has increased the tax value of secondary homes to 80% of market value and has streamlined tax expenditures while reducing the income tax rates in a step-wise manner.

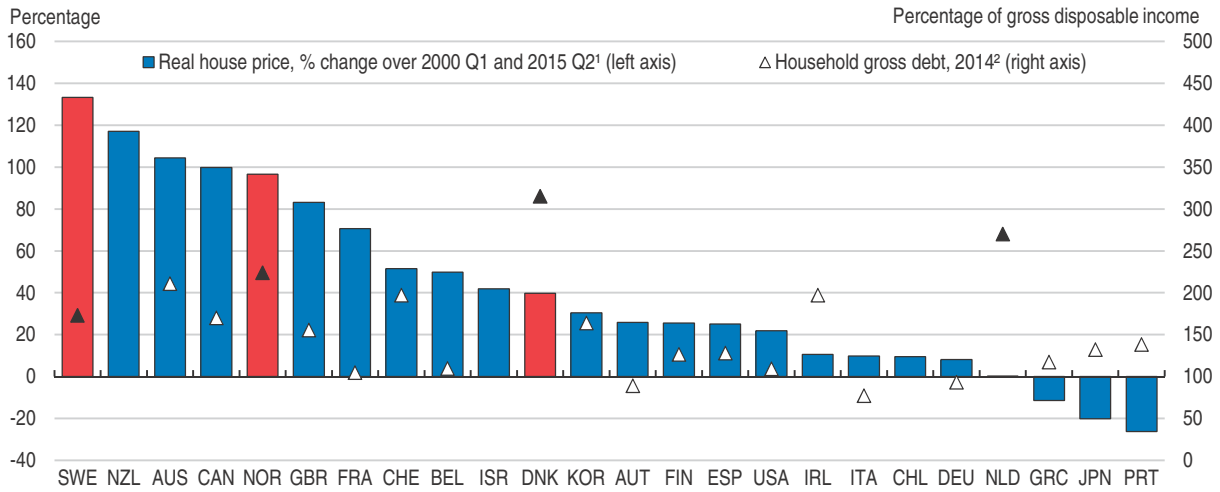
Tightening access to sickness and disability schemes and re-orienting them towards back-to-work and job-search objectives would help maintaining workers in the labour force. Taking a step in this direction, Norway has reduced the generosity of disability benefit calculation and is implementing a faster tapering rule for disability benefits and new medical assessment for sickness benefits. Also, complementary reforms to curb alternative channels to withdraw early from the labour market are needed, such as a tightening of unemployment benefit entitlements. No action has been observed recently in this area.

Removing housing market rigidities to promote labour mobility and macroeconomic stability

Another reform priority for those countries is to address housing market rigidities. Stringent regulation on land planning and rent control as well as tax subsidies for owner-occupied housing are depressing housing supply. This not only impedes efficient labour mobility but also results in elevated housing prices, posing macroeconomic risks via higher household debt level. The rise in housing price has been remarkably fast in some of these countries contributing to an elevated household debt, especially in Denmark (Figure 1.13). Recent actions in this area include:

- The Netherlands reformed its rent control by increasing the extent to which the rent reflects the property value.
- Sweden has put forth a new housing plan that includes measures to streamline land-use planning and incentives for municipalities to release land.

Figure 1.13. **House prices have risen fast amid large household debt**



1. The last available data refer to 2015 Q3 for Canada, Finland, the United Kingdom, Greece, Korea, Norway and the United States; For Chile, data refer to 2002 Q1 and 2014 Q3.
2. The last available year is 2013 for Japan and Switzerland.

Source: OECD, *Prices and Purchasing Power Parities* and *Economic Outlook Databases*.

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Better resource allocation and improved human capital would help further boost productivity

In order to sustain their relatively high productivity level in the medium run, Nordic countries need to reduce the scope of public ownership in network industries and entry barriers in retails and professional services. They also have room to enhance the performance of their education system by developing school evaluation frameworks, in

particular by improving teacher quality and strengthening vocational education and training. Norway and Sweden have increased budget resources to raise teacher qualification and salaries. The Netherlands and Sweden are recommended to reduce the strictness of employment protection of regular workers, which would improve productivity by enhancing the allocation of labour resource.

Table 1.3. **Reform priorities for countries with low working hours and housing market distortions**

	DNK		NLD		NOR		SWE	
	R[1]	A[1]	R	A	R	A	R	A
Unemployment benefits/social protection and ALMPs								
Make UB conditional on work availability and job-search criteria/ reinforce activation			✓					
Retirement and disability policies								
Phase out early retirement pathways (via disability or unemployment)	✓							
Review criteria to disability benefits, improve monitoring and integration with ALMPs	✓		✓		✓	•	✓	
Job protection								
Ease EPL on regular workers (shorten judicial procedure, reduce severance pay), narrow the gap with respect to non-regular workers and tackle labour market duality			✓				✓	
Ease conditions for justified individual or collective dismissals			✓	•			✓	
Tax system – labour tax wedges								
Reduce labour tax wedges	✓		✓	•			✓	
Tax system -structure and efficiency								
Shift the tax burden from personal income taxes toward consumption, immovable property and the environment	✓						✓	
Broaden the tax base – reduce tax expenditures/subsidies	✓		✓		✓	•	✓	
Housing/Planning/Zoning policies and regulations								
Remove obstacles to the expansion of a private residential market/reduce rent regulation	✓		✓	•			✓	
Improve targeting or reduce the use of housing subsidies/improve targeting in the provision of social housing	✓		✓	•				
Reduce/eliminate preferential tax treatment for housing investment/reform property taxation			✓		✓	•	✓	
Loosen/reform land, zoning and planning restrictions	✓	•	✓				✓	
Reduce economy-wide regulatory burdens								
Reduce the scope of public ownership/state intervention					✓	•	✓	
Reduce sector-specific regulatory burdens								
Network sectors (energy, transport, telecoms)					✓	•	✓	
Retail trade and professional services					✓	•		
Human capital								
Primary and secondary education								
Improve teaching quality/improve incentives for talented teachers (especially to work in difficult schools)					✓	•	✓	•
Improve incentives to secondary education completion/focus on reduce dropout	✓						✓	•
Expand access to and effectiveness of apprenticeships and VET and their relevance to labour market needs	✓						✓	
Expand access to and effectiveness of lifelong/job-related education and training	✓							

1. R stands for recommendation in that area, "A" stands for any actions that are implemented or in the process of implementation.

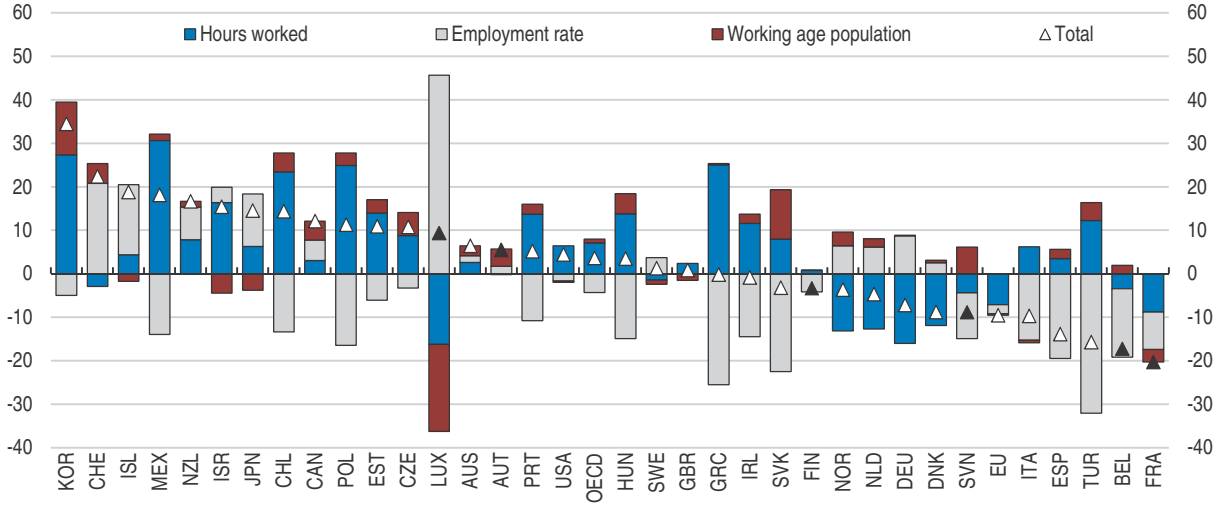
Group 4: Countries with high structural unemployment and/or low participation of older workers (Austria, Belgium, Finland, France, Luxembourg and Slovenia)

The countries in this group are also enjoying levels of productivity that are among the highest within OECD countries (Slovenia being an exception), but their unemployment rates remain considerably above pre-crisis levels (except Austria), which along with low labour force participation rates and low average working hours, contribute to low overall labour resource utilisation (Figure 1.14). To a large extent, the low labour force participation rate reflects the early exit of older workers from labour markets.

An important reform agenda for those countries is to boost employment by reducing the institutional disincentives to labour embedded in the unemployment benefits and pension systems. To ensure that reforms enhancing labour supply result in increased employment, measures to remove impediments to job creation are also advocated, such as lowering tax wedges for low-income earners and reducing entry barriers to industries with strong potential growth.

Figure 1.14. **Shorter average hours worked and lower employment rates reduce overall labour utilisation**

Percentage difference in labour utilisation[1] *vis-à-vis* the upper half of OECD countries, 2014



1. Employment rate is measured as total number of employed divided by working-age population. Hours worked are measured as total number of hours worked per employed. Working-age population is measured as working-age population divided by total population. The total of the three components is not equal to labour resource utilisation since the decomposition is multiplicative.

Source: OECD, *National Accounts*, *Productivity*, *Employment Outlook* and *Economic Outlook Databases*.

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Institutional disincentives to job search and labour supply should be removed

In order to encourage more intensive job search, these countries are recommended to reduce the generosity of unemployment benefits as the duration of the spell lengthens and to activate job-search assistance and conditions at an earlier stage of the spell. Furthermore, they also need to reduce labour tax wedges, which are among the highest in OECD countries, and are particularly reducing job opportunities and incentives to take-up work for low-income earners.

Recent policy actions include:

- Austria in its latest tax reform has reduced the bottom statuary income tax rate. Furthermore, earners with income below the first income bracket will be eligible for a reimbursement of half of their social security contributions, up to EUR 400 per year.
- Belgium has reduced the level of part-time unemployment benefits and tightened the access to unemployment benefits for young people who have insufficient work experience. It also introduced a revenue-neutral shift in the tax burden from labour income to consumption and capital.
- Finland has put in place a joint service involving central and local government bodies that targets the long-term unemployed to improve the labour market skills and employability.
- In France, the earned-income tax credit providing incentives for workers to join the labour force has been raised through the integration and a better targeting of two existing measures.

Closing the pathway to early exit from labour markets

Encouraging older workers to remain in the labour market requires that a number of measures be taken to raise financial incentives to pursuing activity, but also that the working life evolves along with increases in life expectancy. The most essential reform is to increase the statutory retirement age and to re-design contribution and disbursement of pension so that it does not penalise continued work. Furthermore, these countries need to tighten access to programmes such as unemployment insurance or disability benefits that are often used as pathways to early retirement. On the other hand, provision of activation measures such as job placement services and life-long training are also important to support the attachment of older workers to labour market. Significant pension reforms were put in place during the 2010-12 period, notably to help restore public finance sustainability, but further action is needed to encourage the pursuit of activity at older age. More recent policy actions in this area include:

- In Belgium, pension age is gradually increased to 67 years by 2030 and incentives for early retirement are being curbed.
- Finland reoriented the wage subsidy system to those who are in the most difficult labour market situations, namely to the long-term unemployed over 60 years old.
- In France, an agreement reached by social partners will raise incentives for workers covered by complementary pensions to remain in the labour force at older age.

Removing impediments to job creation will help to absorb more workers into employment

Reforms to increase labour supply may not increase employment in the short run, especially during difficult macroeconomic conditions (See Chapter 2). To this end, complementary reforms that boost hiring and job creation are needed, such as reducing regulatory barriers to entry in industries with large scope for job creation.

- In France, a recent reform (*Loi Macron*) eases somewhat entry regulation in legal services and facilitates the creation of firms that can offer a wide range of legal and accounting services in the same entity. It also expands the possibility for stores to open on Sundays, especially in specific areas defined as touristic zones (albeit subject to agreements between store management and unions) and introduces a partial liberalisation of long-distance passenger coach services.

Table 1.4. **Reform priorities for countries with high structural unemployment and low participation of old workers**

	AUT		BEL		FIN		FRA		LUX		SVN	
	R[1]	A[1]	R	A	R	A	R	A	R	A	R	A
Unemployment benefits/social protection and ALMPs												
Make UB conditional on work availability and job-search criteria/reinforce activation			✓		✓		✓	•				
Taper UB along duration/reduce age-bias in UB/reduce progressively the combined generosity of UB and other social benefits (i.e. reduce spikes in marginal effective tax rates)			✓	•	✓				✓		✓	
Tax system – labour tax wedges												
Reduce average/marginal labour tax wedges	✓	•	✓	•	✓		✓	•				
Remove tax and benefit disincentives to low earners full-time participation/introduce or expand EITC			✓						✓		✓	
Tax system -structure and efficiency												
Shift the tax burden from personal income taxes toward consumption, immovable property and the environment	✓	•	✓	•	✓		✓	•				
Broaden the tax base – reduce tax expenditures	✓				✓		✓	•				
Retirement and disability policies												
Phase out early retirement pathways (via disability or unemployment)	✓	•	✓	•	✓	•			✓		✓	
Increase statutory or minimum retirement age			✓	•							✓	
Lengthen contribution requirements to claim full pension/make benefits actuarially neutral					✓	•			✓	•	✓	
Adjust benefits/retirement age in line with life expectancy	✓				✓	•			✓			
Job protection												
Ease EPL on regular workers to narrow the gap with respect to non-regular workers and tackle labour market duality							✓		✓			
Ease conditions for justified individual or collective dismissals							✓	•	✓	•		
Minimum wages and wage bargaining systems			✓								✓	
Reduce sector-specific regulatory burdens												
Network sectors (energy, transport, telecoms)	✓		✓		✓		✓	•			✓	•
Retail trade and professional services	✓		✓		✓		✓	•	✓			
Human capital												
Primary and secondary education												
Improve teaching quality/improve incentives for talented teachers (especially to work in difficult schools)							✓	•				
Other recommendations (reduce inequality in educational outcomes and opportunities, etc.)							✓	•				
Tertiary education												
Increase university autonomy and accountability or specialisation by institutions											✓	
Introduce/raise tuition fees flanked by income-contingent loans/mean-tested grants, improve targeting of means-tested financial assistance	✓						✓				✓	
Other recommendations (reduce inequalities in access etc.)	✓										✓	
Expand access to and effectiveness of lifelong/job-related education and training					✓		✓	•				

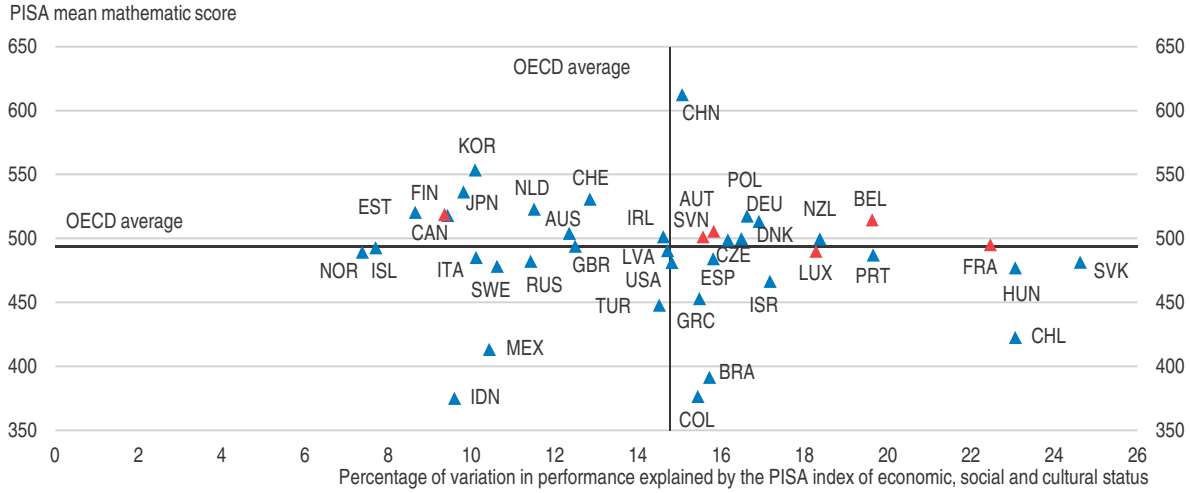
1. R stands for recommendation in that area, A stands for any actions that are implemented or in the process of implementation.

Stronger equity in educational attainment and access to skills formation would increase employability and productivity

While the education systems in those countries yield relatively high performance on average, the individual scores are also strongly influenced by the pupil's socio-economic background (Figure 1.15). Education reforms that promote successful outcomes for all students, in particular those allocating more resource to schools with larger concentrations of students from disadvantaged background, would promote equality of opportunities, social mobility and long-term growth. Similarly, better access to higher education and skills formation opportunities such as VET and life-long training would facilitate school-to-work transitions and enhance the employability of the low-skilled workers. As an example of recent policy actions, France introduced a new individualised guidance system designed for secondary-school students to prevent early drop out. It also put in place priority education networks that allocate funding and teacher trainings across schools based on the social characteristics of their students.

Figure 1.15. **Inequality in educational outcomes is relatively high**

2012



Source: OECD (2013), *PISA 2012 Results: Excellence through Equity (Volume II): Giving Every Student the Chance to Succeed.*

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Group 5: Countries with sluggish productivity growth despite relatively high investment in knowledge-based capital (Australia, Canada, New Zealand, Switzerland, United Kingdoms and United States)

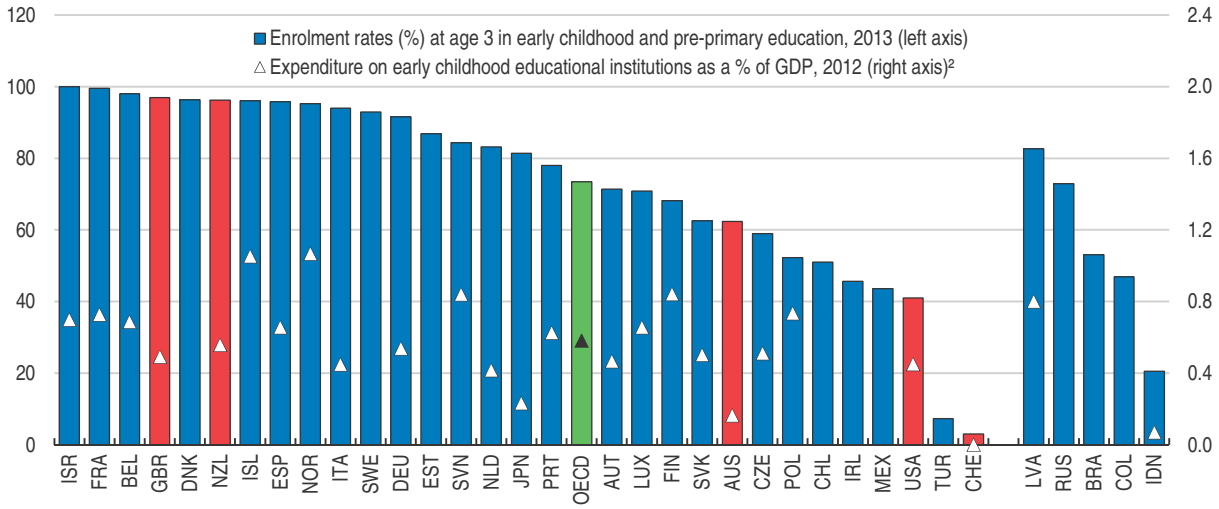
Countries from this group have recently seen a slowdown in growth (except New Zealand and the United Kingdom), as investment remained subdued, contrasting with a comparatively good employment performance. Relatively low rates of youth and long-term unemployment indicate that these countries have generally been successful at keeping lower-skilled workers in the labour force. The flip side is persistently weak productivity growth, in particular gains in multifactor productivity, despite comparatively high investment in knowledge-based capital and a business environment generally favourable to entrepreneurship, in addition to flexible labour markets.

At the same time, boosting productivity requires that a number of common structural weaknesses be addressed, in particular in the areas of educational outcomes – to ensure that educational qualification translates into skills – public spending efficiency, tax revenue structure and public infrastructure.

Ensuring further equity in access to high quality education would enhance human capital

The performance of high-school students from these countries in PISA tests in science and reading proficiency is only around the international average and with a tendency in some cases (Australia, New Zealand and the United Kingdom) to show a high variation across students. These countries need to reduce inequality in access to education at all levels. Increasing the supply and quality of early childhood education and care (ECEC) is of particular importance, as it influences the participation and performance of students at higher education levels. In these countries, expenditure on early childhood education is relatively low, which in some cases is reflected in enrolment rates (Figure 1.16). Reforms should be targeted to minorities and less advantageous social groups, in order to raise equality of opportunities and social mobility. Efforts are made by these countries to expand the supply of, and to raise enrolment in ECEC. For example, the United Kingdom has committed to double the entitlement to free childcare for working families with 3 and 4 year-old children from 2017.

Figure 1.16. **Expenditure on early childhood education is relatively low while enrolment rates can be raised for some countries**[1]



1. Early childhood education target children aged below the age of entry into ISCED level 1. There are two categories of ISCED level 0 programmes: early childhood educational development (ISCED 01) and pre-primary education (ISCED 02). Data for Canada are missing.
2. Public and private expenditure. The last available year is 2013 for Indonesia. Public expenditure only for Switzerland and public institutions only for Italy, Poland, Portugal and Switzerland. Data for Canada are missing.

Source: OECD (2015), *Education at a Glance* 2015: *OECD Indicators*.

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Most countries in this group have faced substantial increases in income inequality during the past few decades. In some cases, there is evidence (the United States in particular) that strong investment in ICT and complementary organisational changes have resulted in faster replacement of workers by machines and software to perform specific tasks, while increasing the demand for workers with complementary skills, favouring those with higher skill levels (Brynjolfsson and McAfee, 2011). A wider access to higher education and effective VET programmes can help mitigate the impact of skill-biased technological progress on income inequality. As an example of recent actions in this area, the United States enacted the Workforce Innovation and Opportunity Act which consolidates job training programmes and aims to streamline services to assist job seekers. This reform involves concentrating resources on programmes that have proved to be effective and become more responsive to business needs.

Growth-friendly and efficient tax system supports productivity growth

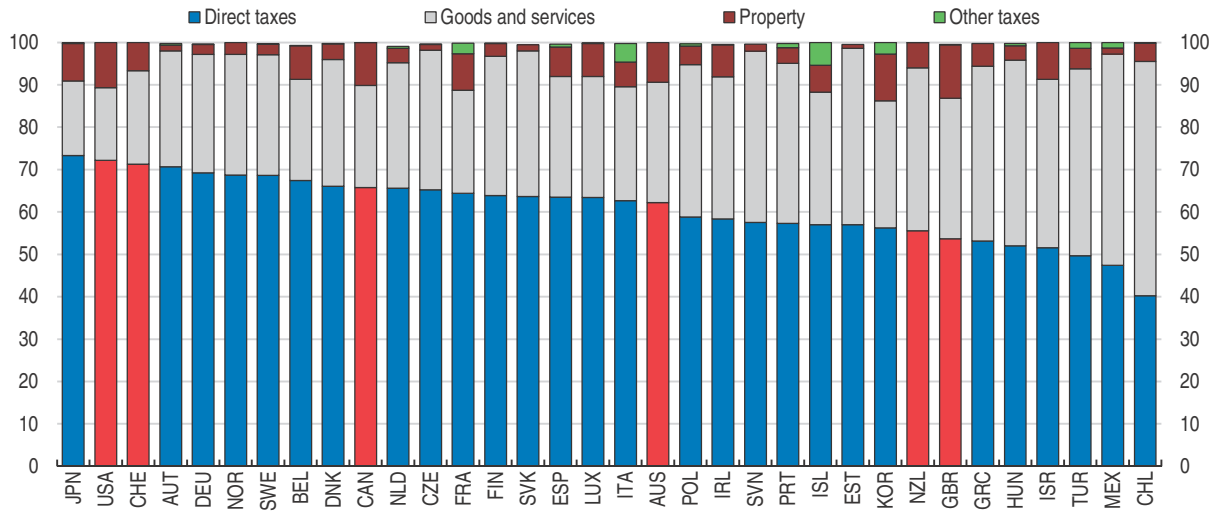
Tax reforms that shifts the burden from direct taxation such as income tax to indirect taxation such as VAT, Goods and Service tax (GST) or property taxation contributes to productivity growth by reducing distortion on labour supply and corporate investments (Arnold et al., 2012). The tax revenue in these countries relies considerably more on income taxation and social security contributions compared to other OECD countries (Figure 1.17). They have room to expand the role of indirect taxation, for instance, by harmonising the sales tax rate across regions (e.g. in Canada) or introducing environmental taxes. The efficiency of taxation can be also enhanced by broadening tax base and scrapping ill-targeted tax expenditures, such as the deduction of mortgage interest for owner-occupied housing from income taxation (e.g. in the United States).

Recent actions in this area include:

- Australia introduced in its 2015-16 Budget several measures to reduce corporate taxation, notably a lower rate of corporate-income for small businesses and a more generous capital write-off rule.
- Canada introduced some measures to reduce direct taxation, such as increasing the annual contribution limit for Tax-Free Savings Accounts (TFSAs) and a gradual lowering of the small business tax rate from 11% currently to 9% by 1 January 2019.

Figure 1.17. **The share of direct taxes in total tax revenues is relatively higher**[1]

Structure of general government tax revenue, percentage, 2014



1. Direct taxes refer to an aggregate of taxes on income, profits and capital gains, social security contributions and taxes on payroll and workforce. The last available year is 2013 for Australia, Japan, Mexico, the Netherlands and Poland.

Source: OECD, *Revenue Statistics Database*.

StatLink http://dx.doi.org/10.1787/888933323873

Enhancing the effectiveness of public services and infrastructure

Providing effective public services in the face of mounting budgetary pressures while containing tax increases is a challenge shared by many OECD countries, including those from this group. An important reform priority is to enhance the cost efficiency of healthcare while ensuring equity to access. Furthermore, in some countries such as Australia and the United Kingdom, congested and depleted infrastructure calls for an increased provision of infrastructure as well as regulatory reforms that enhance its efficient use such as introduction of congestion fee.

Table 1.5. **Reform priorities for countries with sluggish productivity growth in spite of favourable institutional settings**

	AUS		CAN		NZL		CHE		GBR		USA	
	R[1]	A[1]	R	A	R	A	R	A	R	A	R	A
Human capital												
Early childhood education												
Expand access to quality childcare and early education/ improve targeting	✓	•			✓	•	✓		✓	•	✓	•
Primary and secondary education												
Improve teaching quality/improve incentives for talented teachers (especially to work in difficult schools)					✓						✓	
Improve curricula and evaluation					✓						✓	•
Reduce inequality in educational outcomes and opportunities	✓				✓		✓					
Tertiary education												
Introduce/raise tuition fees flanked by income-contingent loans/mean-tested grants, improve targeting of means-tested financial assistance			✓				✓					
Expand access/enrolment/reduce inequalities in access			✓	•			✓					
Expand access to and effectiveness of apprenticeships and VET and their relevance to labour market needs					✓	•			✓		✓	•
Unemployment benefits/social protection and ALMPs												
Strengthen resources for job-search assistance and training while improving targeting of ALMPs									✓	•	✓	•
Tax system -structure and efficiency												
Shift the tax burden from personal income taxes toward consumption, immovable property and the environment			✓	•			✓					
Shift the tax burden from corporate income taxes toward consumption, immovable property and the environment	✓	•	✓	•			✓	•				
Broaden the tax base – reduce tax expenditures	✓		✓				✓				✓	
Efficiency of public spending and services												
Increase cost-efficiency in the healthcare sector					✓	•	✓		✓		✓	•
Reduce inequalities in access to public healthcare	✓	•			✓						✓	
Reduce sector-specific regulatory burdens												
Network sectors (energy, transport, telecoms)			✓		✓							
Reduce barriers to FDI and international trade			✓		✓		✓					
R&D and innovation												
Increase and/or direct R&D support			✓		✓							
Improve targeting of public support/evaluate grant programs			✓		✓							
Strengthen collaboration between research centres/universities and industry	✓											
Provision and regulation of public infrastructure												
Raise public and private investment in infrastructure, promote private sector participation/concessions/PPPs	✓	•							✓	•		
Introduce/increase/reform price signals/congestion charges and user fees	✓				✓				✓	•		

1. R stands for recommendation in that area, A stands for any actions that are implemented or in the process of implementation.

Some policy actions in these areas include:

- The United States expanded the pilot project "Bundled Payments for Care Improvement Initiative" conducted by Centers for Medicare and Medicaid Services to over 2000 additional hospitals and medical establishments.

- Australia is implementing its Infrastructure Growth Package which includes an initiative encouraging State and Territory governments to privatise assets to finance new investments.
- The United Kingdom, in its Productivity Plan put forth in July 2015, prioritises the upgrading of road network, to be achieved partly by spending GBP 15 billion on new roads over the rest of this decade. It also sets as a target that superfast broadband be made available to 95% of UK households and businesses by 2017.

Some reforms can increase the return to investment in knowledge-based capital

These countries are among those with relatively high rates of investment in knowledge-based capital (KBC), a wide range of intangible assets that includes, beside R&D, data, brand, design, firms-specific skills and quality managerial practices. While KBC is observed to have contributed substantially to GDP growth in advanced OECD countries (Corrado et al., 2012), KBC also generate knowledge spill-overs due to their non-exclusive nature, thereby acting as an important source of productivity growth (OECD, 2013a). Despite their high intensity in KBC investment, the subdued productivity growth suggests that these countries are enjoying only limited return on their investment.

In order to strengthen the economy-wide impact of KBC investment, these countries should encourage a stronger interaction between industries and research institutes, with a view to improving the commercialisation of new technologies. Also, reducing entry barriers and enhancing competition in industries (such as network and service industries) allows innovative firms that leverage KBC to play a larger role as the driver of productivity growth and the source of knowledge spill-overs. Similarly, reducing barriers to trade and FDI would encourage foreign firms closer to the technological frontier to enter the domestic market, facilitating the diffusion of new knowledge. However, limited policy actions have been observed in those policy areas recently.

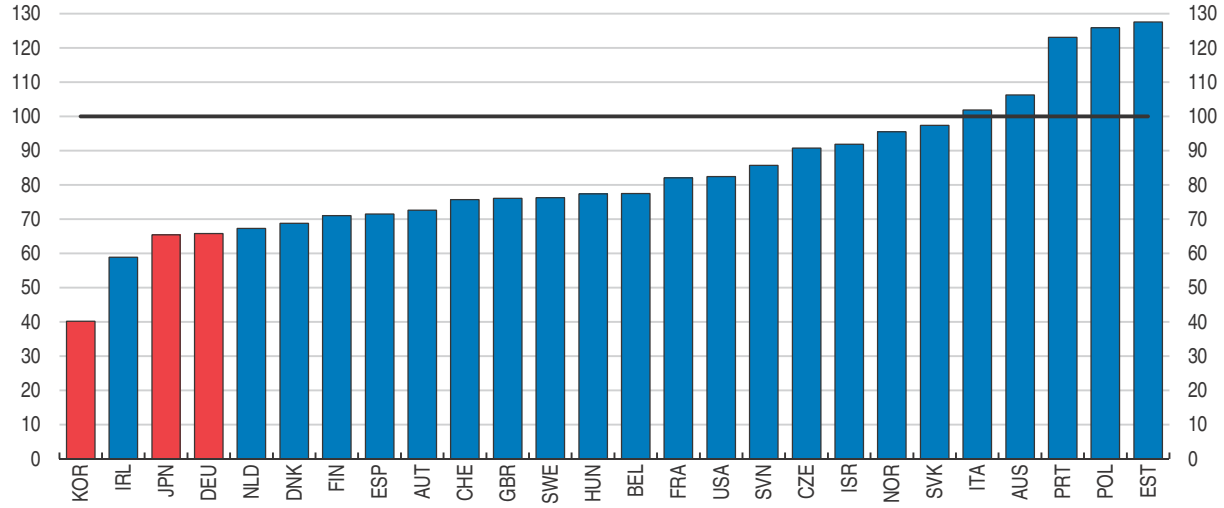
Group 6: Countries with relatively low productivity in non-manufacturing sectors, fast population ageing and high barriers to female labour force participation (Germany, Japan and Korea)

Countries in this group generally have a productivity level in services that is low relative to the level in manufacturing, with the productivity gap being particularly large compared to other countries (Figure 1.18). Lagging productivity in services is contributing to economy-wide labour productivity being significantly below the average of the upper-half of OECD countries (Germany being an exception) (Figure 1.19). Therefore, reducing regulatory barriers to competition and innovation in network industries as well as professional services and retail distribution remains a key common priority.

Another challenge shared by these countries is the rapid ageing of population. The share of working-age population plus the older population under the age of 75 in those countries will fall significantly faster than in other OECD countries (Figure 1.19). Given the need to mitigate the impact of labour force shortages, boosting the full-time labour participation of women has been high on the policy agenda of these countries. However, this requires comprehensive reforms that not only remove institutional disincentives for full-time labour participation but also that promote a working environment that can best help to reconcile work and family responsibilities.

Figure 1.18. **The productivity in services sectors is low compared to manufacturing**

Value-added per employee of business sector services,[1] manufacturing sector = 100, 2014



1. Business sector services cover distributive trade, repair, accommodation, food and transport services; information and communication; financial and insurance; professional, scientific and support activities. Data refer to 2013 for Belgium, Denmark, France, Israel, Italy, Japan, Korea, Poland, Portugal, Slovak Republic, Spain, Switzerland, the United States; 2012 for Australia and the United Kingdom. The observation on business sector services in Japan is an estimate based on National Accounts for 2013 and the 2014 JIP Database. The data on manufacturing sector for Israel include mining and quarrying while the data on business sector services include real estate activity.

Source: OECD *National Accounts Database*, Cabinet Office (Japan) 2013 National Accounts, Central Bureau of Statistics (Israel) "Product, Productivity Compensation of Employed Persons and Capital Return 2005-13".

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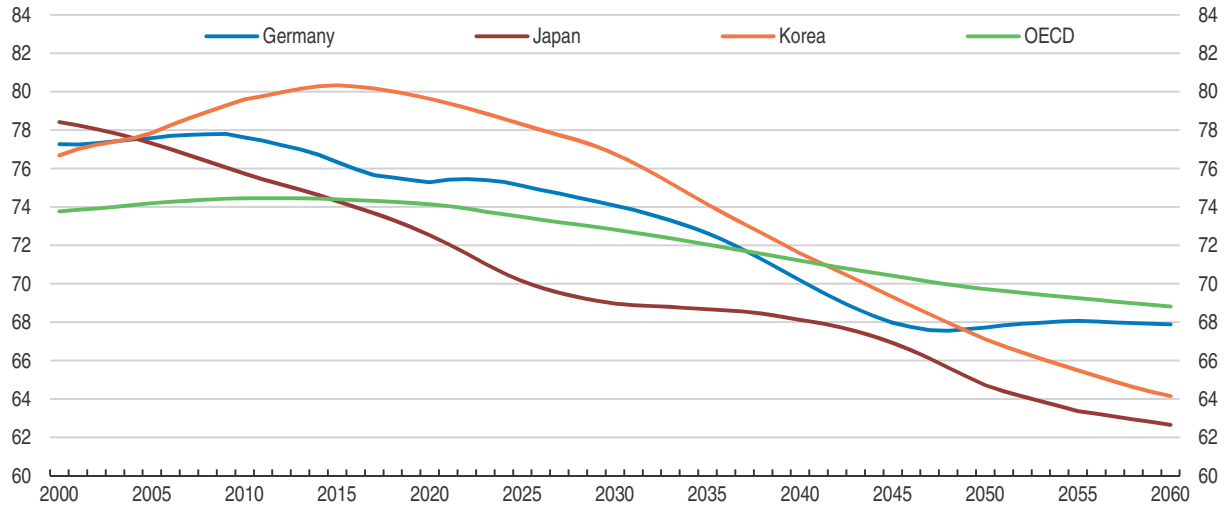
Figure 1.19. **A faster population ageing is expected compared to other OECD countries**

Projection of the share of population aged 15-74 in total population, percentage



Source: OECD, *Economic Outlook 96 Long-term Database*.

StatLink http://dx.doi.org/10.1787/888933323895

Strengthening competition in non-manufacturing sector boosts productivity in services and the competitiveness of the manufacturing sector

Regulatory barriers to entry and competition have held back productivity growth in non-manufacturing sector by discouraging innovation and impeding efficient resource allocation. Such regulatory barriers have also undermined the competitiveness of

downstream industries, especially manufacturing, given that 30% or more of the total value added in exports of manufactured goods is created with services as intermediate inputs. This indicates that substantial efficiency gains could be achieved in services industries by easing regulatory barriers to entry, which could in turn help boosting competitiveness of the manufacturing sector. To this end, those countries are recommended to facilitating entry and competition in network industries and other services, namely in retail. In Germany, abolishing price regulations and reducing exclusive rights in professional services is also a priority. Recent policy actions in this area include:

- Japan passed a law ensuring the neutrality of the electricity transmission and distribution sectors with regard to generation and retail through legal unbundling. It also passed a law that facilitates the establishment of foreign enterprises and promotes entrepreneurship in the National Strategic Special Zones.
- Korea reviewed nearly 800 regulations and amended the laws underpinning 2 377 regulations under the Regulatory Reform *Shinmungo*, a system allowing citizens to request reform directly to the government. It also launched the "Regulatory Reform for Foreign Investment."

Duality in social protection and training opportunity constrains productivity growth

Stringent employment protection on regular workers lowers labour productivity by impeding a smooth reallocation of labour resource (Bassanini et al., 2009). Furthermore, the significant gap in employment protection and training opportunities between regular and non-regular workers has a negative impact on income equality and human capital in those countries, due to the limited mobility from non-regular to regular contracts. These countries thus need to reduce labour market duality by increasing the transparency in dismissal procedure of regular workers while strengthening the job protection and training opportunities of non-regular workers.

While there are few reforms in the area of dismissal procedure of regular workers, some steps have been taken to strengthen the social protection of non-regular workers: For instance, Japan is to expand Employees' Pension Insurance and has extended the coverage of health insurance to 250 thousand non-regular workers beginning from 2016. Germany is considering a reform that limits the duration of employment on jobs filled by temporary work agency workers to 18 months. Those workers are to receive the same remuneration as comparable regular workers after 9 months.

Multi-dimensional efforts are needed to increase full-time labour participation of women

Full-time labour participation of women in these countries remains limited for various reasons: fiscal disincentives such as the joint taxation system or benefits and allowances conditional on spouse's non-employment; high costs, insufficient supply or ill-targeted childcare services; lack of flexibility in working-time arrangement and long working hours that prevent the take up of maternity leave. Duality between regular and non-regular workers also discourages labour participation, given that women are overrepresented in part-time workers (which are mostly non-regular contracts) in these countries (OECD, 2015e). Therefore, reforms to boost women's full-time participation should extend to multiple dimensions covering tax/benefits system, public services and labour regulations, whereas increasing the supply of childcare facilities or maternity leave alone may not be sufficient.

Table 1.6. **Reform priorities for countries with low productivity in non-manufacturing sectors and high barriers to female labour participation**

	DEU		JPN		KOR	
	R[1]	A[1]	R	A	R	A
Reduce economy-wide regulatory burdens						
Reduce administrative burden on start-ups/complexity of regulatory procedure			✓	•	✓	•
Other recommendations (strengthen the competition framework, reduce the scope of public ownership)			✓			
Reduce sector-specific regulatory burdens						
Network sectors (energy, transport, telecoms)	✓		✓	•		
Retail trade and professional services	✓		✓		✓	
Reduce barriers to FDI and international trade			✓	•	✓	•
Reduce/reform public subsidies to agriculture			✓	•	✓	
Job protection						
Ease EPL on regular workers to narrow the gap with respect to non-regular workers and tackle labour market duality	✓		✓	•	✓	
Ensure the enforcement of labour laws						
Unemployment benefits/social protection and ALMPs						
Expand the coverage of social protection and ALMPs to e.g. non-regular workers			✓	•	✓	
Expand/target job- placement schemes						
Tax system – labour tax wedges						
Remove tax and benefit disincentives to full-time female/second earners/lone parents participation	✓	•	✓			
Other recommendations (reduce labour tax wedge/disincentives to low income earners' full-time participation)	✓					
Tax system -structure and efficiency						
Shift the tax burden from personal income taxes toward consumption, immovable property and the environment	✓				✓	
Shift the tax burden from corporate income taxes toward consumption, immovable property and the environment			✓	•		
Broaden the tax base – reduce tax expenditures	✓		✓	•		
Policy barriers to full-time female participation – other than taxes and benefits						
Expand access to quality childcare and early education/improve targeting	✓	•	✓	•	✓	•
Reform parental leave policies/work place arrangement					✓	
Human capital						
Primary and secondary education (Ensure adequate school resources and infrastructure, etc.)	✓					
Expand access to and effectiveness of apprenticeships and VET and their relevance to labour market needs	✓	•				
Expand access to and effectiveness of lifelong/job-related education and training			✓		✓	

1. R stands for recommendation in that area, A stands for any actions that are implemented or in the process of implementation.

Recent policy actions include:

- Germany boosted federal expenditure to expand the childcare services supply for children aged 0-3 years and to raise the quality of childcare, in particular with regards to facilities and equipment. It also abolished the cash-for-care subsidy.
- Japan is increasing the number of childcare places in order to accommodate about 0.5 million children by March 2018. Also, after-school childcare centres are being created to provide care for 0.3 million children by March 2020.

- Korea introduced the provision of free childcare for up to 12 hours per day for all children under five, regardless of the employment status of the mother and family income. Free childcare will be prioritised toward families whose both parents work.

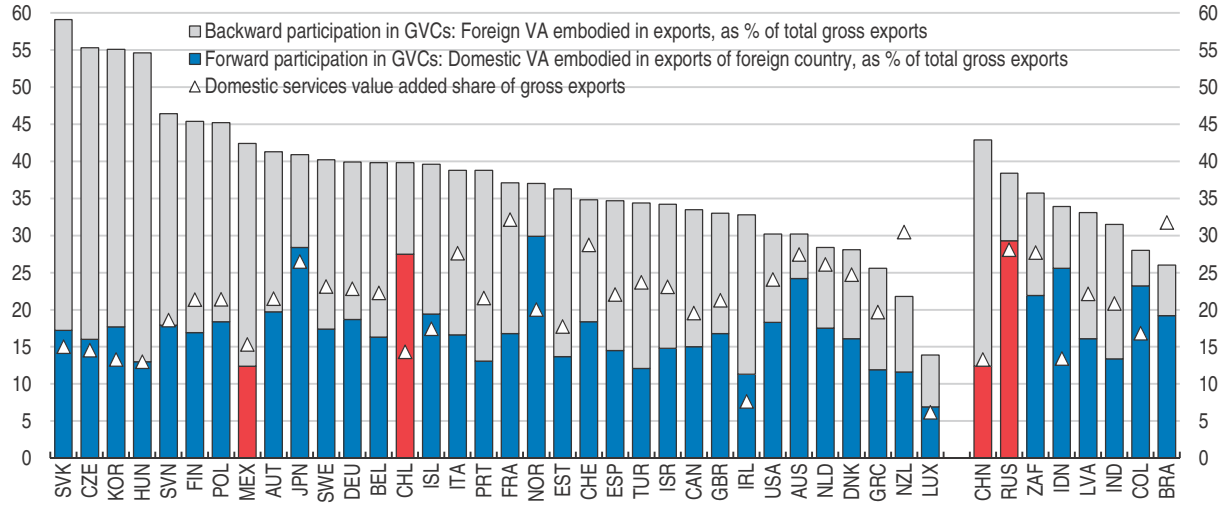
Group 7: Emerging-market economies with ample room for productivity catch-up through investment in knowledge-based capital and better resource allocation (Chile, Mexico, China and Russia)

Following several years (or decades in the case of China) of strong growth, these emerging-market economies need to shift to new sources of growth to continue to catch up with advanced economies. Productivity gains driven by resource reallocation away from agriculture to manufacturing, capital deepening, integration into the global trade system and the associated technology transfer have largely run their course. As the productivity gap between those countries and advanced OECD countries remains large, those countries need to step up investment in knowledge-based capital, improve resource allocation and encourage a more widespread development of skills and human capital.

These economies benefited greatly from their high integration in global value chains (GVCs) as suppliers of base materials (Chile and Russian Federation) or assemblers of final products (China and Mexico) (Figure 1.20). However, except Russian Federation, their manufacturing exports embody a relatively small share of domestic value-added arising from services, where the value-added created by GVCs is often concentrated (OECD, 2013b). To draw more value-added from their global engagement, these countries need to further improve their capabilities in knowledge and skill-intensive activities within GVCs (such as new product development, manufacturing of core components, or brand development).

Figure 1.20. **Strong participation into GVCs but considerable room to move up the value chain**

Index of GVC participation and the share of domestic service value-added in manufacturing exports,[1] percentage, 2011



1. The index of GVC participation consists of Backward participation, which is the share of foreign value-added embodied in a country's exports, and Forward participation, which is a country's value-added embodied in other countries' exports, as the share of its exports. Backward participation tends to be higher for small countries or those engaging heavily in assembly of final goods (ex: China, Mexico and some central European countries). Forward participation tends to be higher for countries exporting natural resource and base material (ex: Norway or Australia) and those participating in GVC as providers of core components (ex: the United States or Japan).

Source: OECD-WTO Trade in Value Added Database (TiVA), October 2015.

StatLink http://dx.doi.org/10.1787/888933323901

Table 1.7. **Reform priorities for countries with a large room for productivity catch-up through investment in knowledge-based capital and better resource allocation**

	CHL		MEX		CHN		RUS	
	R[1]	A[1]	R	A	R	A	R	A
R&D and innovation								
Increase public support	✓	•	✓	•			✓	
Increase and/or reform indirect R&D support – tax incentives, improve balance between direct and indirect support							✓	
Improve targeting of public support/evaluate grant programs							✓	
Strengthen collaboration between research centres/universities and industry	✓		✓					
Reduce economy-wide regulatory burdens								
Reduce administrative burden on start-ups/complexity of regulatory procedure	✓		✓	•	✓	•	✓	
Strengthen the competition framework	✓	•	✓		✓	•		
Reduce the scope of public ownership/state intervention					✓	•	✓	
Reduce sector-specific regulatory burdens								
Network sectors (energy, transport, telecoms)	✓		✓	•				
Reduce barriers to FDI and international trade			✓	•			✓	•
Legal infrastructure and the rule of law								
Reinforce judiciary independence and accountability			✓	•			✓	•
Reduce the scope for public officials' interference in decision-making processes/corruption, increase business transparency					✓	•	✓	•
Financial markets regulation and supervision								
Strike a better balance between liberalisation and regulation in financial markets					✓	•		
Human capital								
Early childhood education								
Expand access to quality childcare and early education/improve targeting	✓	•						
Primary and secondary education								
Improve curricula and evaluation	✓		✓	•				
Reduce inequality in educational outcomes and opportunities	✓	•			✓			
Other recommendations (ensure adequate school resources and infrastructure, etc.)			✓	•				
Tertiary education								
Improve curricula and evaluation	✓				✓			
Expand access/enrolment/reduce inequalities in access	✓				✓			
Expand access to and effectiveness of apprenticeships and VET and their relevance to labour market needs	✓				✓	•		
Unemployment benefits/social protection and ALMPs								
Expand the coverage or level of UB/social protection and social services	✓	•			✓		✓	

1. R stands for recommendation in that area, A stands for any actions that are implemented or in the process of implementation.

Effective innovation policies stimulate business investment in knowledge-based capital

In order for innovation to play a larger role in economic growth, business-based investment in KBC must be stimulated through effective support measures and a strong innovation system including better networking between research institutions and firms to facilitate the commercialisation of new technologies. These countries are recommended to revamp or reallocate their R&D support and enhance university-industry or public-private

sector linkages. Increasing their stock of KBC conditions their ability to innovate and move up the value chain, but also enhances their ability to absorb and assimilate the diffusion of advanced technology from the global frontier.

As an example of recent actions in this area, Chile launched an agenda for productivity, innovation and growth that includes the creation of a productivity commission, designed to lay the ground work for more balanced and diversified development across sectors, and to increase investment in R&D activities. Mexico launched the National Entrepreneur Fund to foster productivity and innovation in small and medium sized enterprises.

Reforms that enhance resource allocation boost productivity and maximise the economy-wide impact of KBC

Economy-wide productivity growth is shaped importantly by the extent to which more productive firms can grow in size (Bartelsman et al., 2013). Also, reforms that strengthen an economy's ability to allocate resources to innovative firms magnify the impact of KBC investment, for these firms can act as a larger source of knowledge spill-overs (OECD, 2015b). By reducing further the scope of command and control regulations as well as the weight of state ownership and entry barriers, these countries can better use market mechanisms that reward competitive firms with larger market shares. Such reforms, together with those in financial and labour markets to improve the allocation of skills and capital toward more productive firms, would unleash productivity growth.

Recent policy actions in this area include:

- Chile introduced a new competition bill that strengthens the sanctions for cartels, introduces a more effective and transparent merger control regime and grants the competition authority formal powers to perform market studies.
- China lifted price controls on 24 commodities and services, including for some categories of freight and passenger transport. It reduced the administrative burden by abolishing or delegating to the sub-national level over 350 administrative approval processes. Furthermore, with the removal of the ceiling on short-term deposits, interest rates have been liberalised except for some policy rates.
- Mexico is implementing the License and Production Sharing Contracts in energy sector and has concluded three tenders. It is also opening up the insurance and telecom industry to FDI. Furthermore, it launched a one-stop online shop for government services and information that would reduce the administrative costs of start-ups.

A robust legal infrastructure is a foundation of economic growth, especially for innovation-driven growth. A transparent and fair legal environment that ensures protection of intellectual property and contract enforcement is crucial for investment in KBC considering that new ideas can often be easily replicated, denying those who invested in the development of such ideas the possibility to recoup their initial investment. Reforms that combat corruption and enforce the rule of law would also stimulate entrepreneurship by reducing the *de facto* entry barriers.

Recent policy actions in this area include:

- China increased the transparency in business conduct by replacing the annual review of enterprises by a requirement of annual disclosure of corporate reports to all enterprises.
- Mexico passed its new anti-corruption framework and has accelerated the implementation of a new justice system at state level.

- The Russian Federation enacted the amendments to the anti-corruption law that broadened the categories of public officials forbidden to have foreign bank accounts. Also, Judges' salaries are to be increased by 30% in 2016.

Reforms enhancing educational outcome and labour mobility complement KBC in realising higher productivity growth

An intensive use of new technologies or other types of KBC increases the demand for workers with skills that complements KBC in achieving higher productivity. A shortage of such skills can be a bottleneck for countries in this group in translating investment in innovation into significant productivity gains. On the other hand, new technologies will inevitably displace workers with skills that are substituted by new technologies. This underscores the importance of education reforms that enable more students and workers with ample opportunities to acquire relevant skills. To this end, those countries ought to further raise the quality of primary and secondary education and ensure equity in access. They are also need to re-orient tertiary education to the skills demanded in labour markets and to upgrade VET by improving teaching quality and curriculum.

Recent policy actions include:

- Chile is processing bills to reform early childhood education, pre-primary education and improve teacher pay conditions. The government has also introduced new legislation that eliminates profits, tuition fees, and selective admission practices in primary and secondary schools receiving state subsidies.
- Mexico implemented the new national standard for primary and secondary teacher performance, in spite of delay in some states. It also launched the Educational Infrastructure Certificates, a new bond to finance the improvement of school infrastructure.

Reforms that remove barriers to labour mobility, such as granting equal access to public services by migrant workers irrespective of their registration status, also boost productivity growth by making it easierfor skilled workers to relocate to higher productivity jobs in urban areas (OECD, 2015e). To this end, China should allow equal access to education for the children of all migrants. Steps are taken as few cities have issued residential permits to migrants.

Group 8: Emerging-market economies with high labour informality and infrastructure bottlenecks (Turkey, Brazil, Colombia, India, Indonesia and South Africa)

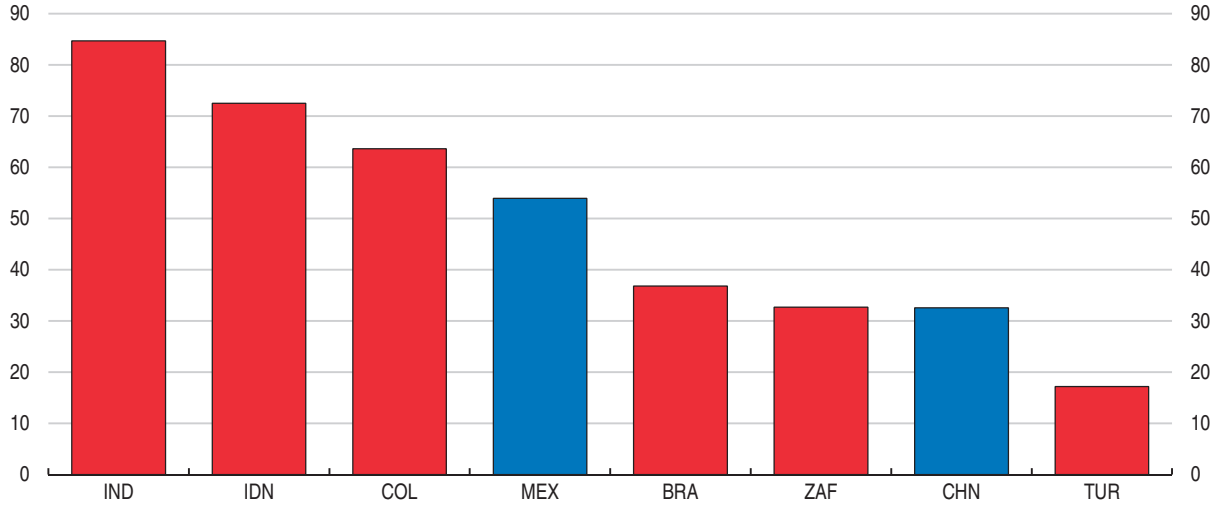
The last group consists of emerging-market economies in need of addressing a wide range of structural bottlenecks in order to sustain strong medium-term growth. The most binding bottlenecks include high labour informality and youth unemployment, severe shortages in public infrastructure and low educational attainment.

Various institutional barriers to formal employment must be removed

Labour informality is often associated with poor employment conditions such as a lack of protection against wage non-payment or hazardous work, lay-offs without notice or compensation, and the absence of benefits such as pensions, sick pay and health insurance. Informal employment, especially prevailing in India, Indonesia and Colombia (Figure 1.21), and high youth unemployment (especially serious in South Africa) are rooted on various rigidities affecting the formal labour markets: onerous labour regulation and stringent employment protection (e.g. in India and Indonesia); high minimum wage and

Figure 1.21. **Informal employment represents a high share of total employment**

Percentage of total employment, 2013[1]



1. Data refer to 2009 for Indonesia; 2010 for South Africa and China; 2012 for India. For China, the figure is an official estimate for urban area.
Source: International Labour Organisation (ILO).

StatLink http://dx.doi.org/10.1787/888933323918

non-wage hiring costs (e.g. in Colombia, Indonesia, Turkey and South Africa); and stringent regulatory entry barriers and administrative burden that impede entrepreneurship and job creation (e.g. in South Africa). In Turkey, the low statutory retirement age is discouraging formal work at older ages.

The scope of reforms to reduce labour informality and unemployment in those countries is wide, given the need to address both the high costs of formal employment and weak job creation. Essential reforms include shifting worker protection from jobs to workers by reducing the rigidities in severance procedures while introducing or expanding the coverage of unemployment benefits; cutting social security contributions and other non-tax compulsory employer payments; capping increases in minimum wages and weakening administrative extension of collective bargaining; cutting red tape and the administrative burden on business operations and strengthening active labour market policies such as job placement services.

Recent policy actions in those areas include:

- India amended its Apprentices Act, relaxing some rigid norms related to the hiring of apprentices. Also, the firm size threshold below which companies can lay off employees without prior government approval has been raised in some states. Furthermore, a unified online portal for 16 central government labour laws was launched while making labour inspection processes more transparent.
- Turkey has granted permanent social security contribution cuts and wage subsidies for the employment of young workers. The wages of workers receiving on-the-job vocational training will be paid by the government for six months, and the employer social security contributions for these workers will be fully subsidised for 3½ years, if the training ends up in hiring.
- In order to reduce the barriers to entrepreneurship, South Africa lowered turnover taxes for micro businesses and increased tax credits for the venture capital scheme.

Addressing infrastructure bottlenecks through efficient regulatory settings and better targeting

The large infrastructure gap that constrains productivity growth in these countries should be addressed by crowding in private investments for instance, in the form of private-public partnerships. Essential reforms in this area include resolving the inefficiencies in regulation concerning tender, concession, land acquisition or project approval as recommended to India and Indonesia. Also, a better prioritisation of investment through an ex-ante cost-benefit evaluation (as recommended to Colombia) would enhance the contribution of infrastructure investment to productivity growth.

Recent policy actions in this area include:

- Brazil launched the second stage of the Logistics Investment Programme PLI, with planned investments of BRL 70 billion through concessions by 2018.
- Colombia expanded the incentives to coordinate better regional infrastructure projects, namely prioritising larger regional projects in need. The plan also included general guidelines for evaluating and prioritising PPPs with a methodology to be issued by the National Planning Department.
- As part of the "Make in India" initiative, India took measures that could encourage private investment, such as relaxing FDI regulations in some sectors including railways, construction, air transport services. It also introduced regulatory reforms in the energy sector such as an enhanced transparency in coal allocation, a partial privatisation of Coal India and the auctioning of oil and gas fields.

Raising educational attainment by allocating more resource and improving teaching quality

As regards the performance of teenage students, the results from the PISA tests reveal the poor international ranking of these countries, in particular in maths (Figure 1.15). This undermines productivity growth but in some cases also contributes to high youth unemployment (e.g. South Africa). There is considerable scope for increasing the resources devoted to education (on a per student basis) and to improve the quality of teachers through more comprehensive training and evaluation programmes. Furthermore, vocational training must be revamped both in supply and quality in order to address the low youth employability and skill shortage.

Recent policy actions include:

- Columbia increased new fellowships for tertiary education and introduced a new system of targeting student loans. It also foresees extending early childhood care to 1.1 million infants as opposed to 400 thousand today.
- Turkey adopted its Vocational and Technical Education Strategy and Action Plan 2014-18 which includes 24 specific goals to be monitored by performance indicators, including revisions of curricula according to national professional standards.
- Indonesia introduced a new syllabus while increasing the funding for education.
- India launched the Skill India Initiative that includes expansion in quantity and scope of skill training programmes and financial incentives for youth attending and completing those programmes.

Table 1.8. **Reform priorities for countries with high labour informality and infrastructure**

	TUR		BRA		COL		IND		IDN		ZAF	
	R[1]	A[1]	R	A	R	A	R	A	R	A	R	A
Job protection												
Ease EPL on regular workers (reduce severance payment) to narrow the gap with respect to non-regular workers and tackle labour market duality	✓						✓	•	✓			
Ease conditions for justified individual or collective dismissals							✓	•	✓			
Minimum wages and wage bargaining systems												
Reduce the minimum cost of labour/allow for age or sector differentiation	✓				✓				✓		✓	
Unemployment benefits/social protection and ALMPs												
Expand the coverage or level of UB/social protection and social services	✓								✓			
Tax system – labour tax wedges												
Reduce average/marginal labour tax wedges					✓							
Reduce labour tax wedges by reducing social security contributions	✓	•			✓							
Human capital												
Primary and secondary education												
Ensure adequate school resources and infrastructure	✓		✓				✓		✓	•	✓	
Improve teaching quality/improve incentives for talented teachers (especially to work in difficult schools)			✓				✓		✓		✓	
Improve school accountability and autonomy	✓		✓								✓	
Reduce inequality in educational outcomes and opportunities			✓				✓					
Other recommendations (improve curricula and evaluation, reduce dropout)			✓								✓	
Tertiary education												
Increase university autonomy and accountability or specialisation by institutions	✓				✓							
Improve targeting of means-tested financial assistance					✓	•						
Expand access to and effectiveness of apprenticeships and VET and their relevance to labour market needs	✓	•	✓				✓	•			✓	
Expand access to and effectiveness of lifelong/job-related education and training	✓	•									✓	
Reduce economy-wide regulatory burdens												
Reduce administrative burden on start-ups/complexity of regulatory procedure							✓	•	✓		✓	•
Ease business exit/bankruptcy procedures							✓				✓	•
Other recommendations (Strengthen the competition framework etc.)											✓	
Reduce sector-specific regulatory burdens												
Network sectors (energy, transport, telecoms)	✓	•	✓								✓	
Reduce barriers to FDI and international trade			✓						✓	•		
Provision and regulation of public infrastructure												
Raise/improve targeting of public and private investment in infrastructure			✓	•	✓	•	✓	•	✓	•		
Promote private sector participation/concessions/PPPs			✓	•	✓	•			✓			
Financial markets regulation and supervision												
Encourage private participation in financial markets/ gradually reduce state intervention while ensuring strong prudential regulation			✓	•			✓	•				
Reduce/reform public subsidies to agriculture and energy	✓								✓	•		

1. R stands for recommendation in that area, A stands for any actions that are implemented or in the process of implementation.

Cross-country policy issues with implications for international trade and FDI

Global trade growth has slowed and, compared to past trends, is particularly weak relative to GDP growth, which may reflect a structural shift in the relationship between the two aggregates (OECD, 2015f, Constantinescu et al., 2015). Yet, trade plays a fundamental role in the diffusion of technology and access to high-quality imported intermediate goods boosts productivity and competitiveness within GVCs (OECD, 2013b). Therefore, collective efforts to remove structural impediments to international trade, such as non-tariff barriers, are required to boost growth both in the short and in the longer term.

Some progress is observed at the global level, and to a lesser extent, at the regional and country levels. At the global level, the negotiation on the Trade Facilitation Agreement (TFA), which contains various provisions for improving the speed and efficiency of border procedures, was concluded in December 2013, followed by the adoption of a Protocol of Amendment in November 2014.The full implementation of the TFA is expected to reduce worldwide trade costs by 12.5 to 17.5% (OECD, 2015g). Furthermore, some important aspects of trade facilitation such as the availability of advanced rulings or streamlining of border and custom procedures strengthen significantly countries' integration into GVCs via increased use of foreign inputs in exported goods or higher exports of intermediate goods used as inputs in foreign exports (Moïsé and Sorescu, 2015).[2]

Another breakthrough came in October 2015, when 12 Asia-Pacific countries reached the Trans-Pacific Partnership (TPP) agreement which covers nearly 40% of the world economy. Aside from the reduction of tariff barriers, the TPP agreement includes provisions that improve intellectual property protection, remove barriers to investment in services, and increase consistency and transparency of regulatory regimes across partner countries. While the immediate impact of the agreement on trade and FDI flows remains uncertain given that many tariffs are abolished only gradually, the prospect of better access to foreign markets may stimulate investment in the relatively short run. In the medium term, stronger competition and increased inward and outward investment are likely to stimulate innovation and productivity growth in previously shielded sectors, namely services and parts of agriculture (Jorgensen et al., 2015).

At the regional level, the European Commission has taken a step toward the Digital Single Market by adopting a strategy that lays out legislative process toward further harmonisation in regulations and reduction of administrative burdens concerning cross-border e-commerce and telecom markets. Another strategy related to the Energy Union was also adopted, aiming for a fully integrated European energy market that involves interconnections and a common regulatory framework. While tremendous efforts are required to push through regulatory harmonisation in Europe, the return to such reforms is large, involving substantial boost in trade and FDI across EU countries (Fournier et al., 2015). The harmonisation in service sector is of particular importance, given that it accounts for up to half of the value-added embodied in gross exports. The stringency of regulatory barriers to service trade reduces not only imports but also exports of services, for such restrictions are mainly behind the border and therefore weakens the competitiveness of local firms as well (Nordås and Rouzet, 2015).

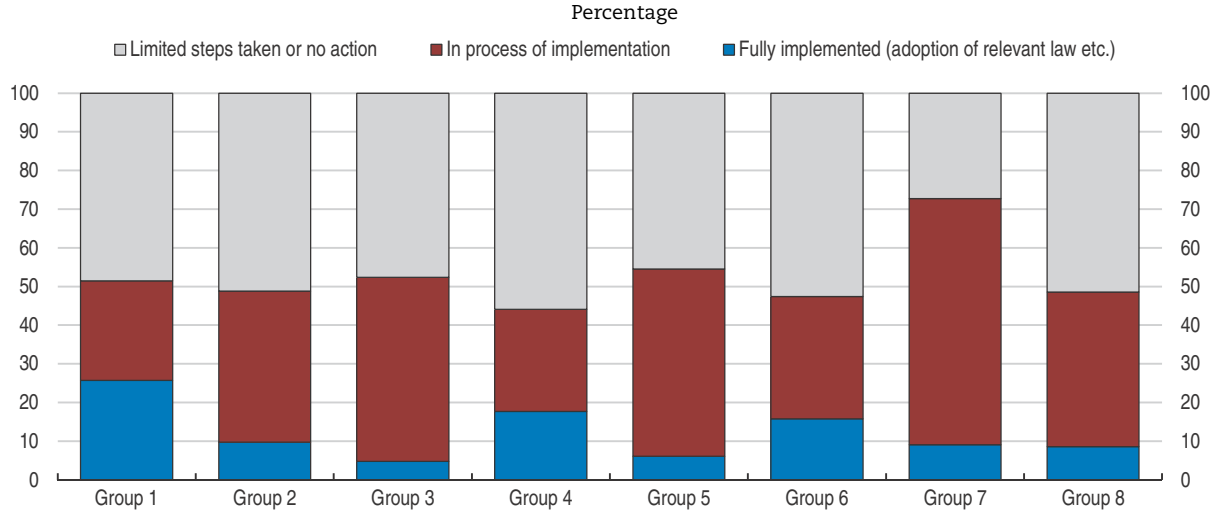
At the country level, some reforms in the highly protected agriculture sector and energy subsidies have taken place. For instance, Japan has reformed its Agricultural Co-operative system and relaxed some of the limits on corporate farm ownership, steps that may promote competition and boost productivity. Norway raised production-level caps in

some agriculture support mechanisms so as to encourage a shift to larger-scale units. Indonesia scrapped subsidies on gasoline and capped those on diesel – a welcome move that contributes both to the efficiency of budget allocation and the environment. However, the administrative price setting regime that replaced subsidies is cumbersome and still inhibits the adjustment of domestic fuel prices to world prices. Furthermore, Indonesia sharply increased import tariffs on food, clothes, cars and other consumer goods, which pushes-up inflation and has a negative impact on household income.

Summing-up: a great variation in the implementation of reforms across and within country groups

During 2015, the highest share of full implementation of structural reforms corresponding to the recommendations made in *Going for Growth 2015* has been observed in country group 1 consisting mostly of Southern European countries (Figure 1.22). Among the countries in this group, Italy and Spain have been most active, while the intensive pace of reforms observed in Greece in previous years basically came to a halt in 2015 in part due to the political transition in the first half of the year. Despite a slower share of completed reforms, other country groups could also end-up with a pace of reforms that is comparable to the average observed across OECD countries over the past two years, if preliminary steps in a number of areas are fully implemented. Within each country group, some countries have been more active, for instance Norway (group 3), France (group 4) and Japan (group 6). In the case of the two country groups comprising emerging-market economies (groups 7 and 8), relatively few reforms have been fully implemented but initial action has been taken on a substantial number of recommendations, in particular in China, India and Mexico.

Figure 1.22. **A large variance in the share of the *Going for Growth* recommendations implemented or in process of implementation**[1]



1. The chart summarises the share of recommendations made in *Going for Growth 2015* by the status of their implementation at the end of 2015. Full implementation refers to legislation of relevant laws or equivalent measures.

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The implications of growth-enhancing structural reforms for inclusive growth and macroeconomic rebalancing

This section briefly discusses the potential impact of *Going for Growth* recommendations and actions taken on policy objectives other than growth in GDP per capita agenda, more specifically the narrowing of income distribution as well as of fiscal and current account imbalances.[3]

Many structural reforms yield double dividends in term of boosting growth and reducing income inequality

The fact that in many countries growth in GDP per capita over the past three decades has benefitted little low-income households points to the importance of structural reforms that promote inclusive growth. The contribution of structural policies to trends in income inequality has been well documented (see *inter alia* OECD, 2008, 2011, 2014c, 2015h), providing many insights on how reforms could be tailored so as to yield the double dividend of higher growth and reduced income inequality (see Chapter 2 of *Going for Growth* 2015).

Many of the recommendations made in the 2015 issue of *Going for Growth* are expected to reduce income inequality, especially those aimed at increasing employment (Table 1.9, column 1). However, some reforms encouraging the labour participation of low income earners and low-skilled workers can lead to higher wage dispersion at the lower end of the distribution. Other reforms enhancing competition and innovation are often found to be associated with wider earning gaps (OECD, 2011), partly through their role in stimulating skilled-biased technology changes. This underscores the importance that such reforms be complemented with measures to facilitate worker's up-skilling and reduce skill mismatch, such as better provisions of vocational trainings and lifelong learning programmes.

Across the ten OECD countries facing the highest degree of income inequality, the number of reforms implemented or in the process of being implemented that are likely to reduce inequality is twice as high as those that are more likely to increase them (Figure 1.25).[4]

The short-run budgetary pressures can be mitigated by a good design and packaging of reforms

In many OECD countries, not least those with a very high level of government debt relative to GDP, the need to pursue public finance consolidation remains high, especially those where population ageing is likely to put additional budgetary pressures. Under a stylised scenario of interest rates normalisation and a rising expenditure on healthcare, long-term care and pension, government debt ratios are expected to rise in about two-third of OECD countries even in the case where interest rates remain at par with GDP growth rates from 2020 onward (OECD, 2015a). And the debt dynamic gets worse in the case where interest rates exceed GDP growth (Figure 1.23).

Although *Going for Growth* recommendations generally contribute to fiscal consolidation in the long run – in particular those that boost private-sector employment (OECD, 2013c) – some of them are associated with non-negligible up-front increases in public expenditure (or declines in revenues) and their implementation can thus pose challenge to fiscal consolidation in the short run (Table 1.9, column 2). Countries with very limited budgetary room may have to focus on low-cost measures or ensure that others are financed through means that are as friendly as possible to employment and growth. The

Table 1.9. **The implication of the *Going for Growth* recommendations and actions taken on other objectives**

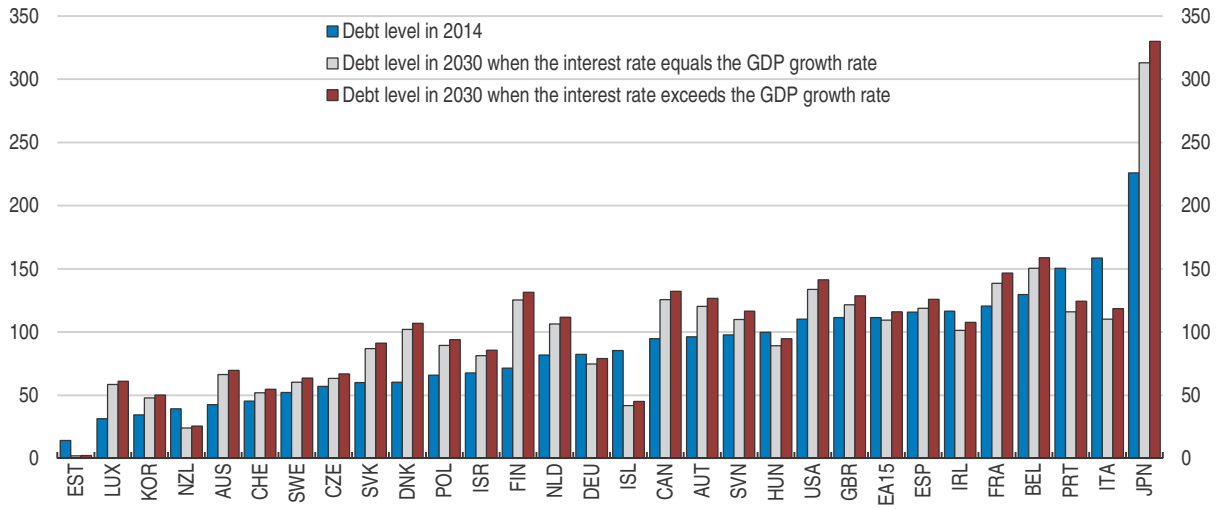
	Income distribution	Budget balance	Current account position	Countries with priorities in this area (**countries taking related action in bold**)
Labour market policies				
Reducing the duality between regular and non-regular workers (in job protection, training opportunity, etc.)/ reducing informal labour participation	+		~	CHL, DEU, ESP, **FRA**, **ITA**, **IND**, IDN, ISR, **JPN**, KOR, **LUX**, **NLD**, SWE,TUR
Reforming minimum wage and wage bargaining	~		+	BEL,COL, ESP, IDN, PRT,SVN, TUR, ZAF
Extending the coverage of unemployment insurance and social protection	+	-		**AUS**, **CHL**, CHN, GRC, IDN, **ITA**, **JPN**, KOR, PRT, RUS,TUR
Reducing the replacement rate and duration of unemployment benefits/strengthening conditionality on job-search	~	+		**BEL**, FIN, FRA, IRL, LUX, NLD, PRT, SVN
Improving effectiveness of ALMPs (job-search assistance/individual follow-up/training and re-skilling)	+	-/~		**ESP**, **EST**, **FRA**, GRC, **GBR**, IRL, **ISR**, **ITA**, LVA, **NLD**, **PRT**,RUS, **SVK**, **USA**, ZAF
Reforming the tax-benefits system to encourage labour force participation of the low-skilled	+/~	-/~		**AUT**, **BEL**, COL, CZE, DEU, **EST**, FIN, **FRA**, **GBR**, **HUN**, IRL, **ISR**, **ITA**, LUX, LVA, **NLD**, POL, SVN, SWE, **TUR**
Reducing barriers to female labour force participation (increasing provision of childcare, reducing fiscal disincentives)	+	-/~	-	**AUS**, CHE, **CHL**, COL, **CZE**, **DEU**, **GBR**, **IRL**, **JPN**, **KOR**, NLD, NZL, **POL**,**SVK**, TUR, USA
Reducing disincentive for continued work at old age and tightening the eligibility to disability benefits	~	+	-	**AUT**, **BEL**, DNK, EST, **FIN**, HUN, **LUX**, NLD, **NOR**,POL, SVN, SWE, TUR, **USA**
R&D and Innovation				
Boosting innovation activities (R&D and other investments in KBC)	-	-	-	AUS, CAN, **CHL**, COL, **CZE**, EST, IRL, LVA, **MEX**, NZL, PRT, RUS, **SVK**, SVN
Education/Human capital				
Increasing the provision and quality of early, primar and secondary education	+	-		AUS, BRA, CHE, **CHL**, CHN, **COL**, **CZE**, **DEU**, DNK, **FRA**, GBR, GRC, HUN, IRL, ISL, **IND**, **IDN**, **ISR**, **ITA**, **JPN**, KOR, **MEX**, **NZL**, **NOR**, POL,PRT, SVK, **SWE**, TUR, **USA**, ZAF
Increasing the outcome of tertiary education/broadening access to VET and life-long training	+	-/~		AUT, BRA, **CAN**,CHE, CHL, **CHN**, **COL**, **CZE**, **DEU**, DNK, **ESP**,**EST**, FIN, **FRA**, GBR, GRC, HUN, **IND**, ITA, JPN, KOR,**NZL**, **POL**, PRT, **SVK**, SVN, SWE, **TUR**, **USA**, ZAF
Product Market Reform				
Reforming product market regulation (PMR) to enhance competition, trade and FDI	-		-/~	AUT, BEL, BRA, CAN, **CHL**, **CHN**, CZE, DEU, **DNK**, **ESP**, EST, FIN, **FRA**, GRC, HUN, **IND**, **IDN**, **IRL**, **ISR**, **ITA**, **JPN**, **KOR**, LUX, **LVA**, **MEX**, NZL, **NOR**, **POL**, PRT, **RUS**, **SVK**, **SVN**, **TUR**, **ZAF**
Reducing agricultural and energy subsidy	+	+	~	CHE, **IDN**, **ISR**, **JPN**, KOR, **NOR**, TUR, USA
Tax reform				
Shifting the burden from direct to indirect taxation (including fiscal devaluations, etc.)	-/~	~	+	**AUS**, AUT, BEL, **CAN**, **CHE**, COL, CZE, DNK, DEU, **EST**, FIN, FRA, **ITA**, **JPN**, KOR, LVA, POL, SWE
Enhancing the efficiency of tax system (cutting back tax expenditure, broadening tax base, fighting tax evasion)	+/~	+	+	AUS, AUT, **BRA**, CAN, CHE, COL, DEU, DNK, EST, FIN, FRA, GRC, ITA, JPN, **LVA**, NLD, **NOR**, SWE, TUR, USA
Infrastructure				
Increasing investment in public infrastructure		-	-	**AUS**, **BRA**, **COL**, EST, **GBR**, **IDN**, **IND**, LVA, MEX, **POL**

Note: The table summarises the expected short- to medium-run impact of each type of reform in attaining the policy objectives. "+" corresponds to the case where the reform is likely to contribute to the objective whereas "-"corresponds to the case where it is unlikely to help or generate a short-run trade-off. "~" corresponds to the case where the impact is ambiguous due to opposing effects. Blank corresponds to the case of no direct effects. The country code in bold corresponds to the case where policy action is taken.

short-run impacts on fiscal expenditure can be also mitigated by implementing in tandem reforms that enable fiscal savings. An example of such "packaging" is a strengthening of conditionality of unemployment benefits on activation measures while expanding ALMPs, as is being done in Italy. Furthermore, some reforms can be implemented in a cost-efficient manner through adequate regulatory reforms. For instance, enabling competition and adequate pricing in network sector can stimulate private investment in public infrastructure.

Figure 1.23. **Government debt levels will likely rise in a majority of OECD countries with normalisation of interest rates and population ageing**

Debt level in 2014 and simulated debt levels in 2030,[1] as a percentage of GDP



1. The chart compares the government debt level in 2014 and the simulated level in 2030 under two alternative scenarios on the evolution of the interest rate and the GDP growth rate. See the source for the details of assumptions made in the simulation.

Source: OECD (2015), *OECD Economic Outlook*, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888933323931

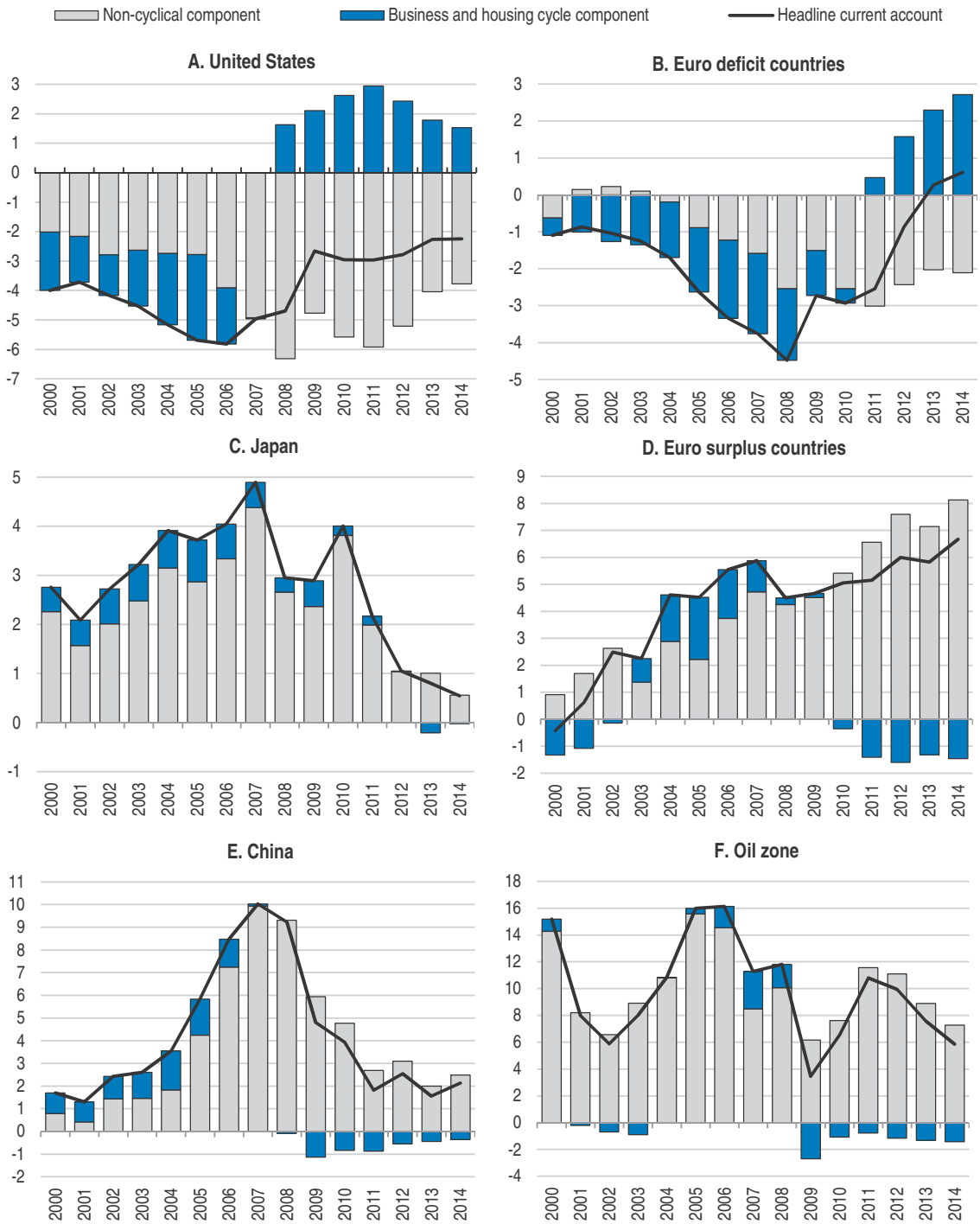
Among the ten OECD countries with the largest primary deficits and the highest government debt levels, the majority of reforms implemented or in the process of implementation are likely to put short-term pressures on the budgetary balance (Figure 1.25).[5]

Reforms can help rebalancing the structural component of current account deficits or surplus

While current account imbalances declined substantially after the crisis, about one half of the decline is explained by cyclical factors, namely large contractions in domestic demand on the back of bursting housing bubbles in a number of deficit countries (Ollivaud and Schwellnus, 2013). The narrowing of cyclically-adjusted global current account imbalances reflects a substantial narrowing for all major trading areas except the euro area, where the cyclically-adjusted balance of surplus countries continued to widen while that of deficit countries narrowed by about one percentage point (Figure 1.24).This underscores the importance of removing the institutional distortions that alter households' saving behaviour or return to private investment. For deficit countries, reforms in labour and product markets that reduce labour or business costs may also help to reduce imbalances by improving competitiveness.

Figure 1.24. **The non-cyclical component of external imbalances remain substantial**

Business and housing-cycle adjusted components of current account balances, as a percentage of GDP[1]



1. The chart decomposes the headline current account imbalances to the component explained by business and housing cycle and the non-cyclical component. Following Ollivaud and Schwellnus (2013), the euro area surplus countries are defined to include euro area members for which the current account surplus was on average larger than 1% of GDP over the period 2000-05 (Austria, Belgium, Germany, Finland, Luxembourg and the Netherlands). The euro area deficit zone includes the remaining members of the OECD euro area (France, Estonia, Greece, Ireland, Italy, Portugal, the Slovak Republic, Slovenia and Spain).

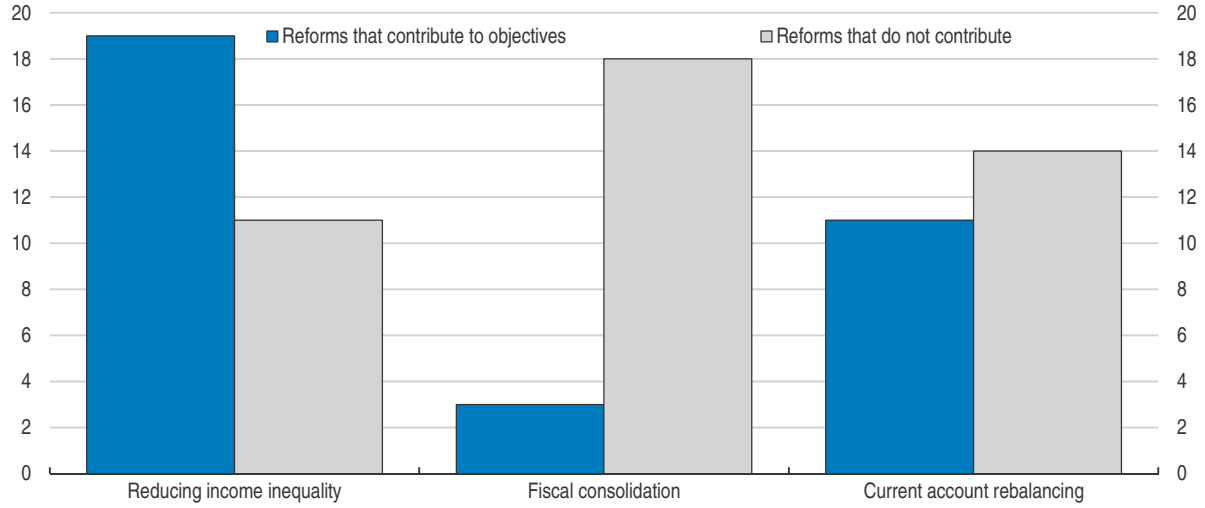
Source: Updated calculations based on P. Ollivaud and C. Schwellnus (2013), "The Post-crisis Narrowing of International Imbalances: Cyclical or Durable?" OECD *Economics Department Working Papers*, No. 1062, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888933323943

The expected contribution of structural reforms to a stronger current account summarised in the third column of Table 1.9 suggests that reducing the minimum costs of labour by reforming worker's bargaining power help deficit countries to rebalance the non-cyclical component of imbalances. Similarly, cutting back subsidies or tax incentives that lead to excessive consumption or investment in specific products may also help. For countries with a large current account surplus, regulatory reforms and fiscal supports that boost investment in physical and knowledge-based capital as well as higher investment in public infrastructure can contribute to reducing the structural component of the current account. Furthermore, promoting the full-time labour force participation of women and older workers may also work towards rebalancing by increasing income of those groups and thereby reducing the need for precautionary or retirement saving.

Figure 1.25. **The actions taken are likely to help reduce inequality but not macroeconomic imbalances**

Number of *Going for Growth* recommendations implemented or in process of implementation[1]



1. The chart summarises the number of recommendations implemented or in the process of implementation by the group of countries facing highest income inequality, fiscal and external imbalances. See footnotes in the text for the methodology for selecting those countries.

StatLink http://dx.doi.org/10.1787/888933323951

Across countries facing largest external imbalances, there are similar numbers of reforms that have been implemented or are in process of implementation that are likely or unlikely to help reducing those imbalances in the short run (Figure 1.25).[6] However, while the reforms undertaken by countries with largest external surpluses are overall likely to help the rebalancing, none of those undertaken by countries with largest deficits are expected to contribute to the narrowing of imbalances.

Notes

1. This may be particularly the case when the indicator is compiled and averaged over a relatively small group of countries such as the group of emerging-market economies.
2. The TFA will enter into force once two-thirds of members have completed their domestic ratification process of the Protocol. Some of the largest trading countries such as the United States, European Union and its member states, China and Japan have completed the ratification process.
3. The implication on the environment are not covered in this chapter, given that there are only very few reforms that directly affects environment and that such impacts are importantly shaped by

the environmental regulations in place (see Chapter 3 of the 2015 issue of *Going for Growth* for an in-depth discussion).

4. The 10 OECD countries with highest income inequality are chosen on a basis of an index that combines the standardised values of Gini coefficients and relative poverty rate. They are: Mexico, Chile, Turkey, the United States, Israel, Japan, Greece, Spain, Australia and Portugal.
5. The 10 OECD countries with the largest fiscal imbalance are chosen on basis of an index that combines the standardised value of cyclically-adjusted primary balance deficits (percentage of potential GDP) and of government debt (percentage of GDP). They are: Japan, the United Kingdom, the United States, France, Canada, Ireland, Belgium, Slovenia, Spain and the Netherlands.
6. The group of countries with the largest external imbalances are the 10 countries selected on the basis of an index that combines the standardised value of current account deficits (averaged over 2010-14) and external debt (both as percentage of GDP) and the 10 countries with the largest current account surplus. The largest deficit countries are: Greece, Turkey, Portugal, Poland, New Zealand, Australia, Spain, Latvia, Colombia and the Slovak Republic, while the largest surplus countries are: Norway, Switzerland, the Netherlands, Sweden, Germany, Denmark, Luxembourg, Korea, Russian Federation and Slovenia.

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Chapter 2

Reform priorities in a difficult macro context

This chapter reviews the main issues related to the short-term impact of structural reforms in different macroeconomic contexts and takes stock of existing theoretical and empirical studies. Taking reforms introduced in "normal" times as a benchmark, it reviews the available evidence on the impact of reforms that are implemented in "bad" times – i.e. in the presence of a sizeable negative output gap and persistently weak demand – as well as under different assumptions regarding the availability or effectiveness of macroeconomic policies in supporting the reforms. In doing so the chapter focuses on the key channels through which different reforms influence short-term activity via the main components of demand and discusses how these channels operate under different macro conditions.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Reform priorities in a difficult macro context

Main Findings

- In a context of weak demand, structural reform strategies should put more weight on measures that in addition to stimulating medium-term employment and productivity can best support demand in the short term. The reforms most likely to achieve this include:
  - *Shift in the composition of public spending towards investment*: More specifically, public infrastructure investment that effectively increases the growth potential in the medium term (e.g. high-speed broadband network) can stimulate private investment in the short term.
  - *Product market reforms in specific service sectors:* Reforming rules restricting the entry of new suppliers (exclusive rights) and the capacity of existing suppliers to compete (fees control) in services characterised by relatively low entry costs (e.g. professional services, taxis, etc.) can yield positive short-term gains in employment and domestic demand.
  - *Reforms of benefit entitlements in the areas of pension or health:* Reforming pension or health systems to contain future ageing-related costs can create the space for short-term stimulus measures and raise their effectiveness, notably through increased confidence in the sustainability of public finances. The gains from such reforms can exceed the cost in the short term to the extent that only future benefits are reduced.
  - *Reforms easing frictions in the reallocation of resources*: Reducing barriers to geographic or jobs mobility can increase the speed of employment gains in difficult times. Housing market policies that promote residential mobility include the lowering of transaction taxes or costs on buying properties as well as the reduction of the stringency of rental regulation.
- In contrast, the risks that reforms fail to lift activity in the short run – or that they even further depress demand – are highest in the case of reforms that initially put downward pressures on wages or mark-ups, such as reforms of employment protection legislation, minimum wages or product market regulation in network industries. A number of measures could help mitigate those risks:
  - *Reform packaging*: Simultaneous reforms of labour and product markets may reduce the risk or extent of contractionary effects. First, the price reduction resulting from product market reforms will ease the downward pressure on the real wage from labour market reforms. Second, labour market reforms will facilitate the necessary reallocation of workers arising from product market reforms as rents are redistributed across firms and sectors.
  - *Reform synchronisation*: In the case of the euro area, a greater synchronisation of reforms will also help reduce the transition costs by giving greater scope to monetary policy to mitigate the potential rise in real interest rates.

- Increasing the short-term payoff from structural reforms also calls for measures that shift the relative strength of the transmission channels from supply-side reforms to demand components.
  - *Addressing financial sector dysfunctions to improve the credit flow:* Significant progress has been achieved in cleaning the banking sector balance sheet following the crisis. However, the share of non-performing loans in the banking system remains relatively high in a number of euro area countries. In fact, the relative speed at which banks' balance sheets were consolidated in the United States may have helped support the faster recovery.
  - *Reducing policy uncertainty:* Reform strategies that are well communicated and sufficiently comprehensive to create synergies may also provide clearer guidance and confidence about the direction and sustainability of policy decisions.

Introduction

Quantifying the long-term gains from structural reforms with some degree of precision is not straightforward but there is at least broad consensus on the direction of impact and the main channels of transmission. Assessing the short-term effects is more challenging: not only are the various channels of influence more difficult to disentangle but the macro context in which the reforms are introduced raises ambiguity as to the direction of the impact.

Progress has been made in better understanding how reforms of product and labour markets affect the main components of supply and demand in the short term and hence how they impact on output gaps, external accounts and relative prices.[1] While a further understanding of the short-run dynamic effects of reforms is still needed, it is particularly so in the case where reforms are introduced in a context of persistently weak demand, deflationary pressures, sizeable negative output gaps, and with only a partial support from demand-management policies. One concern is that some reforms may have a short-term contractionary effect on activity, prices or employment.

For instance, such concern has been raised and debated in the context of reforms introduced at a time when monetary policy is constrained due to nominal interest rates hitting the zero lower bound (Eggertson, Ferrero and Raffo, 2014; Fernández-Villaverde, 2014; Vogel, 2014). More generally, the experience of southern euro area countries, which have implemented significant reforms in a context of aenemic domestic and external demand as well as without the support of macro policies, has led to renewed interest in better understanding the links between reforms and demand and raised questions about the timing, sequencing and packaging of reforms.

Against this background, this chapter reviews the main issues related to the short-term impact of structural reforms in different macroeconomic contexts and takes stock of existing theoretical and empirical studies. An effort is made to assess the extent of knowledge about the short-term demand effect of specific structural reforms. This impact can have a huge bearing on political feasibility, as transitional losses are likely to erode popular support for reforms.

To set the scene, the next section lays out the case of reforms introduced in "normal" times, i.e. with the economy operating close to potential and with available support of macroeconomic policies. It identifies the main channels through which structural reforms influence short-term activity through consumption, investment and net exports. The

subsequent section then focuses on the case where reforms are introduced in "bad" times, i.e. with a sizeable negative output gap and persistently weak demand, and examines how the more adverse environment influences the relative strengths of the main channels. The final section goes one step further and considers cases where reforms are implemented in a weak conjuncture and under constrained macro policies.

Structural reforms in normal times

The speed at which gains from structural reforms can be achieved depends on several factors, even in normal times, that is when cyclical factors are not at play. First, the credibility of announced reform packages plays a key role. Households and firms are more likely to act early in response to reforms if they believe in the implementation and the sustainability of the policy measures as a permanent change. Second, structural characteristics of the economy, including the structural policy settings in place will shape the speed at which a reform yields benefits. For instance, stronger price or wage stickiness is likely to delay the long-term benefit of reform, *ceteris paribus,* by constraining the scope and speed of real variables to adjust to the policy change. Third, well-functioning financial markets play a key role in bringing forward the gains from reforms by funding the necessary investment and allowing for income smoothing both in anticipation of future gains and to offset temporarily income loses (OECD, 2012).

Mainstream models predict a number of channels of transmission through which structural reforms affect the main components of demand. The key channels include i) *wealth* or *permanent income* effects which bring forward future reform-driven income gains in current consumption and investment, notably through rising asset prices and positive confidence channels, ii) *disposable income and cash-flow effects* for households and firms that are liquidity or cash-flow constrained, i.e. that do not have access to borrowing from banks or other financial institutions iii) *uncertainty or negative confidence* effects arising from households' and firms' perception of heightened (or diminished) income and profit insecurity, which come through the precautionary motive for saving and iv) a *real interest rate channel* which captures inter-temporal substitution effects: by making the holding of financial assets more attractive, a rise in the real interest rate induces a decline in current consumption in favour of higher savings. In addition, some reforms have budgetary implications when not introduced in a budget-neutral way and will affect demand through a fiscal multiplier effect. In what follows, the discussion considers mainly budget-neutral reforms.

What does the evidence tell us about the short-run impact of reforms in normal times?

A more detailed analysis of the impact of different types of reforms on short-term demand and activity through these channels is reported in Appendix 2.1. This analysis essentially comes from studies that simulate the impact of reforms, in particular based on dynamic stochastic general equilibrium (DSGE) models. There are also a few empirical studies looking at changes in policy indicators to define structural reform episodes and to estimate their short-term effects (Bouis et al., 2012). In any case, the empirical literature looking at the short-term effect of reforms mostly refer to normal times, that is when macro policies can react to short-term demand developments. Therefore, when macro

stimulus is not available, demand effects are likely to be stronger than in normal times after a reform. The main results from model-based and empirical analysis can be summarised as follows:

- Reforms of wage bargaining institutions, minimum wages and employment protection legislation generally increase wage flexibility and can improve competitiveness through downward pressures on labour costs.
  - Model-based analysis of this class of reforms generally indicate positive, albeit moderate, short-term impacts on consumption and output (Cacciatore, Duval and Fiori, 2012; Barkbu et al., 2012). One study shows that in the case of reform to employment protection legislation, the lower firing costs may lead to an increase in unemployment and a reduction in demand in the initial year after the reform but this effect is quickly reversed in subsequent years (Cacciatore, Duval and Fiori, 2012).[2]
  - In contrast, the evidence from reduced-form empirical analysis points to the absence of significant positive impacts on demand from reforms to employment protection legislation or wage bargaining in the first few years (Bouis et al., 2012).
- Reforms of the tax and transfer systems, including the tax structure, unemployment benefits and pension systems can boost both employment in general and the labour force participation of specific groups:
  - The evidence from reduced-form analysis indicates that reducing the share of direct taxes in overall tax revenue is found to quickly reduce unemployment, particularly for youth, to boost female and youth participation and private investment growth (Bouis et al., 2012). A special case of a growth-enhancing tax reform for countries in a monetary union is the so-called fiscal devaluation, which typically takes the form of a reduction in employer's social security contributions combined with an increase in the value-added tax rate. Empirical evidence points to a positive, but short-lived effect, on employment and net exports, with long-term GDP gains reflecting essentially productivity improvements (Johansson et al., 2008; Koske, 2013).
  - The evidence from both model-based simulations (e.g. Cacciatore, Duval and Fiori, 2012) and reduced-form estimates (Bouis et al., 2012) suggests that lowering unemployment benefits in normal conditions yields positive gains in consumption and overall demand within 2-3 years. In most studies, reforms of unemployment benefits are found to have a significantly stronger positive short-term impact on demand and output than reforms to wage bargaining and employment protection legislation.
  - Model-based evidence indicates that an increase in retirement age is most likely to have a positive effect on demand in the short run via lower private saving due to life-cycle motives (Karam et al., 2010; Barrell et al., 2009). This is corroborated by reduced-form analysis, which shows a positive impact on consumption, investment and GDP (Bouis et al., 2012).
  - The evidence on the impact of pension reforms is less clear in the cases of benefit reductions or increases in contribution rates as their effect is similar to a fiscal contraction, albeit a deferred one. They are found to stimulate private saving in the short run, but may also boost investment through anticipation of reduced public debt (Karam et al., 2010).

- Measures to improve job-search assistance and training for the unemployed or childcare services can raise labour force participation and address labour market frictions. However, these typically have implications for public spending and should be carefully assessed on a budget-neutral basis to capture the effects coming from the structural changes:[3]
  - In the case of a budgetary-neutral reform of active labour market policies (ALMPs), the effect is found to be similar to that of a tightening of unemployment benefits (Cacciatore, Duval and Fiori, 2012), except that by lowering firms' search costs or the costs of initial training, they may stimulate labour demand somewhat more rapidly.
- Product market reforms comprise essentially reductions in regulatory barriers to competition which can lead to lower mark-ups and export prices, lower input prices (and production costs) for downstream industries, and higher productivity through efficiency gains and improved product quality and variety through higher investment in innovation.
  - By and large, model-based evidence points to modest short-term GDP gains from product market reforms, with more visible impacts appearing after 2-3 years (Anderson et al., 2014); (Barkbu et al., 2012).
  - Evidence from reduced-form empirical analysis based on aggregate data shows no significant short-term impact on GDP, except for a decline in the initial year, due to a temporary drop in investment (Bouis et. al., 2012). Evidence based on sector-level data indicates that productivity gains can be achieved after 2-3 years (Bourlès et al., 2013; Dabla-Norris et al., 2015).
  - The overall results at the aggregate level may mask very different outcomes depending on whether barriers to competition are lowered in manufacturing or service sectors, and within services whether the reforms affect primarily network industries (e.g. energy, telecoms and transport) or professional services, where regulatory barriers to entry and strict conduct regulation may create strong latent demand.

Overall, the bulk of evidence suggests that the gains from pro-growth structural reforms introduced in normal times generally exceed the potential losses even in the short run. This is generally the case including with reforms aimed at restoring competitiveness through lower relative production costs and prices. However, the positive effect is in many cases modest, especially in the three-year horizon. The aggregate benefits from reforms to unemployment benefits or pension systems (retirement age) tend to accrue more rapidly than those from other types of reforms, in particular the ones primarily focused on raising wage flexibility and facilitating resource reallocation. Furthermore, the modest net effect of reforms often masks more substantial shifts in the composition of demand, not only between domestic and foreign, but also within domestic demand, reflecting the opposite impact that reforms have on investment and consumption in the case of some reforms.

Initial conditions and reform implementation play a role

The short-term effects of structural reform in one area may depend in part on initial policy and institutional settings in other areas. However, the evidence is inconclusive to the extent that it is difficult to empirically identify how interactions between policy settings and reforms affect outcomes (e.g. Bassanini and Duval, 2009; Bouis et al., 2012). For instance, model-based simulations by Cacciatore et al. (2012) find that gains in the aftermath of product market reforms would be quicker if initially job protection is less

stringent and unemployment benefits are low. That is because when entry barriers fall, new jobs are filled more quickly, minimising the risks of lengthy unemployment spells for laid-off workers. On the other hand, findings from reduced-form empirical analysis show that under initially weak job protection a relaxation of product market regulation leads to higher unemployment and lower employment (Bouis et al., 2012).

How reform is implemented also matters as there can be material interaction effects between policies:

- *Reform packages:* a package of labour and product market reforms that is sufficiently broad can induce a faster adjustment and alleviate the transitional costs of certain reforms (Anderson Hunt and Snudden, 2014; Cacciatore et al., 2012; Everaert and Schule, 2008, Gomes et al., 2013). For instance, (Cacciatore et al., 2012) find that a combination of product market, job protection and unemployment benefit reforms boosts GDP, employment and wages immediately, in contrast with the effects of some of these reforms taken in isolation.
- *Reform credibility:* Early announcement and credible commitment to future reforms can help bring forward the gains from reforms by fostering investment and consumption today. Adjémian et al., (2007) find that announcing product market reforms in advance can trigger an immediate response by firms, accelerating the upside adjustment in investment and output even before the reform is actually implemented.
- *Pace of reforms:* theoretical studies suggest that outcomes might be better if reforms were sequenced, with product market reforms preceding labour market reforms (Blanchard and Giavazzi, 2003). Reforming product markets first can also lower the resistance to labour market reforms by reducing rents and facilitate their subsequent implementation. Another political argument for gradualism is that as governments have a fixed amount of political capital, it is best if they allocate their scarce resources to one set of reforms at a time (Coeuré, 2014). However, too long a time lag between reforms might not be desirable. For instance, in the case of New Zealand's reforms in the 1980s a significant time lag (about five years) between the liberalisation of product markets and labour market reforms mitigated the potential overall gains from reforms (Caldera Sánchez, de Serres and Yashiro, 2016).
- *Boldness of reforms:* Recent empirical analysis has found that incremental labour market reforms tend to raise household income instability while bolder reforms do not, increasing the risk of resistance and reversal in the former case (Cournède et al., 2015).

Structural reforms under weak demand conditions

The previous section has shown that the short-term impact of reforms on the main components of demand often depends on the net outcomes of conflicting channels. The short-term impact from many types of reforms depends notably on the net effect on disposable income and cash-flow as well as the relative strength of the wealth effect versus the precautionary motive for savings. While the bulk of evidence indicates that positive channels dominate the negative ones in normal times, it may no longer be true when reforms are introduced at an unfavourable stage in the business cycle.

Several factors shift the relative strengths of these channels in downturns. First, the proportion of households and firms facing liquidity constraints can be expected to rise along with unemployment and the tightening of credit conditions, which are often features of downturns (Bernanke and Gertler, 1989; Fissel and Jappelli, 1990). Second, even for

households or firms that are not liquidity-constrained, the positive wealth effect of reforms is likely to be weaker, especially if the downturn is associated with dysfunctions in financial markets or the need for private-sector deleveraging. Conversely, the precautionary motive for saving in the face of reforms is likely to be higher in a bad conjuncture. Heightened macro-economic and policy uncertainty can lead households and firms to postpone spending and investment "to wait and see". Finally, the efficiency of job matching may deteriorate in periods of persistent unemployment, given a rising share of long-term unemployed and declines in housing prices. Some of these factors may also condition the effectiveness of fiscal and monetary policies in supporting demand.

Reforms reducing the cost of labour and mark-ups are more likely to depress demand during downturns

Reforms entailing a bigger risk of further depressing demand in downturns include those whose most immediate impact is to put downward pressures on wages or mark-ups.

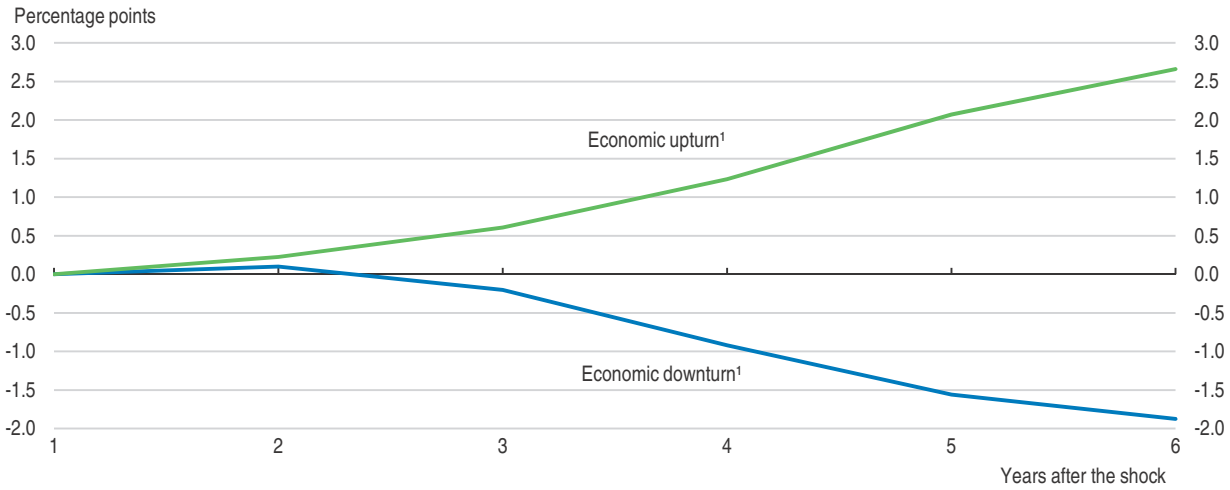
- Product market reforms that enhance competition in formerly protected sectors usually lead to incumbents to engage in restructuring as they seek efficiency gains to preserve mark-ups in the face of downward pressures on prices. In turn, this leads to the displacement of workers and capital in the short run (Blanchard, 2006). Stronger competition also leads to the exit of least productive firms. In normal economic conditions, displaced resources are absorbed eventually by new entrants, more competitive firms that are expanding production or by other sectors. As a result of more efficient resource allocation, aggregate productivity increases and as lower prices stimulate demand employment is also expected to increase. However, when the economy is in a slump, demand may respond less to the lower prices resulting from competition. In such context, displaced resources are expected to remain unemployed for longer as a bleaker profit outlook and credit constraints slows the entry of new firms or the expansion of incumbent firms (Lee and Mukoyama, 2015; Barlevy, 2003; EC, 2013).
- Reforms of wage bargaining institutions or the minimum wage have an uncertain effect on demand in the short term during a downturn. The downward pressures on wages may not be as rapidly compensated by employment gains and the prospects of future productivity-related income gains as they would in normal times. This will weaken consumer demand in the short term by lowering disposable income and strengthening precautionary savings. An easing of employment protection legislation may lead to a similar outcome, as the outflow from unemployment may take more time to exceed the rise in the inflow rate than in normal times.
- Reforms that drive wages down and increase product market competition can boost competitiveness and net exports but their ultimate impact on aggregate demand may be muted in an environment of weak external demand, such as a global downturn. Conversely, Canada, Germany and Sweden have in the past introduced major reforms in a context of weak domestic demand but benefited from robust global trade growth helping to revive their economies relatively quickly (Caldera Sánchez, de Serres and Yashiro, 2016).

Reforms raising incentives to take-up work may be contractionary during downturns

Reforms reducing the generosity of unemployment benefits (replacement rate and duration) are effective in reducing unemployment in the short run by encouraging the unemployed to intensify job search and accept existing offers, thereby increasing outflows

from unemployment. However, when labour demand is weak reducing unemployment insurance could lower disposable income if no jobs are available in the short run, negatively impacting demand. Indeed, evidence shows that when unemployment benefit reforms are undertaken during a typical economic upturn employment increases after two or three years (Figure 2.1). In contrast, if it is undertaken during a typical downturn, the gain in employment is muted and even turns negative from the third year after the reform.

Figure 2.1. **The gains in employment of an unemployment benefit reform can turn negative during a downturn**



1. The lower (upper) line corresponds to the impact of the reduction in the initial unemployment benefit replacement rate during economic downturn (upturn), where the economic cycle is measured through the level of the pre-reform unemployment gap (i.e. the difference between the structural unemployment rate and the unemployment rate). The economic downturn (upturn) corresponds to the case where the unemployment gap is set to the minimum (maximum) value within the sample.

Source: Bouis et al. (2012).

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Other reforms aimed at increasing labour supply are also likely to be less effective in boosting employment and may even be contractionary when labour demand is weak. For instance, tax reforms to remove the fiscal disincentives to second earner's labour participation (such as reduction of spousal tax credits) or reforms that tighten access to disability benefits may not increase employment much if implemented in a context of weak demand, given that the targeted groups may face even more difficulties in finding work than the other unemployed. Instead, they may lower private consumption by reducing household disposable income, if the measure is introduced also to generate budgetary savings.

Indeed, one factor contributing to the higher risk of a negative impact of reforms is the potential increase in skills and geographical mismatches, combined with the heightened pressures on resources devoted to job-search assistance and training programmes. Even though evidence on mismatches is not always easy to interpret, increasing mismatches are a recurrent concern during cyclical downturns insofar as the impact differs across industries and regions (OECD, 2011). In such a case, a depressed housing market may slow geographical mobility, in particular where mobility is already hampered by housing and rental market policies that create high transaction costs (Andrews et al., 2011). Also, active labour market policies that focus on the least employable workers may be less effective in

downturns. Reinforcing job-search assistance may not help in this case as the probability of reemployment does not depend so much on search efforts when there is a lack of jobs (Boeri et al., 2015). Hence, there may be a case for shifting the focus on workers early in the unemployment spells as the chances to find a job are higher. [4]

Demand-side policies mitigate a negative impact from reforms in the short run when demand is weak

The short-term effect of reforms in downturns and the extent to which adverse effects can be quickly over-turned also depends on the timeliness and effectiveness of macro policies. As regards, monetary policy, its effectiveness in stimulating aggregate demand in the short run will in part depend on how well the financial market is functioning and on the share of liquidity constrained households and firms. A dysfunctional financial sector makes it harder for funds to flow to new investment opportunities, which is critical for reforms to pay off. On the other hand, a higher share of liquidity constrained agents may make monetary policy more effective by reducing the cost of debt services, leaving the net effect unclear.

The effectiveness of fiscal policy may be enhanced during recessions due to higher multiplier effects (Auerbach and Gorodnichenko, 2013; Blanchard and Leigh, 2013). During a recession government spending is less likely to cause an increase in the interest rate and crowd out private consumption and investment, provided long-term fiscal sustainability is not at risk. Similarly, the increase in the proportion of liquidity-constrained firms and households who have a higher propensity to consume out of their income makes fiscal policy more effective during a downturn (Galí et al., 2007), especially during a financial crisis or when the financial sector is weak (Corsetti et al., 2012).

The largest short-run impact on aggregate demand is likely to come from government spending measures rather than from tax cuts (e.g. Mineshima et al., 2014). This is largely because spending measures have a direct impact on aggregate demand while tax reductions will have a muted effect if they are saved because of, for instance, high uncertainty. In practice, fiscal stimulus measures can be designed on both the spending and tax side to have a rapid and substantial multiplier effect.

Among spending measures, public investment is usually found to be the most powerful instrument (Röhn, 2010). Boosting investment in public infrastructure is a typical way to boost demand during a downturn, as it pulls demand today, as opposed to other investments (e.g. R&D or education) that need longer to pay off. An increase in public infrastructure investment boosts aggregate demand via two channels, first, through the short-term fiscal multiplier, and second, by crowding in private investment. Indeed, evidence suggests that the positive short-term effect on demand is even stronger when there is economic slack – less crowding out of private investment –, and monetary policy is accommodative IMF (2014). Furthermore, the productivity gains from infrastructure shocks are significantly higher during downturns (Dabla-Norris et al., 2015). In the European Union, removing financial barriers and harmonising regulations, in particular in the area of network industries, would help achieve a higher return on investment.[5]

Some tax reductions can also be put in place to increase household disposable income and boost spending in the short term. While in theory consumption should not respond much to temporary changes in taxes, as consumers are likely to spread out their consumption over their lifetimes, evidence suggests that in some cases temporary tax reductions can be

effective in boosting consumption spending in the short term. For instance, the income tax rebates the US federal government enacted in 2001 and 2008 as part of its economic stimulus packages significantly boosted spending in the short term, especially for households with low liquid wealth or low income (Johnson et al., 2006; Parker et al., 2013).[6]Reductions in labour taxes or social security contributions targeted to lower-income workers, can also increase aggregate demand in the short term, as spending by this group is closely tied to their disposable income (De Mooij and Keen, 2013).

The scope for expansionary fiscal policy may, however, be limited when long-run fiscal constraints are significant. An increase in government spending (or tax cuts) in countries with high debt levels may act as a signal that fiscal tightening will be required in the near future. The anticipation of such adjustment could have a contractionary effect – through for instance adverse effects on financial markets, interest rates and consumer spending – that would offset the short-term expansionary effects. Ricardian behaviour, implying that fiscal stimulus is at least partly offset through an increase in private sector savings, is stronger the higher the level of government debt (Röhn, 2010). Moreover, in a financial crisis, debt financed spending expansions might reinforce a negative feedback loop between bank and government balance sheets when government debt is high.

Structural reforms under weak demand and constrained macroeconomic policies

Monetary and fiscal policies may be limited in various ways in practice, making it difficult to smooth the transitional dynamics associated with structural reforms. This section discusses the short-run impacts of structural reforms when weak demand is compounded by three types of constraints: monetary policy has hit the zero lower bound and has to rely on unconventional monetary tools; participation in a monetary union; and fiscal policy is constrained by consolidation requirements or legislated bounds on the fiscal deficit.

Reforms at the Zero Lower Bound (ZLB)

The zero lower bound (ZLB) brings an additional channel through which structural reforms may lower demand and output in the short run, namely an increase in the real interest rate. In principle, structural reforms that boost aggregate supply can, in a weak demand environment, have a negative impact in the short run by putting downward pressures on prices and inflation expectations if the monetary policy stimulus cannot be increased. The inability of the monetary authority to adjust nominal interest rates in response to falling expectations would push up the real interest rate, further depressing rather than stimulating aggregate demand (Eggertsson et al., 2014; Fernández-Villaverde, 2014).

In practice, this may be an issue only for a relatively limited set of reforms, mostly those that enhance competitiveness through downward pressures on domestic production costs and mark-ups. In the case of reforms that boost productivity through innovation and the reallocation of resources, it is less clear how much of an increase in production capacity can be achieved in the presence of anaemic demand, given the more limited incentives to make the necessary investments. Even if firms do invest, given the time required for these investments to translate into higher supply and downward pressures on inflation expectations, economies may have moved away from the ZLB, hence allowing

monetary policy to react by lowering nominal interest rates. In any case, structural reforms that raise future potential growth will also increase the natural real interest rate, thereby reducing the stringency of the ZLB.

Furthermore, other factors will contribute to mitigate the potential adverse real interest rate effect, even in the case of reforms that do result in rising real interest rates. First, liquidity-constrained households will not be very sensitive to the real interest rate increases but will benefit from falling price levels (Vogel, 2014). Second, insofar as the reforms yield competitiveness gains, increases in net exports will help mitigate the downward pressures on domestic demand, although this may not be sufficient to offset the impact of higher real interest rates (Eggertsson et al., 2014). Third, reforms leading to a price level adjustment need not create disinflationary expectations if the change is bold and implemented in a short time period rather than incremental and introduced gradually (Coeuré, 2014).[7]

Finally, in a country with its own currency, the presumption that monetary policy is incapable of responding to a deflationary shock at the ZLB is debatable given the now widespread use of unconventional monetary policies and their effectiveness in boosting demand up to a point. However, there is concern that unconventional tools could be insufficient in a context of falling real neutral interest rates and persistent negative output gaps, raising the risk of a downward spiral in output and inflation. In such a context, it is *a priori* unclear whether structural reforms would reduce the risks by raising the long-term real neutral rate or increase the risks by temporary increasing deflationary pressures. Such concerns are of particular importance in countries that do not have their own monetary policy, where cost-cutting structural reforms should be considered with particular attention and be part of wider policy packages.

Reforms in a monetary union

The real interest rate channel that plays a role at the zero lower bound also operates in a monetary union, even in normal times. With nominal rates set at the union-wide level, reforms undertaken by one member alone to reduce relative wages and prices could lead to a higher real interest rate. In such a case, internal devaluations can be contractionary in the short term, especially during a period of weak demand, as the positive gains on competitiveness and growth through a reduction in labour costs and domestic prices can be outweighed by the negative effects from higher real interest rates.[8]Furthermore, for countries in a monetary union, changes in the real exchange rate must come through adjustments in relative labour costs and prices. In the case of reforms that lead to a real exchange rate depreciation, such adjustment can be costly. This is especially the case when inflation in the union as a whole is near zero, as real depreciation would require reductions in nominal wages and prices.

On the other hand, fiscal devaluations – a reduction of employer's social security contributions combined with an increase in value-added (VAT) tax rate – is a type of measure that may have more traction for countries in a monetary union, in particular as a means to boost competitiveness and exports in the short run. As mentioned above, a fiscal devaluation is a special case of a reform that shifts taxation from more distortive (direct) sources to less distortive (indirect) ones. Such shifts have been found to yield permanent gains in output and productivity levels in the longer run. An additional competitiveness channel operates in the short term in the case of a monetary union, as long as not too many members introduce a similar reform at the same time, in which case the impact on net exports of each is

diminished. With nominal wages fixed in the short run, a reduction in social security contributions rates lowers labour costs. If the fall in labour costs is passed on into prices, both export and domestic good prices fall leading to a boost in competitiveness. By contrast, the higher VAT only bears on domestic and import goods, but not on exports and, therefore will not dampen the positive effect on competitiveness and net exports.

The magnitude of the short-run benefits of a fiscal devaluation is, however, uncertain. Model-based simulations suggest that fiscal devaluations have beneficial, but moderate, short-term effects on net exports, output and employment (Koske, 2013). For instance, for Portugal, a fiscal devaluation of 1% of GDP would lift net exports by 0.1% of GDP in the first year of the reform (EC, 2011). By contrast, econometric estimates for the euro area show much larger effects in the short run, of an immediate impact on net exports of up to 4% of GDP for a 1% GDP shift in revenues (De Mooij and Keen, 2013). Given the uncertainty surrounding the short-term benefits, a fiscal devaluation cannot thus be a substitute for more fundamental reforms of labour and product markets to sustainably boost competitiveness, but can help sustain demand in the short term.

Reforms under budgetary constraints and public finance consolidation

An expansionary fiscal policy can compensate the lack of support from monetary policy in addressing the demand shortfall, especially for euro area countries which cannot expect an expansionary monetary policy by the ECB to accommodate their individual reforms. However, the fiscal space in many OECD countries has been limited either because they have to engage in fiscal consolidation, face high debt financing costs or their fiscal balances are bound by rules. Indeed, for several countries needing to put public finances on a sustainable path, fiscal policy has been contractionary until recently. Negative impacts of fiscal consolidation are likely to be more pronounced during weak demand times as fiscal multipliers are significantly larger during economic recessions than expansions (Auerbach and Gorodnichenko, 2013).

Tight fiscal conditions and a limited ability of the government to cushion the transitory costs for losers may increase some of the contractionary effects of structural reforms in the short run (Duval, 2008). For instance, reforms that increase flexibility in employment protection and wage formation can negatively impact private consumption if governments cannot mitigate the increase in income risks with an expansion of unemployment benefits or active labour market policies (ALMPs). Fiscal constraints are particularly a concern if they undermine the ability of countries to carry out structural reforms that entail higher spending (e.g. in ALPMs, R&D or childcare), less revenue (e.g. labour taxes), or up-front public spending, for instance through transfer schemes, to compensate reform losers. Furthermore, they can also reduce the feasibility of growth-enhancing structural policies that could enhance short-term as well as long-term growth, such as high-quality infrastructure investment.

The urgency in the fiscal situation may bias structural reforms toward those that realise fiscal savings rapidly, but may be contractionary in the short run. An example of such reforms is a reduction in welfare expenditure that for example took place in New Zealand in the early 1990s amid the strong need for fiscal consolidation (Caldera Sánchez, de Serres and Yashiro, 2016). While a strong pressure to reduce public spending may facilitate the implementation of reforms to public-sector administration and services, the success of the reforms in terms of raising cost-effectiveness and quality may be undermined if priority needs to be given to immediate budgetary savings.

Reforms likely to boost short-run demand when demand is weak and macroeconomic policies are constrained.

Some reforms can be expansionary even under relatively weak demand and constrained macroeconomic policies if they encourage investment or generate rapid job gains:

- *Product market reforms that ease supply constraints*. Reducing entry barriers in service sectors with large pent-up demand and low entry costs can unleash the entry of new firms, boosting investment and job creation relatively fast. Simulations for Italy show that half of the gains of reforms that facilitate the entry of new firms in the service sector would be realised within three years (Forni et al., 2010). Case studies have also found that liberalisation in sectors such as retail trade and telecommunications often resulted in fast decreases in prices and increases in output and employment (Bertrand and Kramarz, 2002; Faini et al., 2006; Skuterud, 2005). Another example is professional services that remain heavily regulated in many countries (i.e. legal, accounting, engineering and architecture professions), especially as regards entry regulations (Figure 2.2). As such reforms reduce the relative price of non-tradables, their impact on net exports will be similar to that of an internal devaluation, with additional positive effects due to the fact that non-tradables are a major input into tradables.
- *Reforms that improve confidence or reduce uncertainty regarding future economic conditions*: By improving the sustainability of public finances, credible reforms in pensions and healthcare systems can boost consumption today through wealth effects and reduced need for precautionary saving. Empirical studies have, indeed, shown that the risk of unexpected healthcare expenditure is an important motive of precautionary saving, and policies that improve access to medical insurance increase consumption (Gruber and Yelowitz, 1999; Jappelli et al., 2007; Bai and Wu, 2014). However, such reforms may be less effective in reducing precautionary saving if the volatility of income and the risk of unemployment is very high (Mody et al., 2012). Product market reforms that reduce the economy-wide administrative burdens on firms and reduce the initial cost of starting-up a business can also improve expectations on future business conditions. For instance, simulations suggest that reforms to reduce the initial costs of starting-up a business implemented during the crisis in Italy, Portugal and Spain have significantly raised the birth rate of firms in those countries (Ciriaci, 2014).

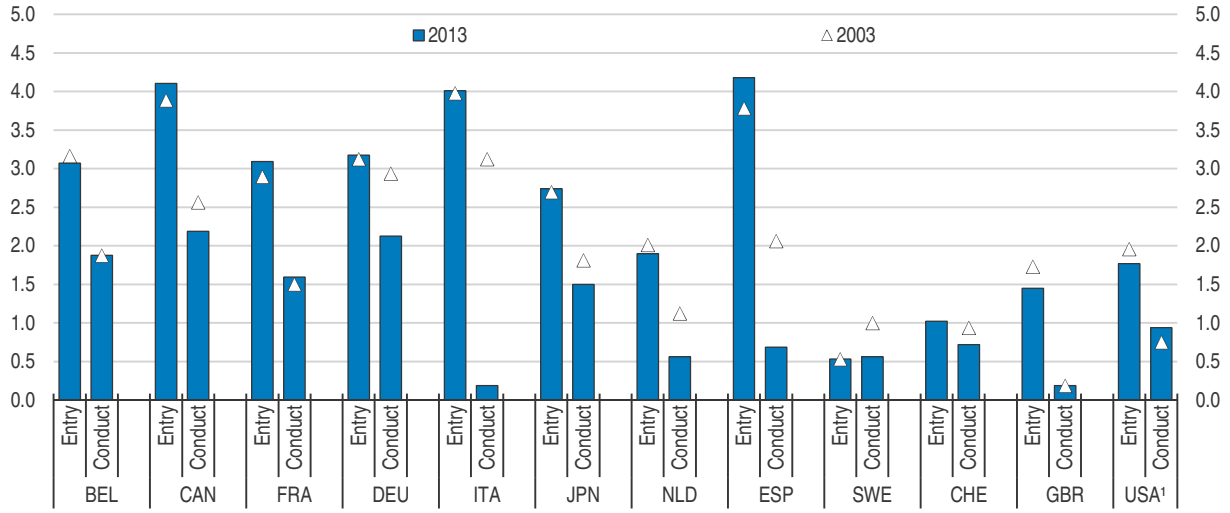
Overall, the review of the evidence on the effects that specific reforms can have on demand when introduced in a difficult macro context allows for a tentative hierarchy of reforms to be drawn based on their likely effectiveness (Table 2.1). The measures most likely to bring short-term benefits even in a bad conjuncture are those aimed at raising investment in knowledge-based capital, including through infrastructure spending and tax structure reforms, as well as those focusing on helping unemployed workers to find jobs, including through higher mobility. In fact, the effectiveness of these measures even tends to be stronger in a difficult context than in normal times. In the specific case of the euro area, one reform that is likely to pay-off in a bad conjuncture is the shift in the tax composition from direct to indirect sources.

Other reforms may have effects that do not necessarily differ much when introduced in a context of weak demand as compared to a normal conjuncture, which means in most cases modest short-term benefits. These include measures to raise competition in professional services sectors or to increase the retirement age. On the other hand, an

easing of employment protection on regular contracts or reforms of collective wage bargaining arrangements are more likely to entail short-term costs if introduced in a difficult context. The same is true for reforms of pension systems, if they involve reductions in benefits or increases in contributions.

Figure 2.2. **Regulation in professional services**

Index scale of 0-6 from least to most restrictive



1. 2008 data instead of 2013.

Source: OECD, *Product Market Regulation Database*.

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Table 2.1. **Expected short-term effects of specific reforms on demand**

	Effect on demand in normal times (1)	Change in effect relative to (1) due to downturns but with support from macro policies (2)	Change in effect relative to (2) due to constrained macro policies (3)
Reduction in regulatory barriers to competition in network industries	Increase	Weaker	Weaker
Reduction in regulatory barriers to entry in professional services and retail trade	Increase	Equal	Equal
Shift in tax composition from direct to indirect sources	Small increase	Weaker	Stronger in EMU
Reform of collective wage bargaining arrangement and minimum wages	Small increase	Weaker	Weaker
Easing of employment protection legislation on regular contracts	No effect or small decrease	Weaker	Weaker
Reform of unemployment benefits	Increase	Weaker	Weaker
Strengthening of job search assistance, training and wage subsidy programmes	Increase	Stronger	Stronger
Reforms of pension systems: Increasing retirement ages	Increase	Equal	Equal
Reforms of pension systems: Reducing benefits or raising contributions	No effect or small decrease	Weaker	Equal
Raising incentives for investment in knowledge-based capital, including through infrastructure spending	Increase	Stronger	Stronger

Notes

1. A large number of studies looking at the short-term effect of structural reforms using either a model-based or reduced-form empirical analysis are reported in Appendix 2.1. More complete information, including the review of case studies, can be found in Caldera Sánchez, de Serres and Yashiro (2016).
2. The latter owes to the fact that while the destruction of jobs is immediate, job creation tends to be gradual as time is needed to match firms and available workers.

3. Model-based simulations indicate that unfunded increases in spending on active labour market policies or childcare services have stronger positive effects on demand within the first two years than after five years (Barkbu et al.; 2012).
4. Insofar as competition for jobs is fiercer in weaker labour markets, active labour market programmes that focus on some workers may improve the search ability of those workers by reducing the relative job-search success of others (Crépon et al. 2013; Michaillat, 2012). A meta-analysis of impact estimates of studies of active labour market programmes by Card, Kluve and Weber (2015) suggests that they are more likely to show positive impacts in a recession.
5. Evidence by Fournier (2015) finds that lower heterogeneity in product market regulations between two countries leads to greater bilateral FDI.
6. The Economic Growth and Tax Relief Reconciliation Act of 2001 gave tax rebates to most US households over a ten-week period from late July to the end of September 2001. The Economic Stimulus Act of 2008 consisted primarily of a USD 100 billion programme of tax rebates to approximately 130 million US tax filers.
7. Indeed, using model-based simulations, a number of studies have found that the short-run negative impact of product and labour market reforms can be fairly small (or non-existent) and short-lived (only one year after reforms) (Gomes, 2014; Vogel, 2014).
8. In the case where private sector debt deleveraging is a major factor contributing to the weakness of demand, it has been shown that under the presence of collateral constraints and long-term debt contracts product market reforms may have a positive impact on output and employment even in the short run despite their deflationary effect (Andrés, Arce and Thomas, 2014). However, the effect of labour market reforms in the same circumstances are less favourable.

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APPENDIX 2.1

Detailed analysis on the impact of reforms in normal times

This appendix provides a summary of the expected effects of specific reforms on short-term activity and a review of the findings from selected studies. The information is reported in the table below, which describes some of the channels through which reforms affect the main components of demand and reports the results obtained from DSGE-type model-based analyses and empirical analyses. The specific reforms considered in the overview are the following:

Labour market reforms to enhance wage flexibility and facilitate labour resource reallocation: They include reforms of **wage-bargaining institutions** to raise the responsiveness of wage adjustments to local labour market conditions; reductions in **minimum wages** to improve the jobs prospect of low-skilled workers; reforms of **employment protection legislation** again to facilitate relative wage adjustments as well as the reallocation of resources across firms and industries; By and large, they can also be thought of as measures to boost competitiveness through downward pressures on domestic production costs, in particular labour costs.

Reforms to stimulate labour force participation and improve matching: This covers essentially **reforms of the transfer systems**, including **unemployment benefits** and other forms of income support for non-working individuals, but also measures to reduce the financial disincentive to labour force participation of specific groups such as women (including childcare support) and older workers (**pension systems**). Also covered are measures to increase the scope and effectiveness of **active labour market policies**, in particular job-search assistance and training programmes.

Reforms to boost product market competition: This comprises essentially **reductions in regulatory barriers to competition** which operates through state control of business operations, various legal and administrative barriers to start-ups, protection of incumbents as well as via obstacles to foreign trade and investment.

Reforms aimed directly at enhancing the productive capacity and productivity of the business sector: These cover **tax structure reforms** that encourage corporate activity, financial incentives for business innovation and investment in public infrastructure.

Model-based assessments

The model-based simulations covered in the table are taken from studies that make use of Dynamic Stochastic General Equilibrium (DSGE) models for the analysis of specific

reforms. In particular, many studies have been conducted by international organisations on the basis of their core DSGE models.

- ***European Central Bank***: Studies based on the Euro Area and Global Economy model (EAGLE) include ECB (2015) **[1]** and Gomes et al. (2013) **[2]**.
- ***European Commission:*** Studies based on different versions of the QUEST model include EC (2013) **[3]**; Vogel (2014) **[4]**, Varga and in't Veld (2014) **[5]**, Varga, Roeger and in't Veld (2013) **[6]** and Arpaia et al.,(2007) **[7].**
- ***IMF:*** Studies based on the Global Integrated Monetary and Fiscal model (GIMF) include Anderson et al.,(2014), **[8]** Barkbu et al., (2012) **[9]**, Everaert and Schule (2008) **[10]**, Karam et al., (2010) **[11]**.
- ***OECD***: Studies using a DSGE-type model include Cacciatore, Duval and Fiori (2012) **[12]** and Mourougane and Vogel (2008) **[13]**.

The DSGE approach has the advantage of describing the response of the macro-economy to reforms within a consistent general equilibrium framework and to illustrate the transmission channels. DSGE model-based simulations also allow for assessing issues that are relevant today, but have little historical precedent, such as the zero lower bound on nominal interest rates in many advanced economies.

A direct comparison of model-based results across studies requires caution given that the same structural reform can be captured in different ways depending on the characteristics of the model. For instance, a reform of employment protection can be captured by a simultaneous reduction in firing costs and in the bargaining power of individual workers in one model, while it is captured as an increase in total factor productivity in another model. Important channels may also be missing in the modelling framework. In particular, the precautionary motive for saving and hence the adverse confidence effects arising from higher job and income volatility cannot be easily featured in such frameworks. Finally, to ensure models are tractable, analyses are typically limited to a small set of structural reforms, (most often product and labour market reforms that reduce price and wage mark-ups), which remains highly stylised.

Empirical analysis based on aggregate or sectoral data

- There have been very few empirical studies that have used reduced-form equations to estimate the impact of reforms with a focus on the short-run effect using cross-country aggregate data or sectoral data:
- ***Studies using aggregate data*** include Bouis et al., (2012) **[14]**, Fiori et al., (2012) **[15]**, de Mooji and Keen (2012) **[16]**. For example, Bouis et al., (2012) estimate average impulse responses in terms of employment and output after one to five years following different types of structural reforms (e.g. product market reforms), based on a panel data of OECD countries over the period 1983 to 2007.
- ***Studies using sectoral data*** include Bourlès et al., (2013) **[17]** and Dabla-Norris et al., (2015) **[18]**. The latter estimates the impulse response mostly in terms of productivity after three years and five years following several types of structural reforms, based on a panel data of 23 industries in 11 advanced economies over the period 1970-2007.

While the estimation of reduced-form equations allows for a flexible empirical specification and the assessment of the impact of a wide array of reforms, it does not identify the channels through which reforms affect output or employment. Furthermore,

the often incremental nature of reforms makes it difficult to clearly identify the short-run impacts. Estimations are also prone to specification error. For instance, a failure to control for the possible complementarity across reforms can bias the estimated impacts of a given reform (Bassanini and Duval, 2009 **[19]**).

Empirical analysis based on micro studies

Another branch of studies infers the impacts of structural reforms by investigating and looking at event studies and assessing the change in the variables of interest before and after a specific episode of reforms. Such event studies often employ a difference-in-difference or regression discontinuity estimation approach that exploits a micro panel dataset covering the periods before and after the reforms. Some studies also infer general tendencies on the effectiveness of specific reforms from a meta-analysis of the existing empirical evidences.

- ***Studies on wage bargaining/minimum wage reforms*** include Neumark et al., (**2013**) **[20]**, Anton and Muñoz de Bustillo (2011) **[21]** and Martins (2014) **[22]**.
- ***Studies on EPL reforms*** include Kugler and Pica (2008) **[23]**, Von Below and Thoursie (2010) **[24]** and Orsini and Vila Nunez (2014) **[25]**. Kugler and Pica (2008) assess the consequences of Italy's legislation that strengthened the protection of regular employment for firms with less than 19 employees.
- ***Studies on unemployment benefits reforms*** include van Ours and Vodopivec (2006) **[26]** and Uusitalo and Verho (2010) **[27]** studying the effect of duration and replacement rate on unemployment duration from the reforms in Slovenia and Finland, respectively.
- ***Studies on ALMPs*** include Crépon et al., (2005) **[28]**, Rosholm and Shaver (2008) **[29]** which report significant impact on unemployment duration. Less favourable finding is reported for instance by Crépon et al., (2013) **[30]**. Kleuve (2010) **[31]** provide a meta-analysis of previous assessments.
- ***Studies on pension reforms*** include Cribb et al., (2014) **[32]** that observed the consequences of a UK reform raising women's pension eligibility age on their labour supply and unemployment rate.
- ***Studies on product market reforms*** include Golsbee and Syverson (2008) **[33]**, Bertrand and Kramarz (2002) **[34]** and Skuterud (2005) **[35]**. Also, Faini et al., (2006) **[36]** provide case studies of liberalisation and privatisation in different sectors in three European countries.

While event studies allow for richer and more rigorous inference on reform impacts than the two previous methods, their focus on a specific policy in a given time and a country makes it difficult to generalise their findings. Also the aggregate macroeconomic implications are not always clear when the analysis focuses on very specific reforms and markets.

Table A2.1. **The impact of structural reforms in normal times: a synthesis**

Reform area	Channels of transmission	Evidence on short-term impacts
Collective wage bargaining arrangement and minimum wages	• Raises responsiveness of wages to local labour and product markets. • Puts downward pressures on real wages, in particular for low-skilled workers but raises labour demand with an ambiguous effect on aggregate disposable income and consumption. • If reduced costs lead to higher mark-ups for firms, this may raise investment among firms dependent on internal financing. • If the lower costs are largely and quickly passed through lower prices, then net exports may contribute to short-term demand gains.	**Model-based evidence**: • Employment gains exceed short-term real wage losses. Small and temporary negative impact on inflation (**[1], [2]**). • Moderate increase in consumption, investment and GDP. Small net effect on the current account. (**[1], [2]**). **Evidence from empirical analysis**: • **Aggregate data**: Empirical analysis confirms short-term gains in employment, consumption and GDP of reduction in the excess coverage of collective wage agreements. Less evidence of impact on investment.(**[14]**) • **Micro studies**: Most studies find negative employment effects of minimum wages, especially for youth and low-skilled (**[20], [21]**). Effect of extending collective wage bargaining is found to be similar to minimum wage.(**[22]**)
Employment protection legislation on open-ended contracts	• Reduces wage bargaining power of employees on regular contracts. Increases both hiring and lay-off rates by reducing expected costs of terminating a match. Boosts long-run productivity by encouraging job-to-job mobility and facilitating reallocation of workers across firms and sectors. • Net impact on **consumption** ambiguous: Impact on disposable income depends on employment and wages. Higher wealth through future productivity and income gains but potentially higher precautionary saving if increased instability in employment. • Impact on **investment** and on **net export s**imilar to that of reform of wage bargaining. Potential wage moderation effect of reform reflected in improved competitiveness and/or higher mark-ups.	**Model-based evidence**: • Small positive effect on consumption despite initial and short-lived rise in unemployment. More rapid positive effect on investment and GDP. No visible effect on net exports.(**[12]**) **Evidence from empirical analysis**: • **Aggregate data**: No evidence of significant impacts on consumption or GDP but mild positive effect on private investment (**[14]**). No evidence of significant positive effect in the five-year horizon. Some evidence of negative effects on productivity and output at the 2-3 years horizon (**[18]**). • **Micro studies**: Increase in lay-off rates is generally found to exceed the rise in hiring rates in the short term leading to higher unemployment (**[23]**,**[24]**). Some evidence of increase in on-the-job search by employees on open-ended contracts following recent reform in Spain (**[25]**).
Unemployment benefits: Extension of the benefit coverage, stronger conditionality and tapering of benefits along the spell	• Lowers benefits and the reservation wage of the unemployed and puts downward pressures on wages. • Raises incentives to take-up jobs and labour demand. Stimulates job creation without affecting job destruction. • Net effect on disposable income and **consumption** depends on speed of employment gains and strength of wealth effect arising from higher future income. • Speed of rise in employment depends on extent of vacancies left unfilled due to high reservation wage. Employment gains further accelerated if reform is accompanied by lower social security contributions. • Households not directly involved by the reform may raise precautionary savings to compensate for reduced generosity of benefits.	**Model-based evidence**: • Positive gains GDP, investment and to a lesser extent consumption. Decline in consumption for LC-households more than offset by increases for others through wealth effects (**[5]**). Unemployment falls as employment rises more rapidly than labour force. Small positive contribution from net exports (**[12]**). **Evidence from empirical analysis**: • **Aggregate data**: Positive impact on employment across all age and gender groups, as well as on consumption and GDP (**[14]**). • **Micro studies**: Reduction in replacement rates and/or duration lead to a short-term increase in employment among those closer to benefit exhaustion (**[26], [27]**).
Active labour market policies: Job search assistance, training programmes and hiring or wage subsidies	• Improves matching efficiency and facilitates reallocation of labour; raises employment in the short run and productivity in the long run. • If unfunded, raises disposable income and can be perceived by firms as a reduction in non-wage costs. Effect on consumption and investment works like fiscal expansion and depends on size of multiplier.	**Model-based evidence**: • Impact of budgetary neutral reforms of ALMPs is similar to that of reduction in unemployment benefit, except for more rapid increase in labour demand (**[5], [12]**). • Unfunded increases in ALMP spending have stronger positive effects on demand in the first two years than after five years (**[8], [9]**). **Evidence from empirical analysis**: • **Aggregate data**: Increases in ALMP spending, after controlling or cyclical influences, are found to raise aggregate employment but not consumption or GDP (**[14]**). • **Micro studies**: Most studies (though not all) find evidence that active job search assistance and mandatory participation to programmes help reduce the duration of unemployment in the short term (**[28]**, **[29], [31]**).

Table A2.1. **The impact of structural reforms in normal times: a synthesis** *(cont.)*

Reform area	Channels of transmission	Evidence on short-term impacts
Pension systems: Increase in the retirement age, reduction in pension benefits or rise in contributions	• Raising the retirement age increases pension wealth by extending working lives. Raises **consumption** for non-liquidity constrained households, if confident about prospects of keeping jobs at age close to pension. • Reducing pension benefits has the opposite effect if workers seek to maintain pension wealth and retirement age. Negative effect on **consumption** amplified if benefit reductions applied to all current pensioners. • Increasing contribution rates reduces disposable income and/or mark-ups depending on whether measure is borne by workers or firms. May be partly offset by a positive wealth effect if contributes to future pension funding.	**Model-based evidence**: • Positive effect on consumption and GDP in the case of increases in the retirement age. Evidence less clear in the case in the cases of benefit reductions or rises in contributions as their effect is similar to a (deferred) fiscal contraction. They are found to lower consumption and investment but to have a positive effect on net exports, with a net small or negative impact on GDP (**[11]**). **Evidence from empirical analysis**: • **Aggregate data**: An increase in the retirement age has a positive impact on consumption, investment and GDP (**[14]**). • **Micro studies**: Some studies find a non-negligible positive short-term impact on employment rates of affected population but also a rise in unemployment (**[32]**).
Product market: Reduction in regulatory barriers to competition	• Stronger competition reduces mark-ups and export prices, lowers input prices and production costs in downstream industries and raises productivity through process (efficiency gains) and product innovation. • Upward pressures on investment through future profitability gains and entry of new firms but also downward pressures through lower mark-ups (for cash-flow-constrained incumbents). • Upward pressures on consumption through positive disposable income (lower prices and gains in employment) and wealth effects. Downward pressures if lower mark-ups and prices lead to high real interest rates (e.g. in monetary union) or if business restructuring initially lead to high job turnover and income instability and hence higher precautionary saving. • Rapid employment gains in sectors with strong pent-up demand and low entry costs.	**Model-based evidence**: • Modest short-term GDP gains with more visible impacts after 2-3 years (**[8]**,**[9]**). Slowly rising gains in investment and (to a lesser extent) consumption (prompted by real wage gains) and negative contribution from net exports. Employment rises in services but falls in manufacturing. One study finds consumption falling in the 2-3 years horizon due to higher real interest rate (**[12]**). **Evidence from empirical analysis**: • **Aggregate data**: No significant short-term impact on GDP **[14]**. Evidence from sector-level data indicates productivity gains within 2-3 years on average **[17]** but one study finds that the impact on productivity in professional services is negative in the first 2-3 years but turns positive after 5 years **[18]**. • **Micro studies**: Industry-specific analyses provide evidence of rapid price declines in response to reduction in entry barriers (**[33]**). Rapid gains in productivity, employment and output are found in industries such as retail trade or telecommunication (**[34]**, **[35]**, **[36]**). In other industries, a significant productivity gain but a decrease in employment is reported, as firms enhance competitiveness by reducing initial over-manning (**[36]**).
Tax structure: Shift in the composition of taxation from direct (capital, labour) to indirect sources (VAT, property, inheritance)	• Reductions in capital and labour taxation raise employment and **investment** until initial return to both production factors is restored. • Positive impact of employment gains and lower income taxes on disposable income offset by higher price level from increased VAT. Higher price effect likely to dominate in the short run, entailing a reduction in **consumption**. • Shift in relative price of domestic and foreign goods will boosts **net exports** unless quickly offset by nominal exchange rate adjustment.	**Model-based evidence**: • Increases in investment and net exports only partly offset by a decline in consumption, leading to moderate short-term gains in GDP (**[6]**). Since the gains in employment due to competitiveness are temporary, the increase in employment is stronger in the short than long term (**[8]**). **Evidence from empirical analysis**: • **Aggregate data**: A decline in the share of income tax in total tax revenues is found to have a positive impact on investment but no significant effect on consumption or GDP (**[14]**). Strong positive impact found on net exports in euro area countries but smaller effect in non-euro area OECD countries (**[16]**).

Note: The numbers in brackets in bold script indicate the studies cited earlier in the Appendix 2.1. For instance, [1] corresponds to ECB (2015).

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Chapter 3

From GDP to average household income: A look at the transmission channels

This chapter reviews the association between GDP and living standards from the perspective of the average household, focusing on the income dimension. It discusses the mechanisms through which GDP growth "trickles down" to household sector income with a view to assessing whether and to what extent such mechanisms are amenable to policy intervention. To do so, the chapter provides a proper assessment of the link between income generated from GDP and income distributed to households, which implies examining income distribution between household and the non-household sectors of the economy.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

From GDP to average household income: A look at the transmission channels

Main findings

- Real GDP has tended to grow by more than real household income in the majority of OECD countries between the mid-1990s and 2013.
- This growth gap is partly due to factors having little policy traction, such as differential developments between the price of domestic output and the price of consumption faced by domestic households, driven notably by terms-of-trade effects: consumption prices have tended to rise relative to output prices in most OECD countries over the period, the only exceptions being commodity exporters such as Norway, Australia and Canada.
- The household income share of GDP, simply defined as the ratio of nominal household disposable income over nominal GDP, has been stable over the period, on average across OECD countries, but with cross-country heterogeneity, with for instance a large decline in Austria and Korea and a large increase in the Slovak Republic and Finland.
- Developments in the household income share of GDP reflect developments in the distribution of production income between the household and non-household sectors of the economy. This can in turn be assessed by looking at household labour, capital and secondary income shares of GDP:
  - About half of OECD countries have experienced a decline in the labour share of GDP, in particular Portugal, Slovenia and Japan, while the other half have experienced an increase, though of a lower magnitude.
  - The vast majority of OECD countries have experienced a decline in the household capital income share of GDP, in particular Belgium and Italy, while only a few countries, including Portugal and the United States, have seen an increase.
  - Concomitant declines in the labour and household capital income shares of GDP could suggest that a rising share of profits has been retained by the corporate sector instead of being redistributed to the household sector.
  - The decline in the household capital income share of GDP could be overstated to the extent that the corporate sector has been reducing the use of dividends in favour of alternative profit redistribution mechanisms to shareholders, such as share buybacks – and that associated capital gains are not recorded in macroeconomic data.
  - The vast majority of OECD countries experienced an increase in the household secondary income share of GDP over the past two decades, i.e. in the share of production income that is being redistributed by the government to the household sector. However, this largely reflects the increases in public income transfers over the early phases of the crisis, which cushioned household incomes from the fall in GDP.

- ❖ In addition, the increase in the secondary household income share could be overstated to the extent that it does not allow for measuring the negative effect of a shift in the tax composition from direct to indirect sources, in particular consumption taxes; yet associated reforms have been quite frequent across the OECD over the last two decades.

- The analysis did not reveal clear links between the changes in income distribution at the macro-level and the rise in income inequality within the household sector experienced by many OECD countries over the last decades.

Introduction

GDP per capita is a widely used measure of living standards and a key headline indicator of economic performance. The emphasis given to GDP growth relies on the assumption that higher GDP per capita is associated with rising living standards for most households. This view has been increasingly challenged. On its own, GDP per capita falls short of accurately measuring people's wellbeing, even from a narrow material living standard perspective.[1] In that respect, one issue that has received little attention is the extent to which GDP growth "trickles down" to households. Yet this is of primary relevance from a wellbeing perspective, as recognised for instance by the Stiglitz Commission (Stiglitz et al. 2009).[2]

Assessing the links between GDP growth and household income growth is also of particular interest for the understanding of developments in income inequality.[3] How GDP growth generates income for the household sector, and the composition of this income, are important factors for inequality. For instance, the distribution of income between labour and capital does matter for understanding income inequality. However, assessing this may have become more complex than in the past as households have more diverse sources of income and there is considerable dispersion within the categories of income. It is thus important to go beyond the classic concept of labour share to understand inequality, notably by enlarging the concept to the different types of household income sources.

Given these challenges, the chapter analyses the association between GDP and living standards from the perspective of the average household, focusing on the income dimension. The idea is to better understand the mechanisms through which GDP growth "trickles down" to household sector income. This justifies a proper assessment of the link between income generated from GDP and income distributed to households, which implies examining income distribution between household and non-household sectors of the economy.[4]

The chapter is structured as follows: the first section describes the measurement framework used throughout the chapter, based on the System of National Accounts (SNA). The second section delivers a snapshot overview of developments in real household income compared to GDP over the last two decades. It also sheds light on the drivers that are, in principle, least amenable to policy intervention, e.g. differential developments between the prices faced by households and those of domestic output and primary income flows with the rest of the world. The third section analyses how income generated from domestic production is distributed between the household and non-household sectors of the economy, in particular the general government and the corporate sector, with a focus on the functional income distribution, in other words on income distribution between labour and capital. The fourth section delivers an assessment of the link between income distribution across household and non-household sectors and income distribution within the household sector.

Adjusted Household Disposable Income: definition and cross-country patterns

For the purpose of this chapter, the level of resources accruing to the household sector is gauged through adjusted household disposable income (AHDI) from the National Accounts, combining information on a large number of market and non-market income sources (including income derived from hidden or underground activities).[5] This is considered as the best available measure of material conditions from a cross-country perspective, although it may not be fully reflective of households' command over economic resources (Box 3.1).[6] For ease of exposition, Figure 3.1 provides a simplified overview of income flows between the household and non-household sectors of the economy as measured in the SNA.

Box 3.1. **Adjusted household disposable income from the national accounts: limitations**

Adjusted household disposable income from the national accounts includes some non-cash items that households may not recognise as part of their income:

- Employer contributions to social security, and employer payments for private pensions, healthcare, and other benefits do not enter the pay-packets of workers but are part of household income in the national accounts. This is because compensation of employees is defined in the national accounts with a view to explicitly measuring the full cost of labour as a factor of production. For example, whereas in the real world social contributions are paid directly by the employers to the social funds and are never seen by the employees, the national accounts treat them as part of wages paid to households. As a result, the "compensation of employees" item includes all contributions, including imputed contributions. In this chapter, this item is included in the definition of labour income.
- Homeowners-occupiers do not receive an income from the housing services that they provide to themselves. Yet an income is imputed in the national accounts, called "imputed rent". This income flow is estimated based on actual rents of comparable accommodations, but national statistical offices apply different methodologies in this respect. In this chapter, this item is included in the definition of household capital income.
- Households benefit from the services supplied by general government, such as healthcare, education, housing, recreational and cultural services, but associated transfers are not spendable. The national accounts attribute to household income an imputed value for such services, i.e. "social transfers in-kind", to distinguish them from cash transfers. Their measurement is problematic given the non-market nature of these services (and could be very different from the household point of view). Indeed, the national accounts valuation of social transfer in-kind is based on the price of inputs used in the production process, hence on expenditure by general government. In this chapter, this item is included in the definition of household secondary income.

The non-recording of capital gains and losses is another limitation of the household income account. Agents face a potential holding gain or loss whenever the price fluctuates. A distinction is made between "unrealised" and "realised" gains and losses. A typical unrealised gain or loss occurs when the price of a share held by an agent changes but when the agent has not yet sold his holdings. By contrast, realised gains (or losses) result from the sale of the shares. The proceeds received from the holding gain are in most cases subject to taxation.

Box 3.1. **Adjusted household disposable income from the national accounts: limitations** *(cont.)*

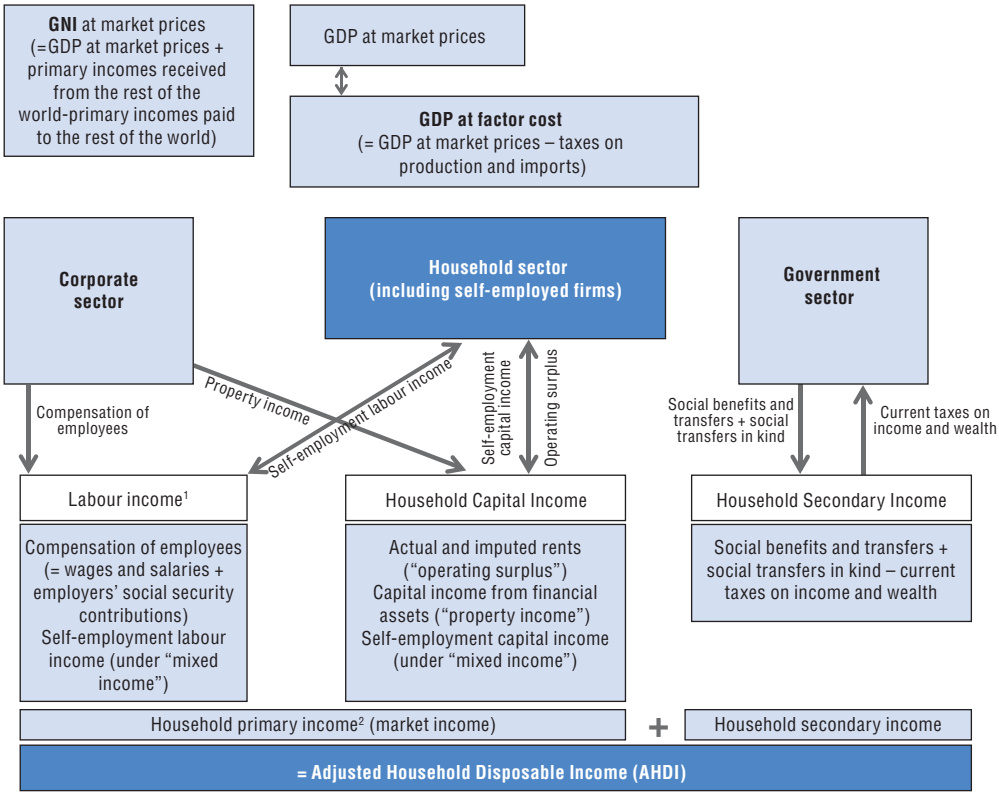
Households in OECD countries have on several occasions in the recent past benefited from rises, or suffered from falls, in the prices of these two types of assets; for instance during the stock market bubble toward the end of the 1990s, and the steep drop in stock prices starting in 2000 and more recently, during the housing market bubble. Asset price changes induce positive or negative wealth effects, allowing household to consume more or less than their disposable income. These so-called "wealth effects "may play a major role in households' perception of own economic resources, but they cannot be inferred from national accounts.

Against this background, household capital income as defined in this chapter based on the SNA excludes capital gains and losses, whether realised or not. Income from housing assets is included insofar as it reflects actual and imputed rents (the latter accruing to homeowner occupiers). Financial income covers interest received on households' financial investments and dividends paid by companies to households but, due to the exclusion of capital gains, other forms of financial income are excluded from the SNA. Such is the case of share buy-backs, which have been playing a growing role in corporate profit redistribution strategy. This income transfer from firms to households is not recorded in the household income account.

Finally and related to the previous point, the impact of the external sector on household income in the SNA covers essentially primary income, that is, income from work, dividends and interest. Financial transactions with the rest of the world do not affect household income nor do they affect GDP. By contrast, such transactions affect the balance sheet of resident institutional sectors as defined in the SNA: households, the general government and corporations. As a result, external macroeconomic imbalances stemming from e.g. net borrowing *vis à vis* the rest of the world do not influence the distribution of income between the general government and households but may eventually influence the distribution of wealth and savings between the general government and households, an issue that goes beyond the scope of the current chapter.

AHDI is obtained by adding two broad components: 1) the flows that make up individuals' primary (or market) income: labour income (compensation of employees and labour income of the self-employed – the latter being part of "mixed income") and capital income (income derived from financial assets, essentially dividends and interest, included under "property income" and from non-financial assets, essentially actual and imputed rents, included under "operating surplus", as well as self-employment capital income – the latter being part of "mixed income"); and 2) secondary or redistribution income: the cash and in-kind social transfers that households receive from governments (such as public education and healthcare services) net of the current taxes on income and wealth and the social security contributions paid by households. In this respect, consumption taxes are not considered among taxes paid by the household sector in the SNA. They appear in the difference between GDP at market prices and GDP at factor costs (i.e. GDP at market prices minus taxes on production and imports). AHDI can be expressed both in gross and net terms, with the difference being households' consumption of fixed capital.[7] The bulk of this chapter relies on the gross measure to make the link with GDP, which is a gross concept, and because of better cross-country comparability.[8]

Figure 3.1. **Income flows between the household and non-household sectors: a simplified overview of the System of National Accounts (SNA)**



1. In the case of self-employed, only overall (mixed) income is reported. In order to split their income into the labour and capital components, the labour income of self-employed is imputed by assuming that their annual wage is the same as for the average employees of the whole economy. The capital income is then approximated by taking the difference between mixed income of self-employed and their imputed labour income.
2. Household primary income corresponds to income derived from market activities and is sometimes referred to as "market income".

The limitations associated with the definition of household income in the SNA should be kept in mind and differences across countries and over time should therefore be interpreted in light of different institutional arrangements. Nevertheless, the SNA system relies on a number of harmonising procedures implemented with a view to maximising cross-country comparability. Importantly for the purpose of this chapter, such procedures ensure a very good level of comparability for the household income account. Comparability may be more problematic for the household financial and balance sheet accounts and this may limit cross-country analysis of household wealth and savings. One of the most relevant issues in this respect is the recording of pension contributions and pension benefits of employees between capitalisation and pay-as-you go systems (Box 3.2). This chapter performs a comparative analysis of household income but not of household wealth. As a result, the analysis should not be affected by differences in institutional arrangements governing countries' pension systems, reflecting harmonising adjustments applied within the household income account.

For the average household, the main income component is compensation of employees, followed by self-employment income[9] and transfers in-kind provided by the government (Figure 3.2, Panel A). When the AHDI decomposition is simplified into labour and capital income (which make up primary income) and secondary income, labour income appears as the most important income source in most countries (Figure 3.2, Panel B).

Box 3.2. **How pension and social security funds are recorded in the household income accounts**

One can distinguish two main types of pension systems: those functioning as "savings plans" (also called "full capitalisation systems") and those functioning as "transfer plans" (also called "pay-as-you-go systems"). If the pension plan is a savings plan (often called a "pension fund"), each employee contributes to a fund from which his or her future pension benefit will be paid. The national accounts record all contributions to the plan (both those of employers and of employees) as a form of savings by employees (i.e. an increase in the pension asset of employees) and pension benefits as "dis-saving" (i.e. a decrease of the pension asset of retirees).

By contrast, a pension system is a transfer plan (rather than a savings plan) when the pension contributions of current employees are used to pay the pension benefits of current retirees. In this case (which is typical of social security pension systems), the national accounts deduct pension contributions from income (and thus they are also deducted from savings), and pension benefits are considered part of income (and thus included in savings). Pension contributions are included in current transfers paid by households and pension benefits in current transfers by households.

To harmonise the measure of household income, the SNA framework records pension contributions and benefits of savings plans (i.e. pension funds) as if they were transfer plans (i.e. social security).* As a result, cross-country comparisons of household income accounts are in principle unaffected by cross-country differences in the institutional settings governing the funding of pension systems. In this chapter, pension benefits and contributions are included in the definition of household secondary (net) income, being considered as transfer income.

* This (transfer) income flow from the corporate sector to the household sector is not shown in the simplified overview of income flows between SNA sectors (Figure 3.1). In principle, it would appear as a secondary income flow from the corporate sector (pension funds) to the household sector.

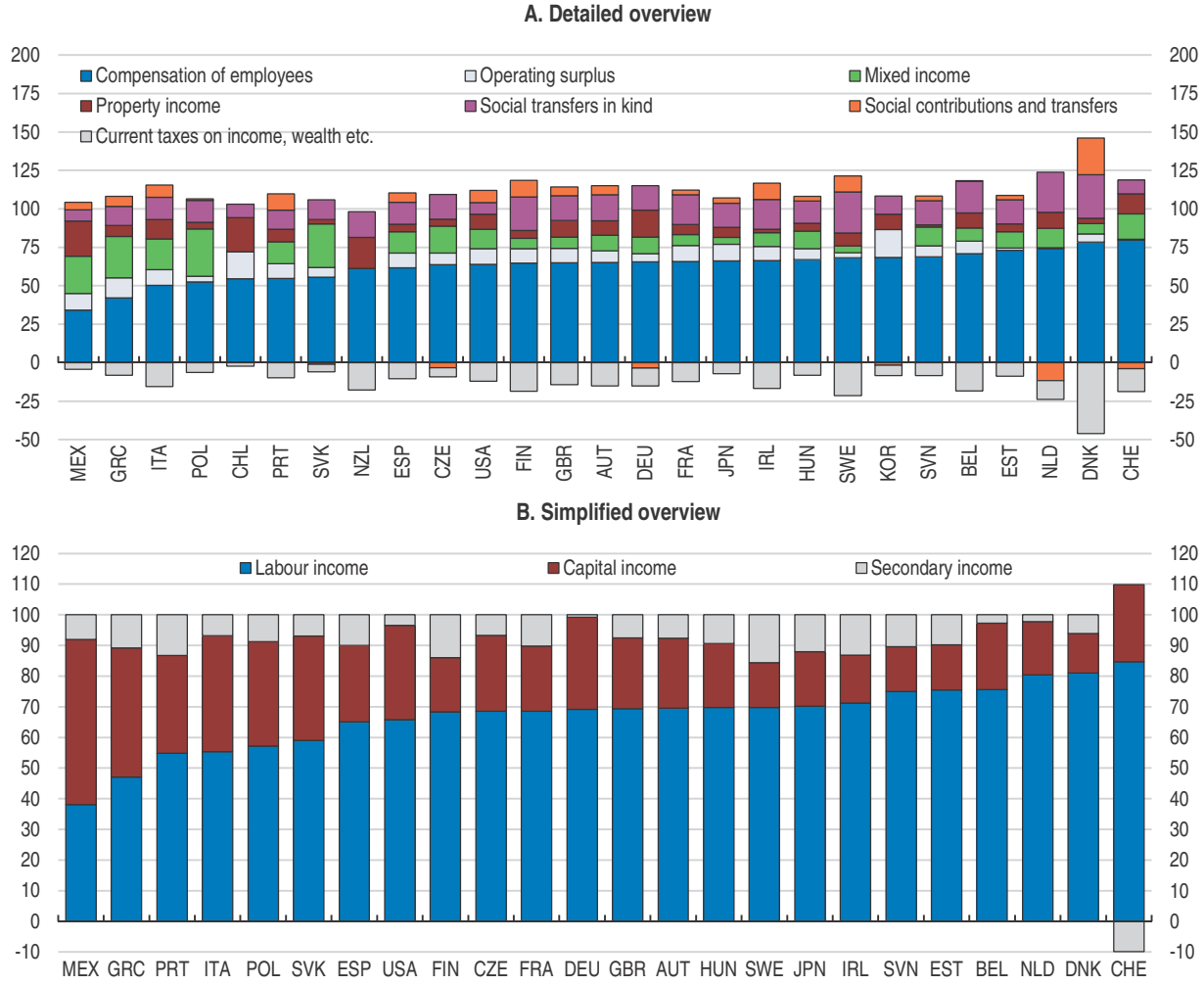
Tracking income growth from the household perspective and explaining the gap *vis-à-vis* GDP growth

From a welfare perspective, household income growth is best measured in real consumption terms (i.e. changes in nominal household income should be deflated with consumption prices and not with output prices which are used to deflate GDP). This is what ultimately matters to assess household consumption possibilities as a function of production income. Tracking growth from the household income perspective thus starts with the simple comparison between growth in GDP and growth in real adjusted household income with a view to assessing the extent to which income generated from GDP trickles down to the average household. This comparison suggests that since the mid-1990s and in particular over the pre-crisis period, GDP has tended to grow more than households' economic resources in many OECD countries (Figure 3.3, Panels A and B). The gap was particularly large in Korea and Ireland. In fact, only a few countries with large commodity-producing sectors experienced stronger gains in real household incomes relative to GDP (e.g. Norway and Australia).

The growth gap between GDP and household incomes temporarily narrowed during the initial phase of the crisis, as automatic stabilisers (i.e. rises in net income transfers from government to households during recessions) and discretionary income-support

Figure 3.2. **Components of adjusted household disposable income[1] (AHDI)**

As a percentage of gross adjusted household disposable income, 2013



1. The data refer to the components of gross adjusted household disposable income based on the System of National Accounts. The sum of compensation of employees, property income, operating surplus and mixed income (i.e. labour and capital income of the self-employed) represents primary or market income. Social contributions and transfers and social transfers in kind minus current taxes on income and wealth represent secondary income (income that the government redistributes to households directly or indirectly). See Figure 3.1 for a definition of the respective components shown in panels A and B. Components do not exactly sum to household gross adjusted disposable income due to statistical discrepancies. Data refer to 2014 for Czech Republic, Denmark, Finland, Italy, the Netherlands, Portugal and Sweden; 2012 for New Zealand and Switzerland. For Chile and Korea, the component "Operating surplus" includes mixed income.

Source: OECD, *National Accounts Database*.

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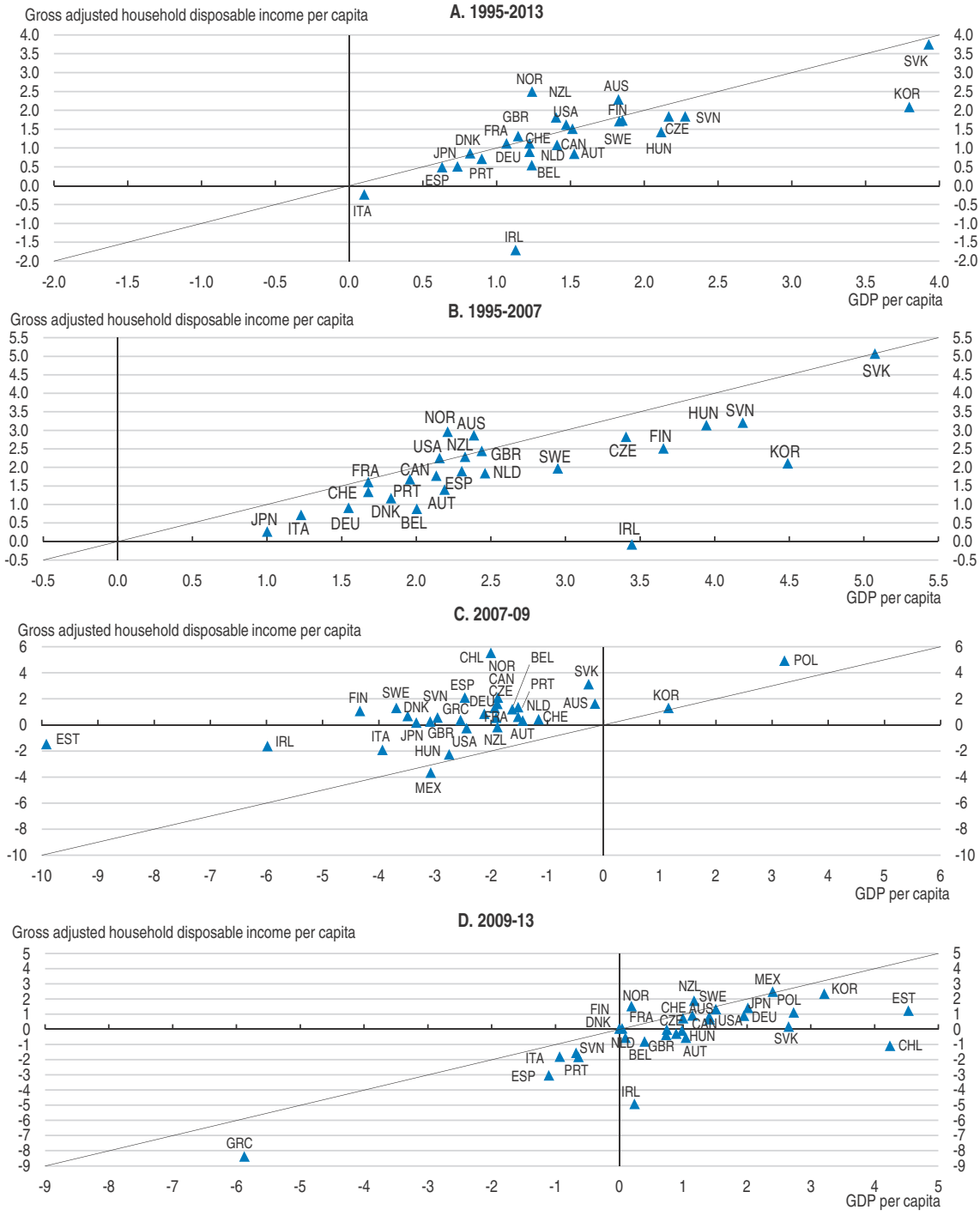
measures introduced to moderate the fall in aggregate demand at the early stages of the recession had the effect – to a varying extent across countries – of protecting households' disposable incomes from recession-induced losses in market incomes (i.e. income from work and capital) (Figure 3.3, Panel C).[10] However, with the effect of automatic stabilisers and anti-crisis measures tapering off, the diverging trends resumed as GDP growth largely outpaced household income growth in 2009-13 (Figure 3.3, Panel D). Indeed, more than one third of OECD countries experienced contracting household real disposable incomes in post-crisis years, reflecting in part the impact of fiscal consolidation.

Figure 3.3. **Real annual growth rates of GDP and adjusted household disposable income[1] (AHDI)**

Average annual growth rates, percentage



1. Gross adjusted household disposable income and GDP are expressed in USD, constant prices and constant PPPs, OECD base year 2010. Gross adjusted household disposable income is deflated with the deflator for actual individual consumption while GDP per capita is deflated with the GDP deflator. For panel A, data refer to 1995-2014 for Canada, Czech Republic, Finland, Italy, Korea, the Netherlands, Norway, Portugal and Sweden; 1995-2012 for Switzerland; 1999-2013 for Hungary, Ireland, Spain and the United Kingdom; 1999-2012 for New Zealand; for panel B, data refer to 1999-2007 for Hungary, Ireland, Spain, the United Kingdom and New Zealand; for panel C, data refer to 2008-09 for Chile; for panel D, data refer to 2009-14 for Canada, Czech Republic, Finland, Italy, Korea, the Netherlands, Norway, Portugal and Sweden; 2009-12 for New Zealand and Switzerland.

Source: OECD, *National Accounts Database*.

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The contribution of relative price movements to the growth gap

Differential developments between GDP and household income in real terms may reflect differential developments between consumption and output prices (Figure 3.4, Panels A and B). Indeed, different price indices are used to convert nominal values in real values, respectively the GDP deflator for domestic output and the consumption deflator for household income.

The comparison between real and nominal terms shows that a very large part of the growth gap between GDP and real household income is due to relative price effects over the period under consideration (i.e. 1995-2013). Most OECD countries experienced declines in output relative to consumer prices while the only ones experiencing increases in output prices relative to consumer prices are commodity-exporters such as Australia, Canada and Norway (Figure 3.4, Panel C) – pointing to terms-of-trade effects. In nominal terms, growth in household income was remarkably close to GDP growth.

Such relative price effects could reflect a number of factors, including:

- Secular declines in the relative price of investment reducing output prices more than consumer prices, and, related, secular declines in the price of tradable relative to non-tradable products, especially in services.
- Temporary increases in commodity prices generating favourable terms-of-trade effects in commodity-exporting countries over the period under consideration.
- Increases in consumer prices resulting from tax reforms shifting the burden from direct to indirect taxes and in particular to VAT over the period under consideration.[11]

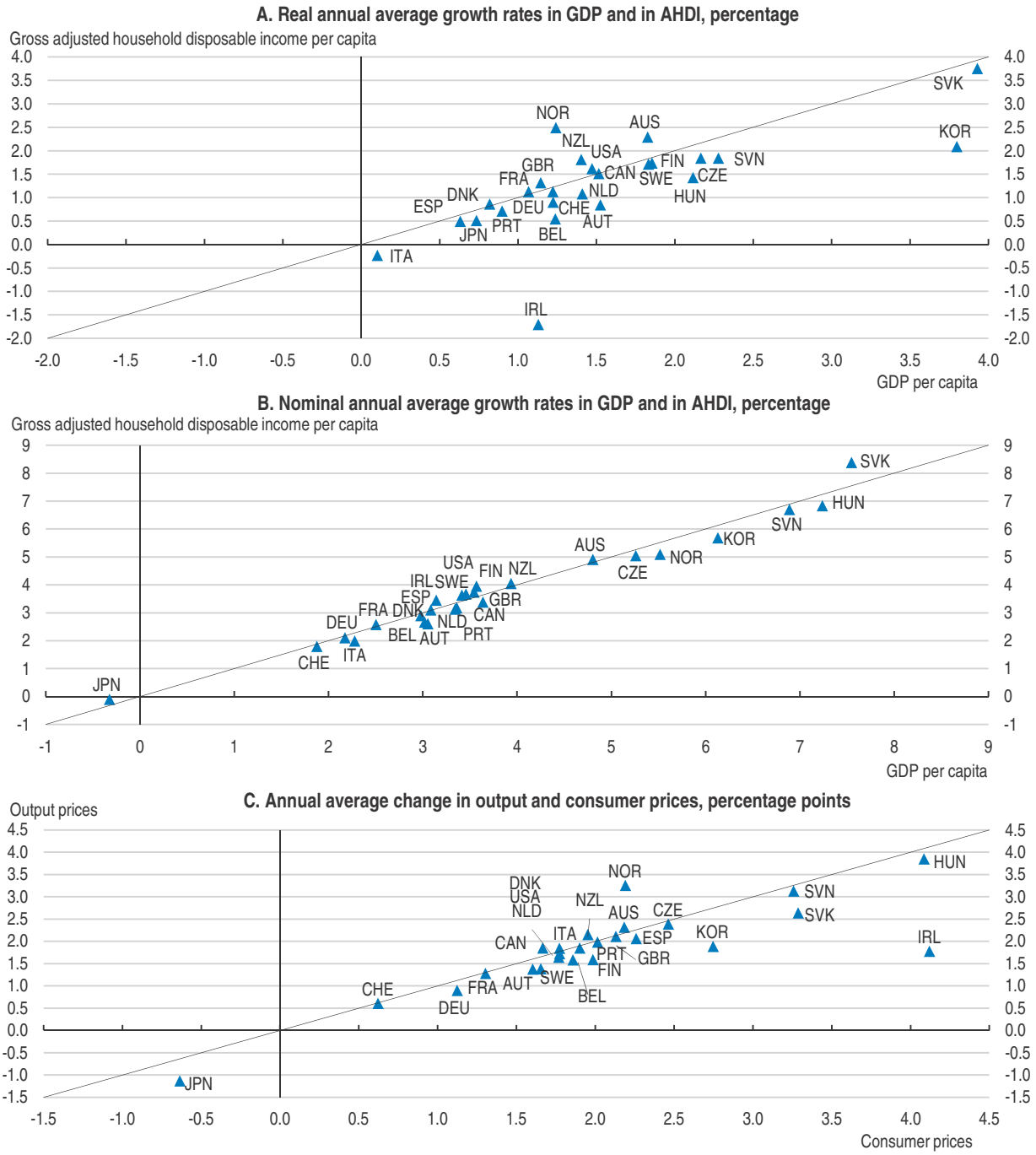
The contribution of cross-border income flows to the growth gap

Part of the gap between growth in GDP and household income may also reflect that between the income produced within the territory and the income received by residents. Household incomes are measured for resident units, regardless of whether these incomes are obtained within the national territory or not. In addition to the income received from the production within the territory, which is included in GDP, residents may receive income derived from production outside the territory, which is excluded from GDP.[12] Adding the net primary income flows with the rest of the world to GDP allows for coming closer to the resources that can trickle down to resident households. These primary incomes consist of wages and salaries, property income (interest and dividends) and taxes and subsidies on production. The final result is Gross National Income (GNI), which can be considered as a "bridge" measure: GNI is, unlike GDP, an income-based concept and not a production based concept, since it includes income derived from production abroad and excludes the value of output repaid to foreign factors of production. As a result, assessing developments in household income relative to GNI instead of GDP underscores the potential role of primary income flows with the rest of the world.[13]

A look at the evolution of GNI suggests that developments in primary income flows with the rest of the world also account for part of the growth gap between real GDP and real household income (Figure 3.5, Panels A and B), but to a much lesser extent than relative prices. Weaker GNI relative to GDP growth seems to have contributed to weaker growth of household income relative to GDP in e.g. Belgium and Korea (Figure 3.5, Panel C). At the opposite end of the spectrum, stronger GNI relative to GDP growth seems to have contributed to stronger growth of household income relative to GDP in e.g. Australia and Norway, which suggests that associated foreign income inflows were also driven by rising

Figure 3.4. **Comparing growth in GDP and in AHDI: the role of relative prices**[1]

1995-2013



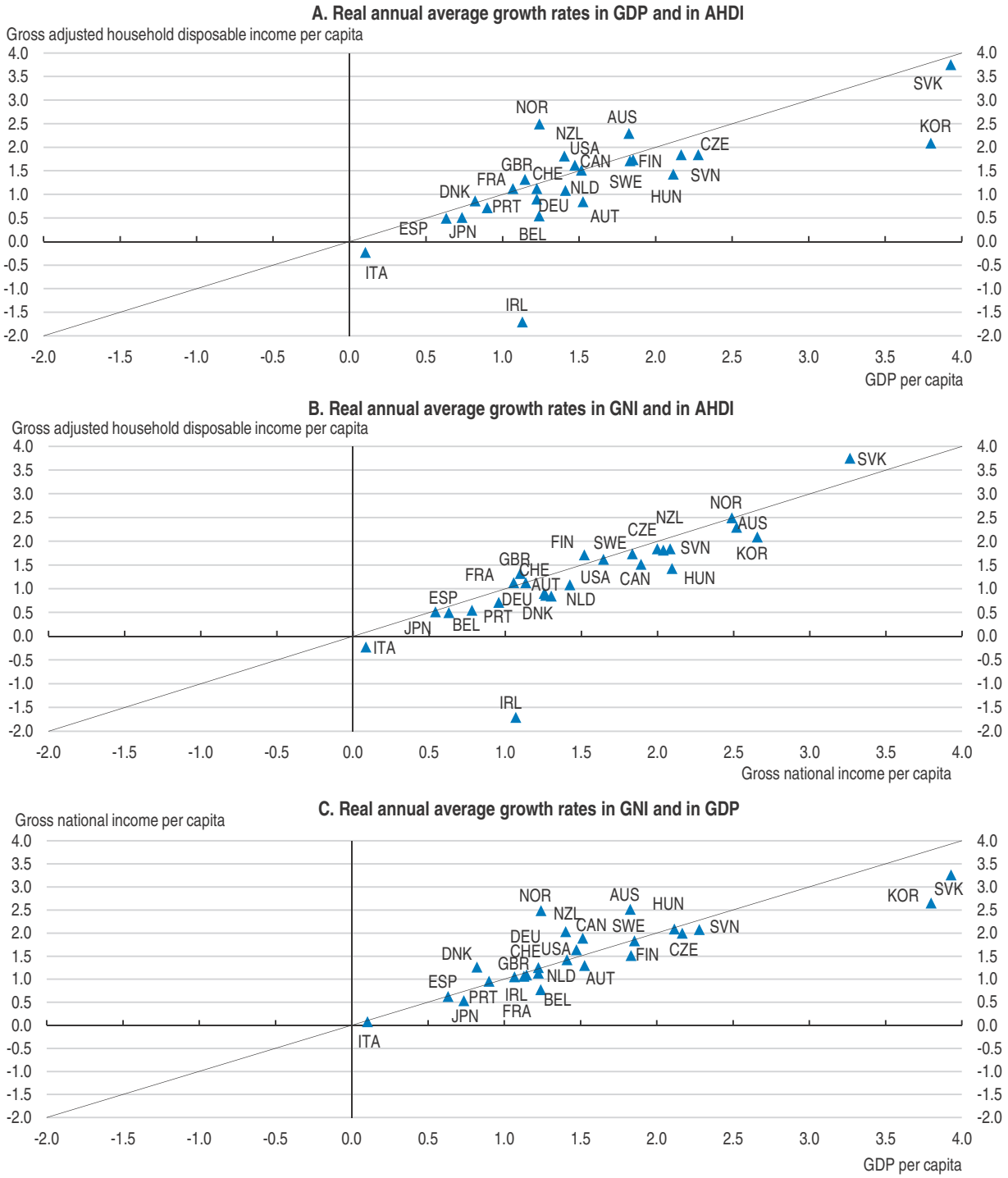
1. For panel A, gross adjusted household disposable income per capita and GDP per capita are expressed in USD, constant prices and constant PPPs, OECD base year 2010. Gross adjusted household disposable income per capita is deflated with the deflator for actual individual consumption (consumer prices) while GDP per capita is deflated with the GDP deflator (output prices). For panel B, gross adjusted household disposable income per capita and GDP per capita are expressed in current prices. Data refer to 1995-2014 for Canada, Czech Republic, Finland, Italy, Korea, the Netherlands, Norway, Portugal and Sweden; 1995-2012 for Switzerland; 1999-2013 for Hungary, Ireland, Spain and the United Kingdom; 1999-2012 for New Zealand.

Source: OECD, *National Accounts Database*.

StatLink http://dx.doi.org/10.1787/888933324010

Figure 3.5. **Comparing growth in GDP and in AHDI: the role of primary income flows with the rest of the world**[1]

Percentage, 1995-2013



1. Gross national income (GNI), Gross domestic product (GDP) and gross adjusted household disposable income are expressed in USD, constant prices and constant PPPs, OECD base year 2010. For gross adjusted household disposable income, PPPs and deflators are those for actual individual consumption of households while for GDP and GNI, PPPs and deflators are those for GDP. Data refer to 1995-2014 for Canada, Czech Republic, Finland, Italy, Korea, the Netherlands, Norway, Portugal and Sweden; 1995-2012 for Switzerland; 1999-2013 for Hungary, Ireland, Spain and the United Kingdom; 1999-2012 for New Zealand.

Source: OECD, *National Accounts Database*.

StatLink http://dx.doi.org/10.1787/888933324022

commodity prices over the period under consideration (Figure 3.5, Panel C). Nevertheless, in most cases, developments in primary income flows with the rest of the world do not seem to explain much of the wedge between real GDP and real household income dynamics: indeed, a number of countries (for example Ireland and Italy) experienced equivalent growth gaps in terms of either GDP or GNI.

A wrap-up on the growth gap of household income vis-à vis GDP

This section has looked at the respective contributions of relative prices and cross-border income flows to the growth gap between real household disposable income and real GDP. It finds that the former explains a substantial portion of the gap while the contribution of the latter is negligible except for a few countries. Taking these factors into account, the rest of the chapter focuses on the factors potentially driving a wedge between AHDI and GDP, both expressed in nominal terms.

In order to do so, the chapter introduces the household income share of GDP, a synthetic measure of the growth dividends from the household perspective, which is simply defined as the ratio of nominal AHDI to nominal GDP. A significant decline in the ratio would indicate that a substantial portion of the growth gap in real terms remains to be explained, even after taking into account relative price effects. As it turns out, such ratio has been stable over the last two decades, on average across OECD countries (Figure 3.6, Panels A and B).[14] Nevertheless, this stability masks differential trends across countries, with marked declines – of around 6 percentage points – in Austria, Korea, Belgium and Norway and marked increases – of around 10 and 5 percentage points – in the Slovak Republic and Finland, respectively (Figure 3.6, Panel B).

The finding of a broad stability on average is formally confirmed by econometric analysis: the elasticity of adjusted household disposable income to GDP is not statistically different from unity, once controlling for country-fixed effects and other factors.[15] This incidentally implies that the wide cross-country differences in the level of household income shares of GDP (Figure 3.6, Panel A) tend to persist over time. They are likely due to factors such as the degree of countries' openness, their trade structure and industrial composition.[16]

Income distribution between the household and non-household sectors

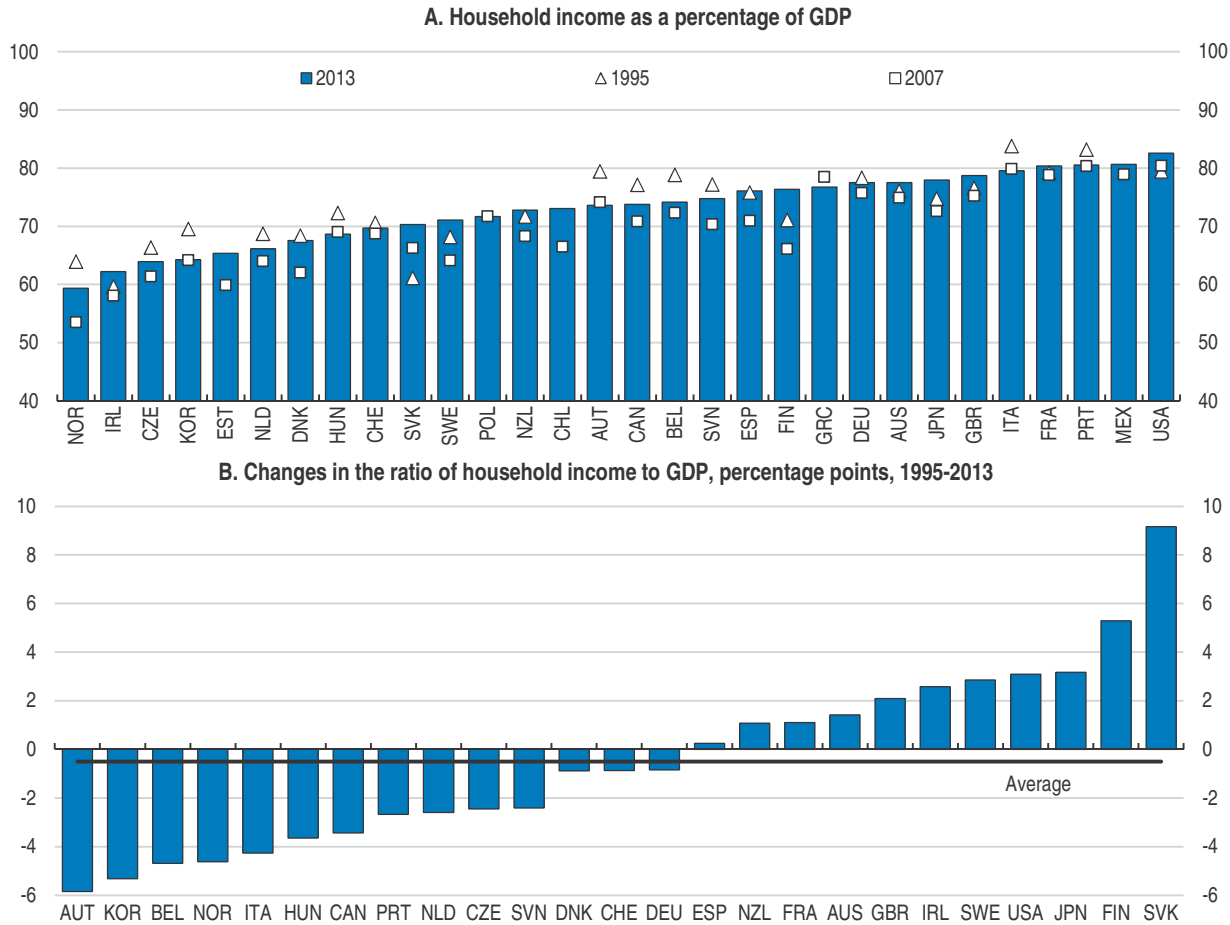
This section provides an exploratory analysis of the household income share along its components with a view to understanding the channels through which production income (GDP) translates into household income. This requires assessing the link between GDP and the three household income components defined in the first section: labour and capital (i.e. primary income); and secondary income, i.e. income redistributed from the government. This allows for shedding some light on income distribution between the household and non-household sectors of the national economy, in particular the government and corporate sectors.

The labour share of GDP

Labour represents the main source of overall income for the average household (Figure 3.2). Capital income also plays a role, but it represents a comparatively minor income source and, depending on the mode of capital remuneration, may be redistributed from the corporate to the household sector with a lag.[17] As a result, the functional income distribution, i.e. the division of income generated by domestic production between the

Figure 3.6. **The household income share of GDP**[1]

Nominal terms



1. Gross domestic product (GDP) and household income are expressed in current prices. For 1995, data refer to 1999 for Hungary, Ireland, Spain, New Zealand and United Kingdom. For 2013, data refer to 2014 for Canada, Czech Republic, Finland, Italy, Korea, the Netherlands, Norway, Portugal and Sweden; 2012 for New Zealand and Switzerland.

Source: OECD, *National Accounts Database*.

StatLink http://dx.doi.org/10.1787/888933324036

remuneration of labour and that of capital, hence the aggregate labour share, is likely to influence in the short to medium term the division of income generated by domestic production between the household and non-household sectors.

Declines in the labour share have been documented over the past decades, even though the magnitude of such decline has been the object of controversies.[18] A wide array of research has investigated the drivers of this trend, focusing in particular on the role of globalisation along with that of changing policies and institutions. The main conclusions from this literature are summarised in the appendix. This section delivers a new assessment of developments in the labour share on the basis of SNA data.

The labour share is defined as the GDP share of income that is received by workers, be they employees or self-employed, in the form of labour compensation. Proper measurement of the aggregate labour share requires addressing a number of issues, such as estimating the division of income between labour and capital for the self-employed (Box 3.3).

Box 3.3. **Measuring the aggregate labour share**

The aggregate labour share is typically computed by dividing gross labour compensation by GDP at factor costs. There are several measurement issues associated with this calculation:

- *Measurement issues in specific industries*. In some industries, measurement of the labour share is problematic, which could impact on that of the aggregate labour share. For example, the value added of the public administration, as measured in the national accounts, is often equal to the sum of labour costs. As a consequence the labour share may be dramatically inflated in the public sector. Outside the public sector, in industries such as mining and fuel production, value added fluctuates quite a lot while wages do not, thereby inducing large fluctuations in the labour share.
- *Labour compensation of the self-employed*: the revenue of the self-employed is a mix of *labour* and capital incomes, which are typically not identified separately in the national accounts and appear under the item "mixed income". This requires imputing *labour* income for the self-employed. There is wide consensus that the remuneration of proprietor's labour should be assumed equal to the average compensation of wage earners (Arpaia et al., 2009).*

To analyse the mechanism whereby income generated by aggregate production trickles down to households, the labour share must be defined at the aggregate level by assuming that wage of the self-employed is the same as for the average employee of the whole economy.

In order to gauge the robustness of the analysis, the aggregate labour share can be confronted to alternative comparable datasets, relying on recent work published by Karabarbounis and Neiman (2014). The correlations between the aggregate labour share estimates of this chapter and those of Karabarbounis and Neiman are very close to one: they range between 0.90 and 0.95 for the levels and between 0.78 and 0.85 for the annual changes between 1995 and 2010.

Finally, this chapter uses as a denominator of the labour share of GDP at market prices and not at factor costs. This is necessary to analyse the link between GDP and household material living standards with a view to getting closer on the purchasing power of household incomes. This also takes into account the fact that government absorbs part of the value added (see European Commission, 2007, for a discussion). In any case, this measurement choice has no impact on results since the correlation between the labour share measured in terms of GDP at market prices and factor costs is higher than 0.97 both in levels and differences.

An additional analytical issue is the treatment of those at the top of the pay distribution; those are often more akin to entrepreneurs, employed by shareholders and rewarded with stock options which are an entitlement based on future profits and reduce the future returns to other shareholders. OECD (2012) delivered adjusted labour shares, by excluding the top 1% earners' income from the computation of the wage bill for seven countries over the period 1990 to mid-2000s: this shows that the drop in the "adjusted" *labour* share – or the labour share for the bottom 99% of income earners – is even greater than the drop in the "unadjusted" *labour* share, especially for the United States and Canada, due to an increase in the wage share of top income earners. One recent study estimates that the labour share excluding the contribution of top incomes has declined so much in the US that it is lower today than at any other time since the 1930s (Giovannoni, 2014). This may reflect the surge in CEO and other top executives' compensation, one of the main driving forces beyond the broader well-documented finding of an increase in the share of national income accruing to top incomes (Atkinson et al. 2011, Fernandes et al. 2009, Frydman and Jenker, 2010). This issue is beyond the scope of the current chapter but is left for future research, building on recent OECD work on top incomes (Ruiz and Woloszko, 2015).

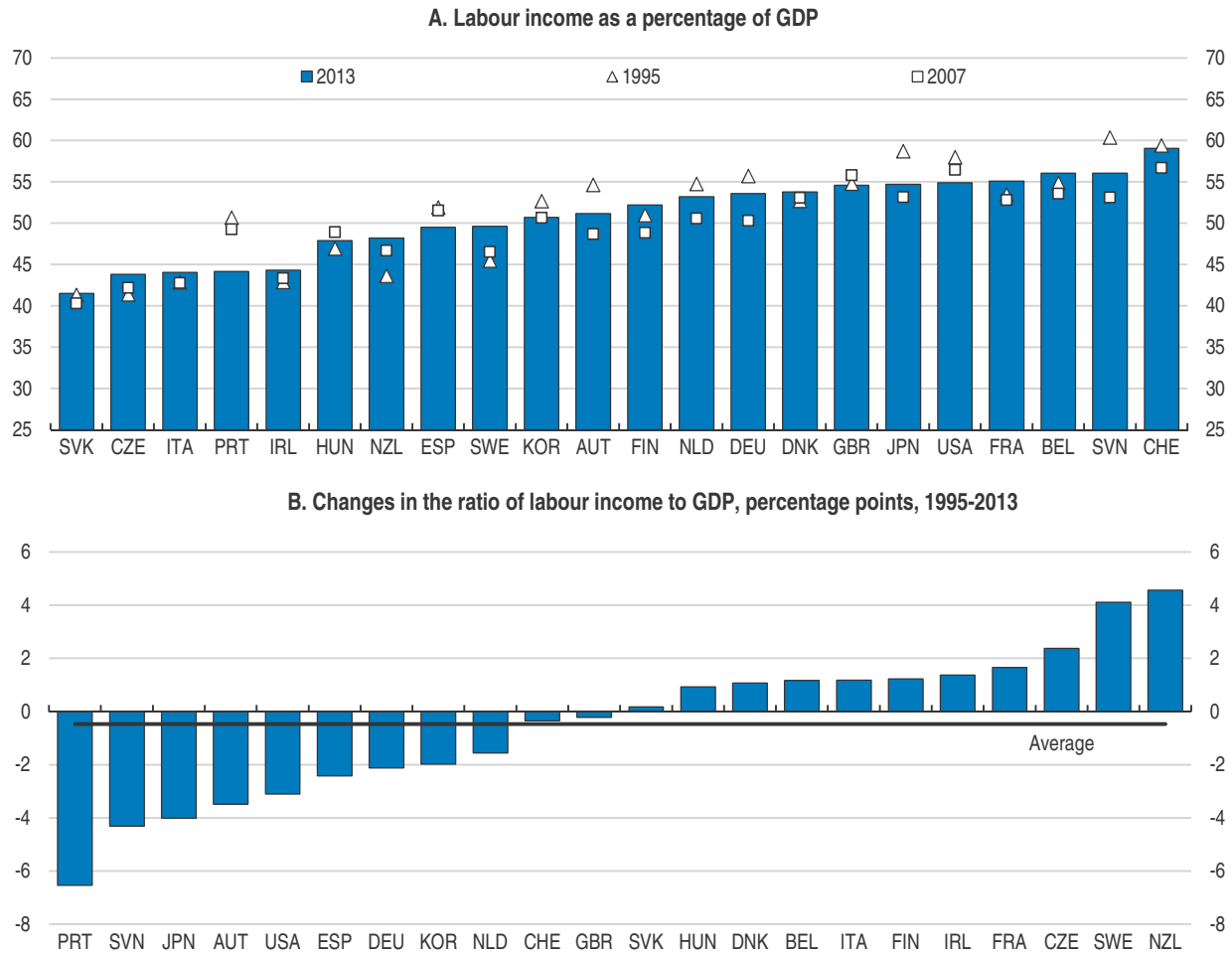
* An alternative method, when focusing on the business sector and working at the industry level, is to impute the hourly compensation of a proprietor's labour share by using the industry average compensation of employees.

National accounts data suggest a relative stability in the labour share over the last two decades, on average across OECD countries for which the data are available (Figure 3.7), somewhat in contrast with earlier studies. However, this average picture masks cross-country heterogeneity. Slightly half of the countries experienced a decline in the labour share: by more than 6 percentage points in Portugal, around 3 in the United States and 2 percentage points in Germany and Spain. Increases in the labour share experienced by the other half of the countries were of lower magnitude, generally between 1 and 2 percentage points, except in New Zealand and Sweden where such increases reached almost 5 percentage points.

The difference between the findings of this chapter and of previous studies is likely to reflect differences in the vintage of the data and the nature of the approach. In particular, most studies have measured the labour share for a subset of industries as opposed to the

Figure 3.7. **The labour share of GDP**[1]

Nominal terms



1. The labour share is defined as the sum of employees' wages and compensation and labour income of the self-employed, over GDP. Labour income of the self-employed is imputed by assuming that their annual wage is the same as for the average employee of the whole economy. GDP and wages and compensation are expressed in current prices. For 1995, data refer to 1998 for the United States; 1999 for Spain, the United Kingdom, Hungary, Ireland and New Zealand. For 2013, data refer to 2014 for Czech Republic, Finland, Italy, Korea, the Netherlands, Portugal, Sweden; 2012 for Switzerland, New Zealand and the United States.

Source: OECD, *National Accounts Database*.

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aggregate economy, for instance by focusing on the non-primary business sector (as done in OECD, 2012) while others have also excluded the self-employed (as done in Karabarbounis and Neiman, 2014). The current findings may mask compositional effects arising from cross-industry differences as well as workers' reallocation between industries. As a result, the aggregate approach needs to be complemented with a finer industry-level approach in future work.

The household capital income share of GDP

Capital represents a smaller source of overall income than labour for the average household, but this this income source is far from negligible and highly variable across countries (Figure 3.2).[19] Since capital is ultimately held by households, developments in economy-wide capital income over the last decades should have ultimately trickled down to the household sector.[20] This section provides a preliminary exploration of developments in capital income for the average household with a view to shedding light on this issue. Before doing so, it is useful to remind the SNA definition of household capital income. Such income covers the three following items:

- *Household operating surplus*: this item corresponds to income from housing services, that is, actual and "imputed" rents. In countries where homeownership is dominant such as France and Italy, most output in the housing sector is recorded as imputed rent paid by homeowners to themselves and this item amounts to around 10% of household adjusted disposable income per capita.
- *Capital income of the self-employed*: this item corresponds to the remuneration of capital for unincorporated enterprises, which are included in the household sector alongside "real" households. The national accounts do not generally allow for distinguishing between income from capital and labour for the self-employed, and the sum of the two is therefore called "mixed income". The split between the remuneration of labour and that of capital needs to be imputed, as explained in Box 3.3. The resulting capital income share is highly heterogeneous across countries, between 2.5% and 20% of adjusted household disposable income per capita, not least reflecting the heterogeneous incidence of self-employment.
- *Property income*: this item corresponds to the returns on households' financial investments (interest, dividends, and imputed interests from life insurance policies). It represents a smaller part of household income per capita compared to other capital income components and may not deliver a comprehensive assessment of returns to financial capital, reflecting the following limitations: i) it excludes capital gains and losses, whether realised or unrealised, and ii) as a result, it excludes capital gains from share buy-backs, yet such corporate profits redistribution mechanism to shareholders has been on the rise relative to dividend pay-out and iii) in some countries such as Germany and Italy it includes self-employment income accruing to a very substantial group of small individual firms.[21]The latter limitation has been shown to affect foremost cross-country level comparisons, leaving trend comparisons largely unaffected.[22]

Proper measurement of the capital income share ideally requires taking into account capital depreciation. The increasing share of fast-depreciating capital, notably intangible and knowledge-based capital (KBC) in all OECD countries implies an increase in the average depreciation rate of the overall capital stock (Andrews and Criuscolo, 2013). Experts generally assume a depreciation rate around 15% for intangible capital, which is much

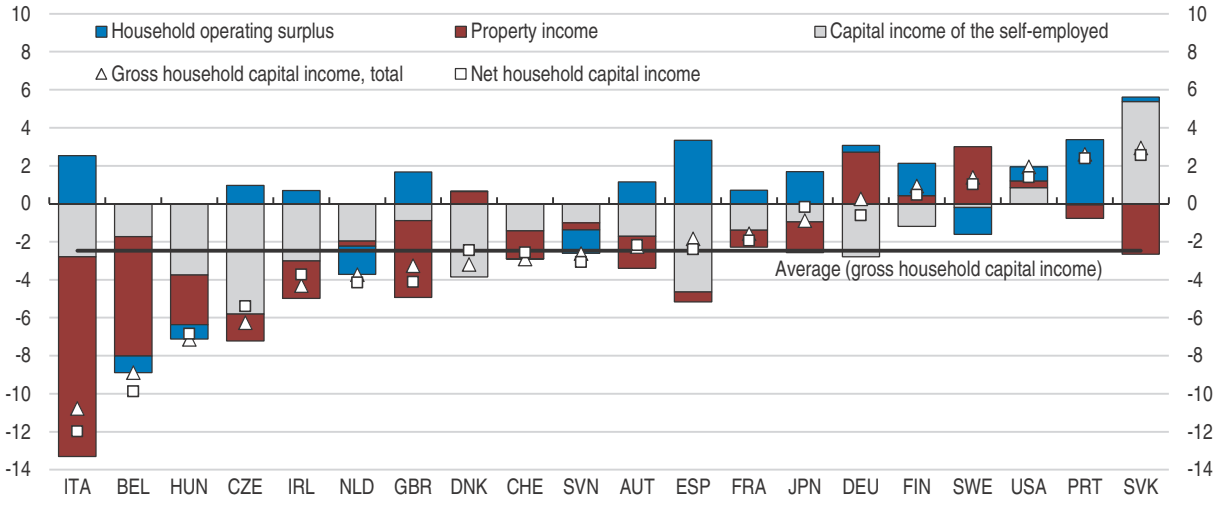
higher than the depreciation rate applied to tangible capital, although this is a new area of research which implies that any such estimate is surrounded by uncertainty. Even without formally taking into account KBC, recent empirical findings based on a sample of G7 countries suggest that trend rise in the capital income share is less pronounced when measured in net terms, reflecting increasing depreciation rates (Rognlie, 2015).

In practice however, methods for calculating consumption of fixed capital are complex and tend to differ between countries, thus creating doubts about the comparability of results. In addition, depreciation data are only available for a subset of countries in the SNA. As a result of these issues, this chapter presents both gross and net capital income shares. While the net concept is more appropriate in theory, results should be interpreted with care, reflecting comparability and measurement issues.

According to SNA data, the household capital income share of GDP (i.e. the ratio of capital income accruing to the household sector over GDP) has declined in the vast majority of OECD countries since the mid-90s (Figure 3.8).[23] The average decline of 2.5 percentage points masks cross-country differences in magnitude: from more than 12 percentage points in Italy to around 1 percentage point in France. The decline in property income may partly reflect declining interest payments on government debt held by households, as suggested by the sharper decline observed in Italy and Belgium, since in these countries bonds and other debt securities represent a higher proportion of household financial assets compared to the rest of the OECD.[24] Portugal and the United States are among the few countries experiencing a rise in the household capital income share and they are also among the countries experiencing a marked decline in the labour share. This

Figure 3.8. **The evolution of the household capital income share of GDP and its components**[1]

Nominal terms, percentage points, 1995-2013



1. The household capital income share is defined as the sum of household operating surplus, capital income of the self-employed and property income, over GDP. Capital income of the self-employed is imputed by the difference between their mixed income and their labour income, assuming that their annual wage is the same as for the average employee of the whole economy. GDP and household capital income are expressed in current prices. Net capital income is obtained by subtracting households' consumption of fixed capital from gross capital income. For 1995, data refer to 1998 for the United States; 1999 for Spain, the United Kingdom, Hungary, Ireland and New Zealand. For 2013, data refer to 2014 for Czech Republic, Finland, Italy, Korea, the Netherlands, Portugal, Sweden; 2012 for Switzerland, New Zealand and the United States.

Source: OECD, *National Accounts Database*.

StatLink http://dx.doi.org/10.1787/888933324054

could suggest a shift in the functional income distribution. Nevertheless, a number of countries experienced a decline in the household capital income share amid stability (e.g. United Kingdom) or decline (e.g. Austria) in the labour share.

Income from housing services has been the only component of household capital income not falling relative to GDP. This corresponds to rental income, most of which is imputed in the national accounts on the grounds of owner-occupied housing. This finding echoes recent work by Rognlie (2015) as well as Bonnet et al. (2014) who show that the trend rise in the capital share of GDP has been driven by the housing sector.[25] This could mitigate the adverse distributional consequences of rising capital incomes, because housing is more equitably distribut ed than other capital assets (i.e. financial assets), as recently shown in OECD (2015b).[26] The role of housing cannot be properly addressed through SNA data, due to cross-country differences in the methodology applied for imputing owner-occupied rents (Box 3.1).

Parallel declines in labour and household capital income shares of GDP could suggest that a rising share of primary income has been retained by the corporate sector. This would be consistent with Karabarbounis and Neiman (2014) who show that the decline of the labour share has been the counterpart of a concomitant increase in corporate savings.[27] Nevertheless, the findings reported in this chapter provide a more complex picture: widespread declines in the household capital income share have coincided with mixed developments in the labour share (i.e. increases in some countries, declines in others). The decline in household capital income could nevertheless be overestimated in the current analysis if the nature of capital income has been changing towards forms of remuneration that are not covered by the SNA. This notably applies to realised capital gains, as discussed before, including share buy-backs, which have been increasingly used by corporations as a way to redistribute profits to shareholders. Assessing developments in household capital income in association with developments in corporate profit distribution and savings behaviour is also an important area for future research.

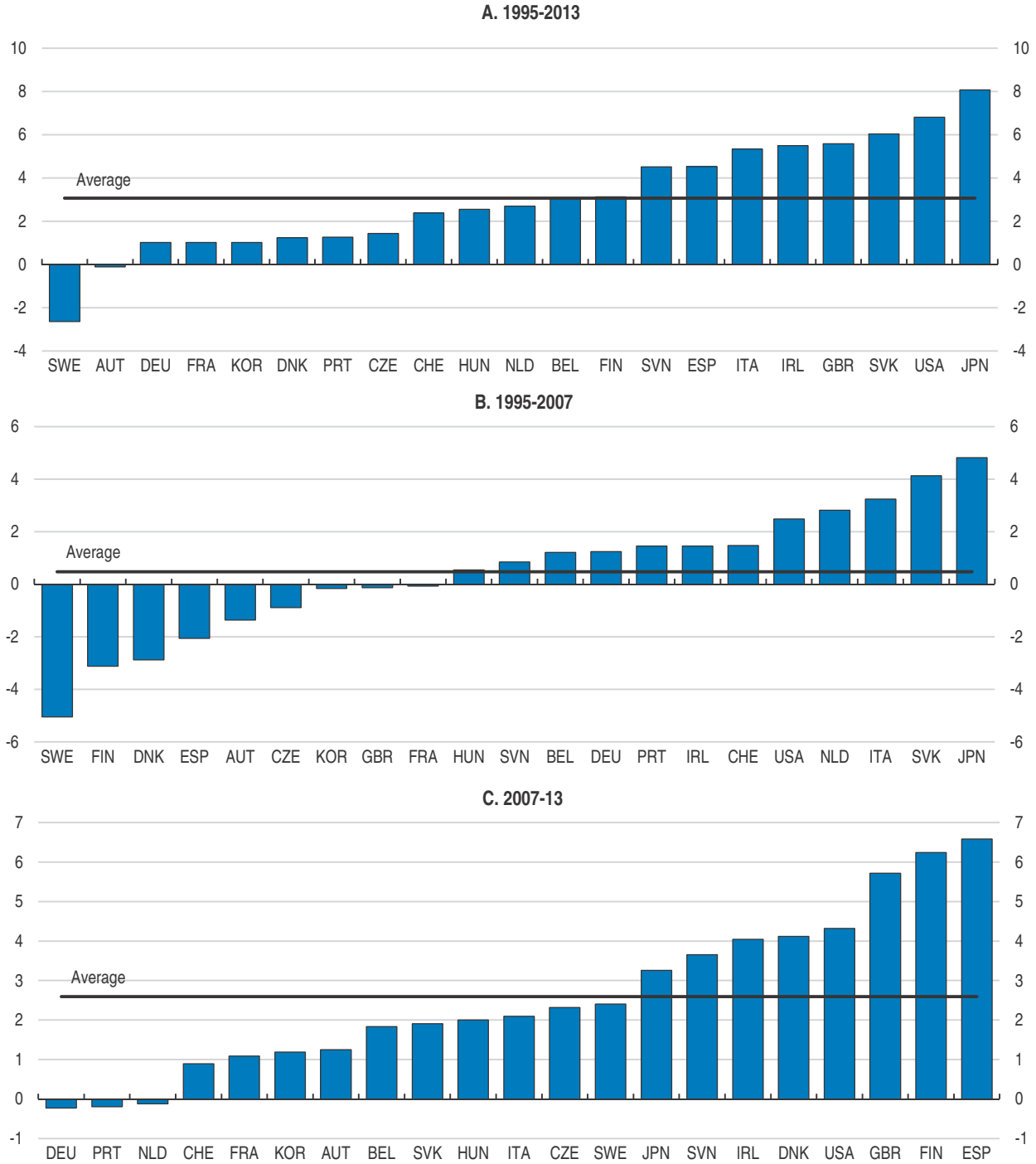
The household secondary income share of GDP

Developments in the household income share of GDP may also reflect income flows between the household and the government sector. Indeed, so far the analysis has focused on household primary income, that is, income from labour and capital. This needs to be complemented with an analysis of household secondary income, that is, income that the government redistributes in cash or in-kind to households, net of the current taxes on income and wealth paid by households (see Figures 3.1 and 3.2).

Secondary household income shares of GDP have been rising in many countries (Figure 3.9, Panel A). This finding should be qualified: it largely reflects higher social transfers and lower taxes during the crisis period (Figure 3.9, Panels B and C), which have cushioned household disposable incomes from the falls in GDP and market income. Apart from the crisis period, cross-country trends have been heterogeneous, with around one third of countries experiencing declines of more than 2 percentage points, another third facing rises of more than 2 percentage points, and the rest seeing relative stability in the share of household secondary income in GDP (Figure 3.9). All in all, income redistributed by the government does not appear as a major long-term driver of disposable income for the average household, but rather as a key income stabiliser over the economic cycle, which is broadly consistent with priors on the cushioning role of the welfare state.

Figure 3.9. **The evolution of the household secondary income share of GDP**[1]

Nominal terms, percentage points, 1995-2013



1. The household secondary income share is defined as the sum of the net social benefits, transfers, and social transfers in-kind received by households, minus current taxes on income, wealth, etc. over GDP. The household secondary income share is defined as the ratio of household secondary income over GDP. GDP and household secondary income are expressed in current prices. For 1995, data refer to 1998 for the United States; 1999 for Spain, the United Kingdom, Hungary, Ireland and New Zealand. For 2013, data refer to 2014 for Czech Republic, Finland, Italy, Korea, the Netherlands, Portugal, Sweden; 2012 for Switzerland, New Zealand and the United States.

Source: OECD, *National Accounts Database*.

StatLink http://dx.doi.org/10.1787/888933324062

The finding of an increase in income redistributed from governments to households could also be overestimated to the extent that consumption taxes are excluded from taxes paid by households in the SNA framework, as emphasised above. Yet across high-income countries the recent period has been characterised by a trend shift in the tax structure towards consumption taxes,[28] which is likely to have reduced the purchasing power of household incomes. Indeed, this is in line with the findings reported in the first section of this chapter, that is, a decline in real household incomes, when nominal household income is deflated with consumer prices, as those have increased in many countries relative to output prices.

A Wrap-up on the household income share of GDP

To wrap-up, the changes in the household income share of GDP presented at the beginning of this chapter can be decomposed as changes in the labour share of GDP, in the household capital income share of GDP, and in the household secondary income share of GDP (Figure 3.10). This summary decomposition delivers the following broad conclusions:

- Over the period 1995-2013, declines in the household income share of GDP were in most cases largely driven by declines in the household capital income share of GDP while increases were driven by increases in the household secondary income share of GDP. The contribution of labour income was heterogeneous across countries, but generally of lower magnitude (Figure 3.10, Panel A).
- The relative contribution of labour, household capital and household secondary income shares partly reflects the cushioning role of secondary income redistributed by governments at the onset of the crisis (Figure 3.10, Panels B and C). Indeed, most OECD countries experienced declines in the household income share of GDP over the pre-crisis period; this was driven by declines in primary incomes, in particular by declines in the household capital income share but also, though to a lesser extent, by declines in the labour share. Such declines were not generally compensated by increases in household secondary income shares of GDP, in contrast with the crisis period.

From functional income distribution to income inequality

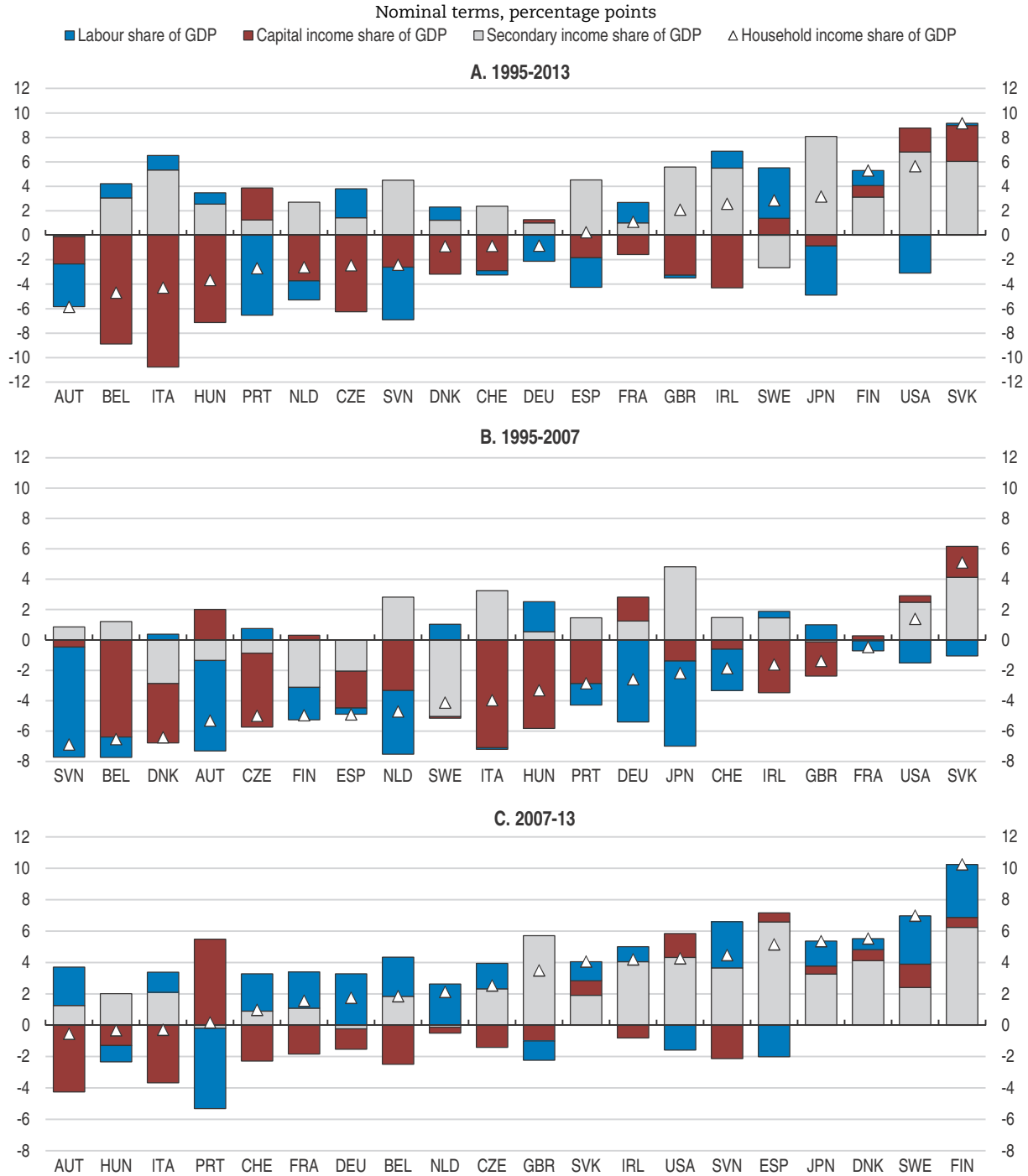
Functional income distribution, which can be defined as the division of income between labour and capital, is often expected to explain income inequality. However, the link is not a simple one whereby income is divided into workers receiving only wages and capitalists or landlords receiving only profits and rents. First, most people have multiple sources of income, notably from labour and from capital; second, there is considerable inequality within each category of income, notably within labour and capital income. Even if there were only two types of income, wage and capital, the effect on income inequality of changes in the functional income distribution would depend on the degree of correlation between wage and capital income and on the relative dispersion between the two income sources.[29]

Market income

Empirically, declines in the labour share have been associated with widening market-income inequalities,[30] even though the correlation is not very high and a number of countries have experienced increases in both labour shares *and* inequality of market incomes (Figure 3.11). The association is even weaker for household capital income. Developments in the household capital income share reveal nothing on market-income inequality, as most OECD countries have experienced declines in household capital income

Figure 3.10. **Decomposing the changes in the household income share of GDP**[1]

Nominal terms, percentage points



1. See Figures 3.7 to 3.9 for the definition of respectively the labour share, the household capital income share (gross terms), and the household secondary income share. GDP and the various components are expressed in current prices. For 2013, data refer to 2014 for Czech Republic, Denmark, Finland, Italy, the Netherlands, Portugal and Sweden; 2012 for New Zealand and Switzerland. For Chile and Korea, the component "Operating surplus" includes mixed income. For panel C, 1999 instead of 1995 for Hungary, Ireland, Spain, the United Kingdom and New Zealand and 1998 for the United States.

Source: OECD, *National Accounts Database*.

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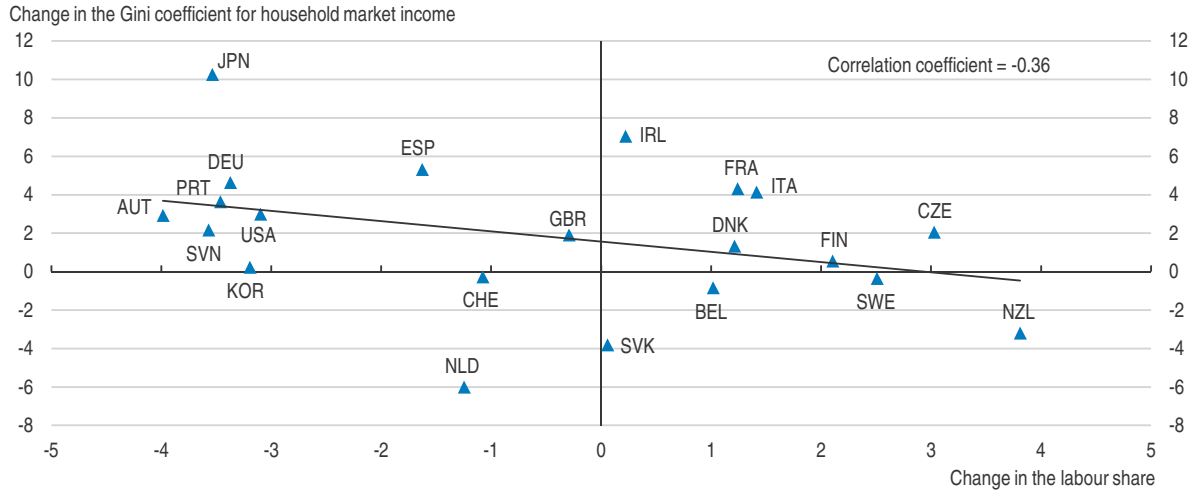
Figure 3.11. **Developments in the labour share and in market income inequality**[1]

Nominal terms, percentage points, 1995-2012



1. See Figure 3.7 for a definition of the labour share. Inequality is measured by the Gini index coefficient for pre-tax and transfer income (market income). The values of the Gini coefficient range between 0, in the case of "perfect equality" (i.e. each share of the population gets the same share of income), and 1, in the case of "perfect inequality" (i.e. all income goes to the individual with the highest income). For 1995, data refer to 1998 for the United States, 1999 for Hungary, Ireland, Spain, New Zealand and the United Kingdom. For 2012, data refer to 2011 for Canada, Denmark, France, Germany, Japan, the United Kingdom, New Zealand, Switzerland and Sweden.

Source: OECD, *National Accounts and Income Distribution Databases*.

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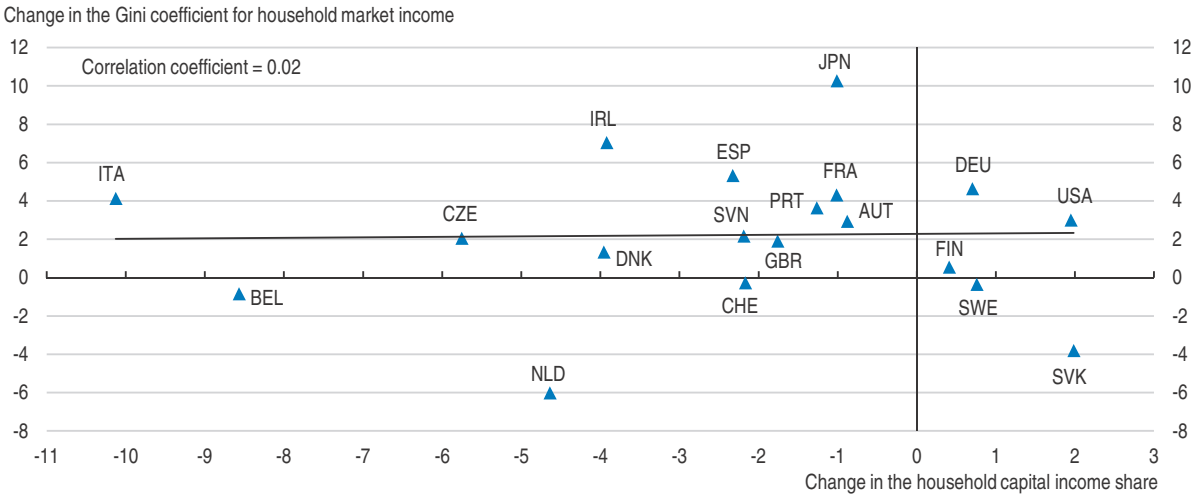
shares and increases in inequality of market incomes (Figure 3.12). This is likely to reflect measurement limitations associated with household capital income, such as the non-recording of capital gains in national accounts. Measurement limitations also apply to Gini coefficients. Generally computed on household surveys, they tend to under-estimate top incomes and thus the dispersion of capital incomes.

Figure 3.12. **Developments in the household capital income share and in market income inequality**[1]

Nominal terms, percentage points, 1995-2012



1. See Figure 3.8 for a definition of the household capital income share and Figure 3.11 for the Gini index. For 1995, data refer to 1998 for the United States, 1999 for Hungary, Ireland, Spain, New Zealand and the United Kingdom. For 2012, data refer to 2011 for Canada, Denmark, France, Germany, Japan, the United Kingdom, New Zealand, Switzerland and Sweden.

Source: OECD, *National Accounts and Income Distribution Databases*.

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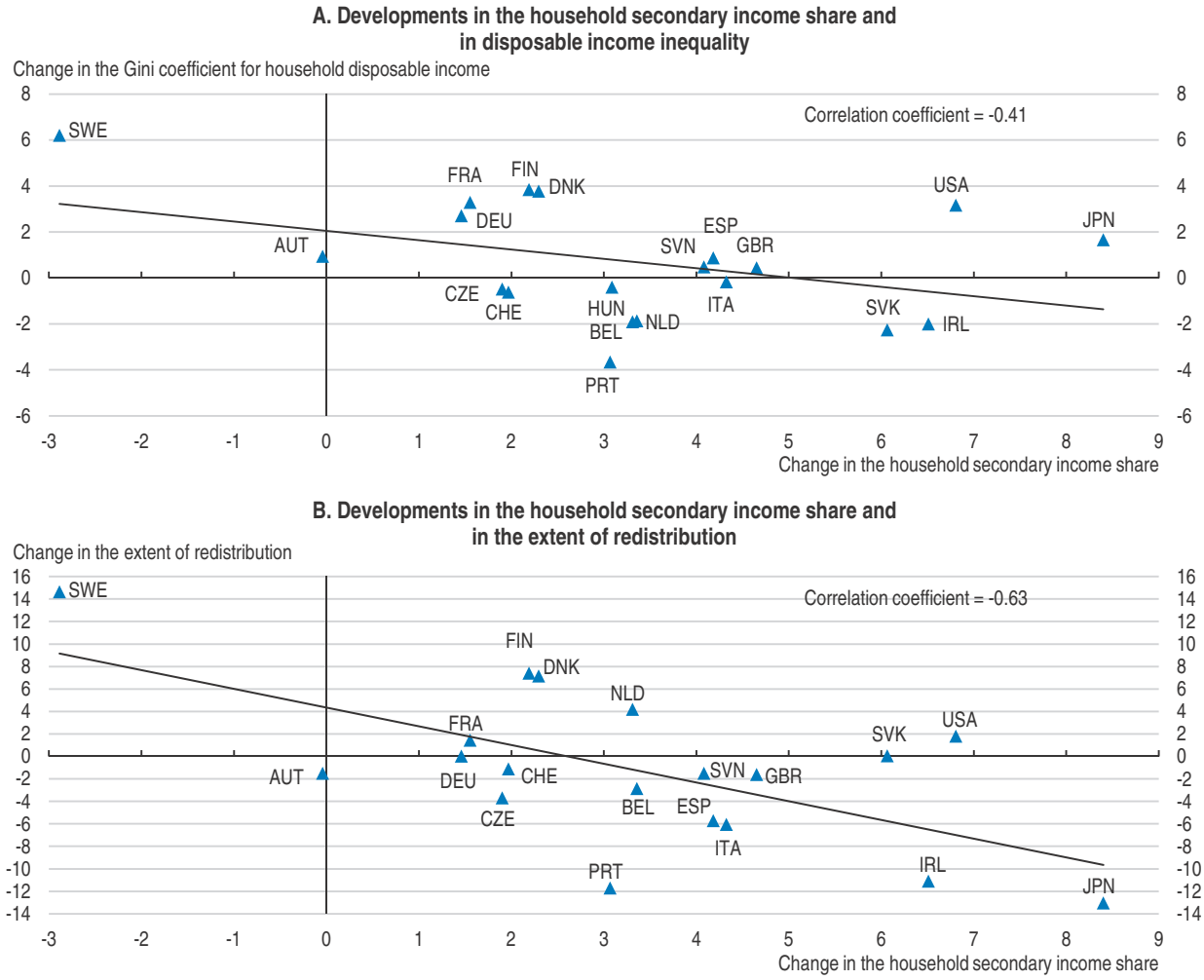
Secondary or redistribution income allows for moving from market income to disposable income, i.e. market income net of current income taxes paid and transfers received by households from the government. The association between developments in the household secondary income share of GDP and in inequality of household disposable income is negative and relatively strong (Figure 3.13, Panel A). Redistribution income is indeed meant to reduce the impact of market income inequality on disposable income inequality. Nevertheless, the redistributive effect of taxes and transfers is heterogeneous across OECD countries: for a given rise in secondary income accruing to the average household, countries are more (e.g. Portugal) or less (the Netherlands) successful at moderating the transmission from market income inequality to disposable income inequality (Figure 3.13, panel B).

Figure 3.13. **Developments in the household secondary income share and in income inequality**[1]

Nominal terms, percentage points, 1995-2012



1. See Figure 3.9 for a definition of household secondary income share and Figure 3.11 for the Gini index. The extent of redistribution is defined as the difference between the Gini coefficients for disposable and market income, relative to the value of the Gini coefficient for market income. It is measured in terms of the change over the period 1995- 2012. For 1995, data refer to 1998 for the United States, 1999 for Hungary, Ireland, Spain, New Zealand and the United Kingdom. For 2012, data refer to 2011 for Canada, Denmark, France, Germany, Japan, the United Kingdom, New Zealand, Switzerland and Sweden.

Source: OECD, *National Accounts and Income Distribution Databases*.

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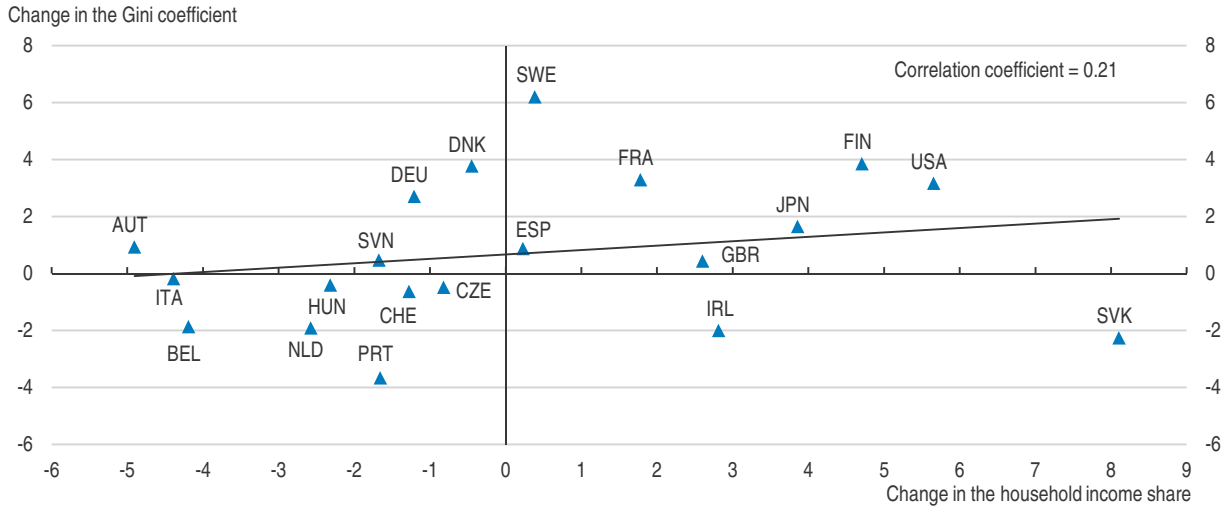
A Wrap-up on income distribution

Wrapping-up on the different components of household income, i.e. labour, capital and secondary income, changes in the overall household income share of GDP are positively but weakly correlated with changes in disposable income inequality (Figure 3.14). This would imply that as the household sector receives a larger share of GDP, income dispersion across the household sector increases, a somewhat counter-intuitive finding. This is more likely to reflect that income distribution between the household and non-household sectors of the economy has little information value about income distribution within the household sector, as it largely ignores the major drivers of dispersion at the level of market incomes: inequality between workers and non-workers and inequality among workers, as well as taxes and transfers as a major source of income and a redistributive tool to mitigate market income inequality.

Figure 3.14. **Wrapping-up: developments in the household income share and in disposable income inequality**[1]

Nominal terms, percentage points, 1995-2012



1. Household income and Gross domestic product (GDP) are expressed in current prices. Inequality is measured by the Gini coefficient for post-tax and transfer income (disposable income). See Figure 3.11 for a definition of the Gini index. For 1995, data refer to 1998 for the United States, 1999 for Hungary, Ireland, Spain, New Zealand and the United Kingdom. For 2012, data refer to 2011 for Canada, Denmark, France, Germany, Japan, the United Kingdom, New Zealand, Switzerland and Sweden.

Source: OECD, *National Accounts and Income Distribution Databases*.

StatLink http://dx.doi.org/10.1787/888933333848

Notes

1. Stiglitz et al. (2009), Atkinson, (2012, 2015), OECD, (2008), (2011a), (2011b), (2015), *OECD Better Life Initiative*, *OECD Inclusive Growth Initiative*, Piketty (2013), Causa et al. (2014a, 2014b).
2. See also Atkinson, (2012), OECD, (2011a), *OECD Better Life Initiative*, *OECD Inclusive Growth Initiative*, Causa et al. (2014a).
3. Empirical evidence on income distribution and on the influence of growth-oriented policies on income distribution is relatively rich. See Causa et al. (2014a, 2014b), OECD, (2011b), Braconier and Ruiz-Valenzuela (2014), Fournier and Koske, (2012), Joumard et al. (2012), Koske et al. (2012), Jaumotte and Osorio Buitron (2015). This has allowed for progressively incorporating income inequality among the objectives of policymaking, for instance among the policy recommendations formulated in *Going for Growth* reports.

4. This paper relies on a comprehensive use of the SNA and its guide (Lequiller and Blades, 2014). The SNA defines six institutional sectors: households (S14); non-financial corporations (S11); financial corporations (S12); general government (S13); non-profit institutions serving households (S15); and the rest of the world (S2).
5. An estimate of income derived from the underground (or hidden) economy is included in the SNA and represents a large share of GDP in many countries (for example around 11% in Spain). See Lequiller and Blades (2014). Household income in the SNA consistently includes income derived from hidden activities. The majority of hidden activities are related to small enterprises. As a consequence, the main part of the adjustment ends up in output and value added of households (for example in self-employment income).
6. See Atkinson (2009) and (2012) for a discussion and the definition of "spendable income".
7. Consumption of fixed capital is defined as the reduction in the value of the fixed assets used in production. At the household level, the most important fixed asset is usually housing. Under the SNA framework, consumption of fixed capital is estimated by applying a depreciation rate to the current value of each capital asset, *i.e.* its current market price. The depreciation rate varies across countries and depends on the assumption about assets' service lives (*i.e.*, how long the asset is assumed to be used; for example in the United States it is assumed that the service life of a dwelling is 80 years). Depreciation functions may be geometric (US assumption for dwellings) or linear. On average across OECD countries for which data are available, consumption of fixed capital represents 5% of net adjusted household disposable income.
8. There are well-known measurement issues in the estimation of households' consumption of fixed capital, suggesting that gross adjusted disposable income may be more appropriate for cross-country comparison purposes. The correlation between them is close to one (0.99).
9. Self – employment income corresponds to the SNA item "mixed income": so-called because this category includes both the remuneration of labour and that of capital.
10. This pattern is in line with recent OECD work on inequality trends during the crisis, where it is shown that taxes and social transfers alleviated the effects on disposable incomes of falling market incomes during the crisis (OECD, 2013c).
11. Many OECD countries have been raising their standard VAT rate, in particular between 2009 and 2014. The OECD average standard VAT rate reached 19.1% in January 2014, from 17.6% in January 2009. Ten OECD countries now have a standard rate above 22% versus four in 2009. See OECD (2014).
12. For example, household income includes -- while GDP excludes -- the wages and salaries of workers who are resident in a country but working in neighbouring countries; conversely, household income excludes, while GDP includes, the wages and salaries of workers who are non-resident of a country where they have come to work.
13. GNI is not affected by the activity of multinationals and therefore the allocation of value added and profits across countries. In the SNA, all profits end up in the country of residence of the multinational, via the item "reinvested earnings on foreign direct investment" in the business accounts: see Chapter 7 in Lequiller and Blades, (2014).
14. The same diagnosis applies to the household income share of GNI (not shown).
15. This finding confirms earlier results by Causa et al. (2014b).
16. See Causa et al. (2014b) for a discussion.
17. For instance companies may defer cash dividends distribution because the cyclical or institutional context makes it more attractive to accumulate cash or retain earnings for investment purposes. The part of household capital income that accrues in the form of capital gains is *de facto* excluded from the SNA.
18. See OECD, (2012) for a recent in-depth assessment and policy analysis., see also *inter alia* Arpaia et al. (2009); Azmat et al. (2012), Bentolila and Saint-Paul (2003), Checchi and Garcia-Penalosa, (2008, 2010), De Serres at al. (2002), Elsby et al. (2013), European Commission, (2007), Frydman and Saks, (2010), Harrison, (2002), Jaumotte and Tytell, (2007); more recent papers have analysed the concomitant rise in the capital share: see Karabarbounis and Neiman (2014), Piketty (2013), Piketty and Zucman (2014), Rognlie (2015).
19. Trend rises in the aggregate capital share of GDP among high-income countries since the post war area have been documented and received growing attention among researchers and policymakers, not least reflecting associated inequality implications (Piketty, 2013). See Karabarbounis and Neiman (2014), Piketty (2013), Piketty and Zucman (2014), Rognlie (2015). The most recent period is

however characterized by a marked decline in the investment rate hence in capital per worker as discussed for instance in Chapter 3 of OECD (2015a). The impact on the functional income distribution is likely to depend on number of factors such as substitutability between capital and labour. The impact on the household capital income share is likely to materialize with a lag and will depend on companies' profits and their redistribution strategies.

20. Capital income of general government is null by construction, because the output of the general government sector consists of non-market output and is valued "at cost", meaning that value added is equal to labour costs (i.e. compensation of civil servants, which is included in the aggregate labour share).
21. In Italy, unincorporated enterprises with more than five employees are considered as "quasi-corporations" and are therefore classified in the corporate sector. This implies an overestimation of the profit share hence an underestimation of the labour share. See Guidetti and Pionnier, (2015) for a detailed assessment.
22. This conclusion is based on findings reported in Guidetti and Pionnier (2015).
23. These results pre-date the crisis: similar conclusions are reached for the period 1995-2013.
24. OECD (2015b), Chapter 6.
25. The finding of positive effects from housing assets is also emphasized in recent OECD work on household wealth: OECD (2015b) shows that rising house prices have been a key factor leading to higher household wealth in some OECD countries such as Australia, Belgium, Canada, Spain and the UK. In the SNA, the household income account does not allow for directly capturing capital gains associated with rising house prices – unless indirectly reflected in rising actual and imputed rents.
26. This argument remains tentative since the National Accounts data do not cover the income distribution. See OECD (2015b), Chapter 6 for a recent focus on household wealth and its distribution.
27. The authors develop a model-based explanation for these trends: that is, a global decline in the cost of capital, which has induced firms to shift away from labour and towards capital, financed in part by an increase in corporate savings.
28. OECD (2014).
29. The higher the dispersion of capital relative to labour income and the higher the correlation between the two income sources, the most likely will the decline in labour share result in higher inequality.
30. See OECD (2012), Checchi and Garcia Penalosa (2008, 2010).

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APPENDIX 3.1

Policy drivers of the labour share: a brief literature overview

Declines in the labour share have been documented over the past decades, even though the magnitude of such a decline has been the object of controversies.[1] A wide array of research has investigated the drivers of this trend, focusing in particular on the role of globalisation along with that of changing policies and institutions. The main conclusions from this literature can be summarised as follows:

- Empirical evidence has pointed to negative effects of technical change and skill-biased technical change embodied in ICT capital on the labour share, reflecting extensive automation of production and substitution between capital and labour.[2]
  - Technical change is becoming disembodied to the extent that it reflects the accumulation of knowledge-based capital (KBC, including output from R&D, better management, etc.). This also favours high-skilled workers, for instance because the accumulation of KBC reflects productive improvements associated with highly-qualified personnel.
  - However, disembodied technical change and the rising share of KBC have uncertain effects on the aggregate labour share. First, in net as opposed to gross terms, the process is not necessarily capital-augmenting once the higher depreciation rates for KBC are accounted for; second, the process is likely to exacerbate wage inequality between low- and high-skilled workers, reducing the labour share of the low-skilled relative to that of the high-skilled, with ambiguous aggregate effects.[3]
- Evidence on the effect of globalisation on the labour share is not clear cut. Foreign competition may reduce the bargaining power of workers in exposed industries, which would not nevertheless necessarily imply a decline in the aggregate labour share. This is likely to reflect the aggregate interplay between multiple confounding channels and factors, such as differences in trade-induced reallocation between high and low-labour share industries and differential effects between high and low-skilled workers.[4] Robust findings for advanced countries can be summarised as follows (OECD, 2012, Bassanini and Manfredi, 2012):
  - Rising offshoring of intermediate stages of production tends to reduce the labour share.
  - Competition from foreign firms in domestic market induces structural changes that have different effects on the aggregate labour share, that is: i) greater import penetration prompts reallocation of resources away from affected industries and towards either domestic industries or countries with lower labour costs; and ii) growth

of import penetration appears more important in industries that are typically characterised by a high labour share. The resulting larger trade-induced reallocation away from these industries contributes to reduce the aggregate labour share, although available evidence points to a small effect.[5, 6]

- Evidence on product market liberalisation pertains to the network industries, as most reforms have been taking place in these industries during the 1990s.
  - Privatisation of SOEs tends to reduce the labour share within liberalised industries and as a result the aggregate labour share.
  - Reductions in barriers to entry have no significant effect on the labour share. This is likely to reflect the interplay between counter-balancing effects of pro-competitive reforms: i) on the one hand, these reforms may erode firms' rents and squeeze profits hence increase the labour share;[7] ii) on the other hand, these reforms may erode the bargaining power of the average worker hence reduce the labour share.
- Available studies have been largely silent on reform-driven price effects and associated effects on the labour share. Workers generally benefit from increased competition in the form of gains in real wages. For example, trade liberalisation reforms that reduce barriers to import competition should reduce consumption prices relative to GDP prices. The descriptive analysis reported in this chapter suggests that relative price effects have a large impact on real household developments. Proper identification of reform-driven relative price developments is a challenging task for future research.
- Empirical evidence on the effects of labour market policies on labour shares is mixed. This probably reflects the differential effects across categories of workers, such as across low and high-skilled workers (European Commission, 2007).[8] The main conclusions can be summarised as follows:
  - Trends in the labour share cannot be strictly related to the nature of collective bargaining or to its evolution (OECD, 2012).[9] This likely reflects the important and confounding role of globalisation, increased competition and financial liberalisation, which have: i) reduced the collective bargaining power of workers across the board, that is, irrespective of wage bargaining regimes, and ii) at the same time, catalysed wage bargaining reforms towards either more decentralisation or more centralisation and co-ordination,[10] ultimately delivering wage moderation.[11]
  - Increases in the statutory minimum wage relative to the median tend to reduce the labour share, but the quantitative effect is estimated to be very small (OECD, 2012). This could reflect that firms are induced to invest in labour-saving innovation prompted by the need to contain the rise in labour costs. This finding would suggest that large increases in minimum wage could reduce the labour share, even though such increases might reduce wage inequality in the lower-half of the wage distribution and in-work poverty. Indeed, empirical evidence based on European countries suggests that higher minimum wages increase low-skilled labour shares and reduce medium-skilled labour shares, resulting in a small negative effect at the aggregate level (European Commission, 2007).
  - Stepping-up job search support and active labour market policies (ALMPs) while reducing the generosity of unemployment benefits has been found to increase the labour share of low-skilled workers across European countries (European Commission, 2007). Well-designed and targeted activation and training policies primarily induce an increase in employment of low-skilled workers, who are

overrepresented among the pool of unemployed. The evidence suggests that this compensates any potential moderating effect on wages. The overall effect of higher spending on ALMP on the aggregate labour share has been found insignificant, reflecting a negative effect on the labour share of medium-skilled workers by contrast to the effect on low-skilled workers; while that of higher UB replacement rates has been found negative, reflecting a concomitant negative effect on the labour share of low and medium-skilled workers.

- Relaxing job protection has not been found to trigger any significant change in the aggregate labour share, even though it has been found to boost aggregate productivity growth. This neutrality may reflect the interplay of differential effects of job protection between industries and workers. Empirical evidence based on European countries suggests that stricter job protection increases high-skilled labour shares and reduces medium-skilled labour shares, resulting in a small negative effect at the aggregate level (European Commission, 2007). Non-standard employment has become the predominant source of job creation in many OECD countries since the mid-nineties (OECD, 2015, Chapter 4). More recent forms of non-standard employment such as on-call work, subcontracted work and zero-hours contracts in e.g. the United Kingdom and the United States certainly favour hiring flexibility for firms and in principle also for workers who need it. However, in practice, for workers, they have been associated with more wage variability and reduced firms' obligations to ensure standard benefits and protection; as well as with low career and training opportunities. Policy changes of this type may reduce workers' bargaining power and as a result, their wages, especially for those with low skills.

- The high growth of the financial sector has also been highlighted as a potential cause of declining labour shares, even though direct empirical evidence is scarce.[12] The deregulation of financial markets may have lowered workers' bargaining power by pressuring firms to reduce costs; hence to focus on core activities while sub-contracting labour-intensive activities in order to reduce debt while at the same time generate high short-term profits.

Notes

1. See OECD, (2012) for a recent in-depth assessment and policy analysis., see also *inter alia* Arpaia et al. (2009); Azmat et al. (2012), Bentolila and Saint-Paul (2003), Checchi and Garcia-Penalosa, (2008, 2010), De Serres at al. (2002), Elsby et al. (2013), European Commission, (2007), Frydman and Saks, (2010), Harrison, (2002), Jaumotte and Tytell, (2007); more recent papers have analysed the concomitant rise in the capital share: see Karabarbounis and Neiman (2014), Piketty (2013), Piketty and Zucman (2014), Rognlie (2015).
2. Karabarbounis and Neiman (2014), Koh et al. (2015), OECD (2012), Arpaia et al. (2009), European Commission (2007), Jaumotte and Tytell (2007).
3. This reflects differences in substitutability between capital and low skilled as opposed to high skilled labour, because different degree of substitutability between capital and labour have different implications on the effect on the labour share of a change in the relative price of labour. When the elasticity of substitution between capital and labour is smaller than 1, the labour share will increase if the capital-labour ratio increases. In this context, the price effect will dominate the quantity effect. This implies that a reduction in workers' bargaining power leading to a decline in the real wage will reduce the labour share if the elasticity of substitution between labour and capital is smaller than 1. Given that it is generally assumed that high skilled labour is complementary to capital while low skilled labour is substitutable to capital, capital deepening can increase the labour share of high skilled workers and reduce the labour share of low skilled workers.

4. See OECD (2012) for a discussion.
5. The finding of a small reallocation effect is in line with that of the documented negligible role of reallocation in explaining changes in the aggregate labour share. See Bassanini and Manfredi (2012).
6. European Commission (2007) finds a negative effect of openness on the labour share of medium-skilled workers, and this drives a negative effect at the aggregate level.
7. This is the well-known prediction of a standard theoretical model with homogenous firms and workers (Blanchard and Giavazzi, 2003).
8. Again, this is due to differences in the elasticity of substitution between capital and different types of labour (e.g. low and high skilled). Reform effects are also likely to depend on the elasticity of substitution in industries most affected by the reforms.
9. European Commission (2007) finds a negative effect of union density on the labour share of low-skilled workers and a positive effect on the labour share of high-skilled workers. The authors interpret this along the lines of complementarity between high-skilled work and capital and substitutability between low-skilled work and capital. Union density is however a very crude and partial measure which in isolation falls short of capturing the nature of wage bargaining.
10. Such pro-decentralisation reforms have largely aimed at increasing the flexibility to negotiate at firm level. See OECD (2012) for an in-depth qualitative discussion of wage bargaining reforms.
11. See Box 3.5 in OECD (2012) for a summary of empirical studies on globalisation and increased competition on workers' bargaining power.
12. OECD (2012), ILO (2012).

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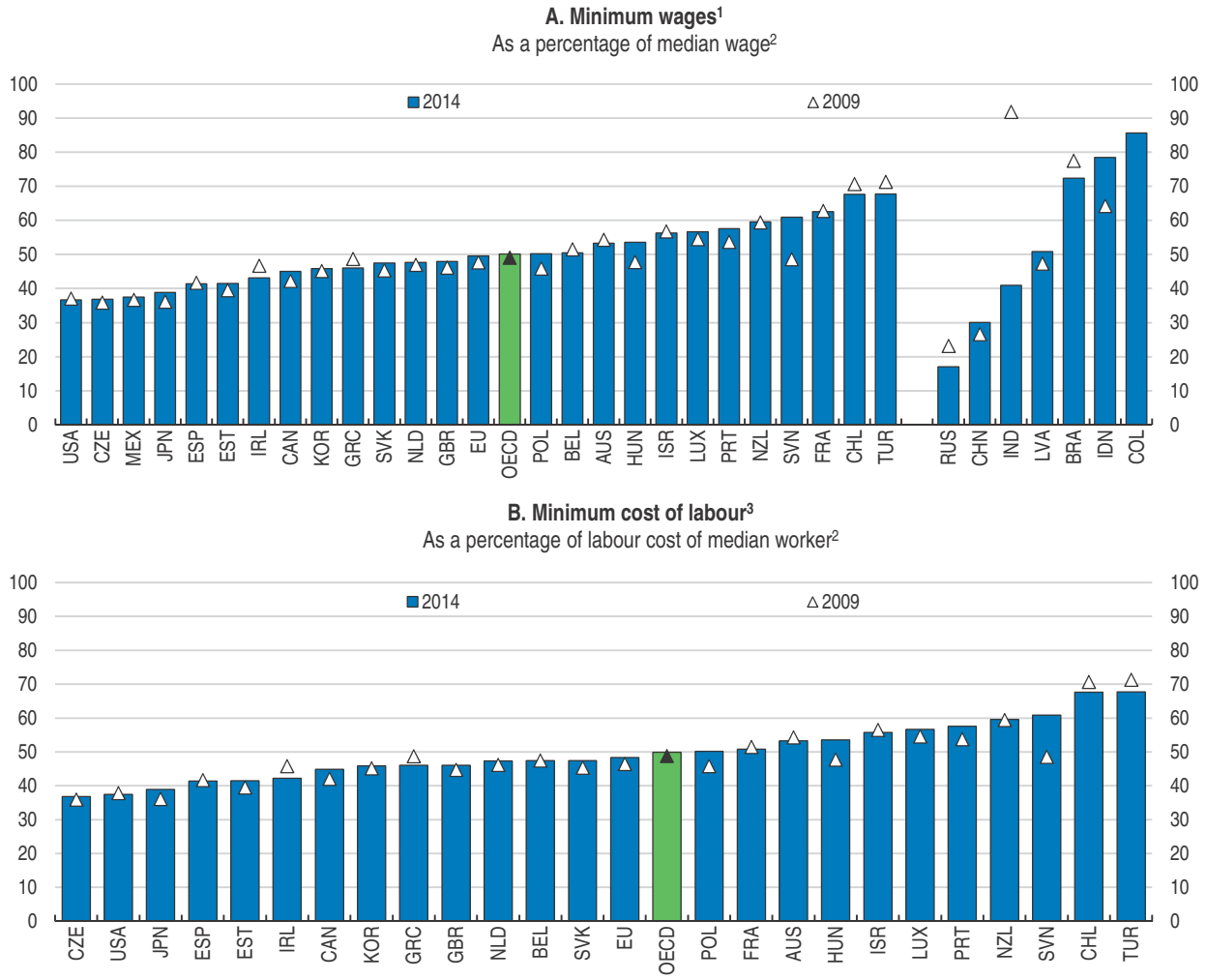
Chapter 4

Structural policy indicators

This chapter contains a comprehensive set of quantitative indicators that allow for a comparison of policy settings across countries. The indicators cover areas of taxation and income support systems and how they affect work incentives, as well as product and labour market regulations, education and training, trade and investment rules and innovation policies. The indicators are presented in the form of figures showing for all countries the most recent available observation and the change relative to the previous observation.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Figure 4.1. **Cost of labour**



1. Missing countries do not have a national statutory minimum wage except for Mexico. Data refer to 2004-05 and 2009-10 for India; 2013 for Colombia.
2. Exactly half of all workers have wages either below or above the median wage for the OECD countries. Percentage of minimum to average wage for China, Indonesia, the Russian Federation and India.
3. The cost of labour is the sum of the wage level and the corresponding social security contribution paid by employers.

Source: Panel A: OECD, *OECD Employment Outlook Database*; China Ministry of Human Resources and Social Security, National Bureau of Statistics; *Instituto Brasileiro de Geografia e Estatística (Pesquisa Nacional por Amostra de Domicílios); International Labour Organisation* (ILO) *Database on Conditions of Work and Employment Laws;* Ministry of Man Power and Transmigration of the Republic of Indonesia and Statistics Indonesia (BPS); Russia Federal State Statistics Service and Rani, U., P. Belser, M. Oelz and S. Ranjbar (2013), "Minimum wage coverage and compliance in developing countries" *International Labour Review,* Vol 152, No.3-4; Panel B: OECD, *OECD Employment Outlook* and *Taxing Wages Databases*.

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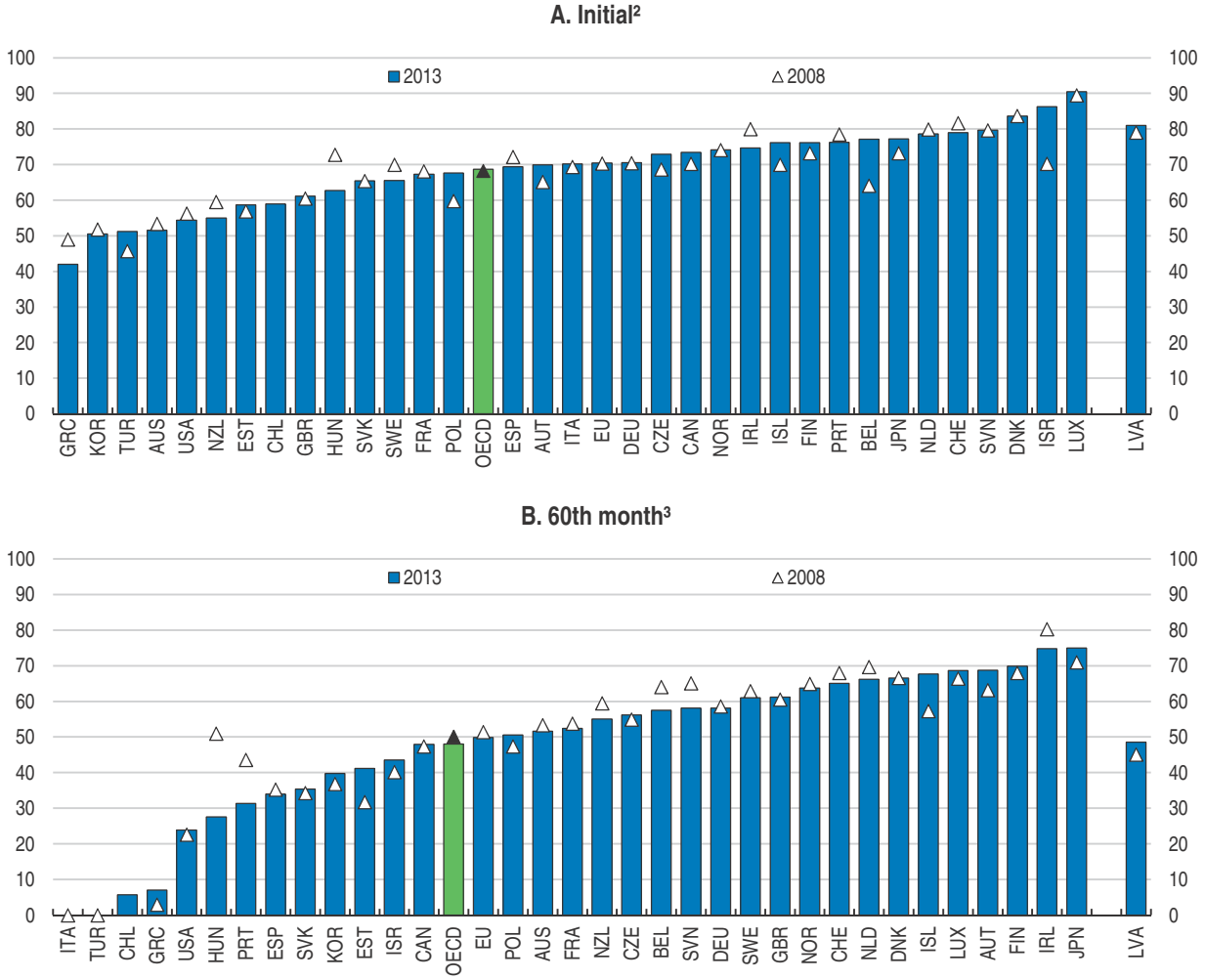
Figure 4.2. **Net income replacement rates for unemployment**

Net income when unemployed as a percentage of net income when working[1]



1. Simple average of the net replacement rates for the following households situations: single with no child and with two children at 67% and 100% AW, one-earner married couple with no child and with two children at 67% AW and 100% AW. After tax and including unemployment and family benefits. Social assistance and other means-tested benefits are assumed to be available subject to relevant income conditions. Housing costs are assumed equal to 20% of AW. The OECD average excludes Chile for 2008 and Mexico for 2008 and 2013. For Turkey, the average worker earnings (AW) value is not available. Calculations are based on average production worker earnings (APW).
2. Initial phase of unemployment but following any waiting period. Any income taxes payable on unemployment benefits are determined in relation to annualised benefit values (i.e. monthly values multiplied by 12) even if the maximum benefit duration is shorter than 12 months.
3. After tax and including unemployment benefits, social assistance, family and housing benefits in the 60th month of benefit receipt. Values for Italy and Turkey are equal to zero in 2008 and 2013.

Source: OECD, *Tax-Benefit Models*.

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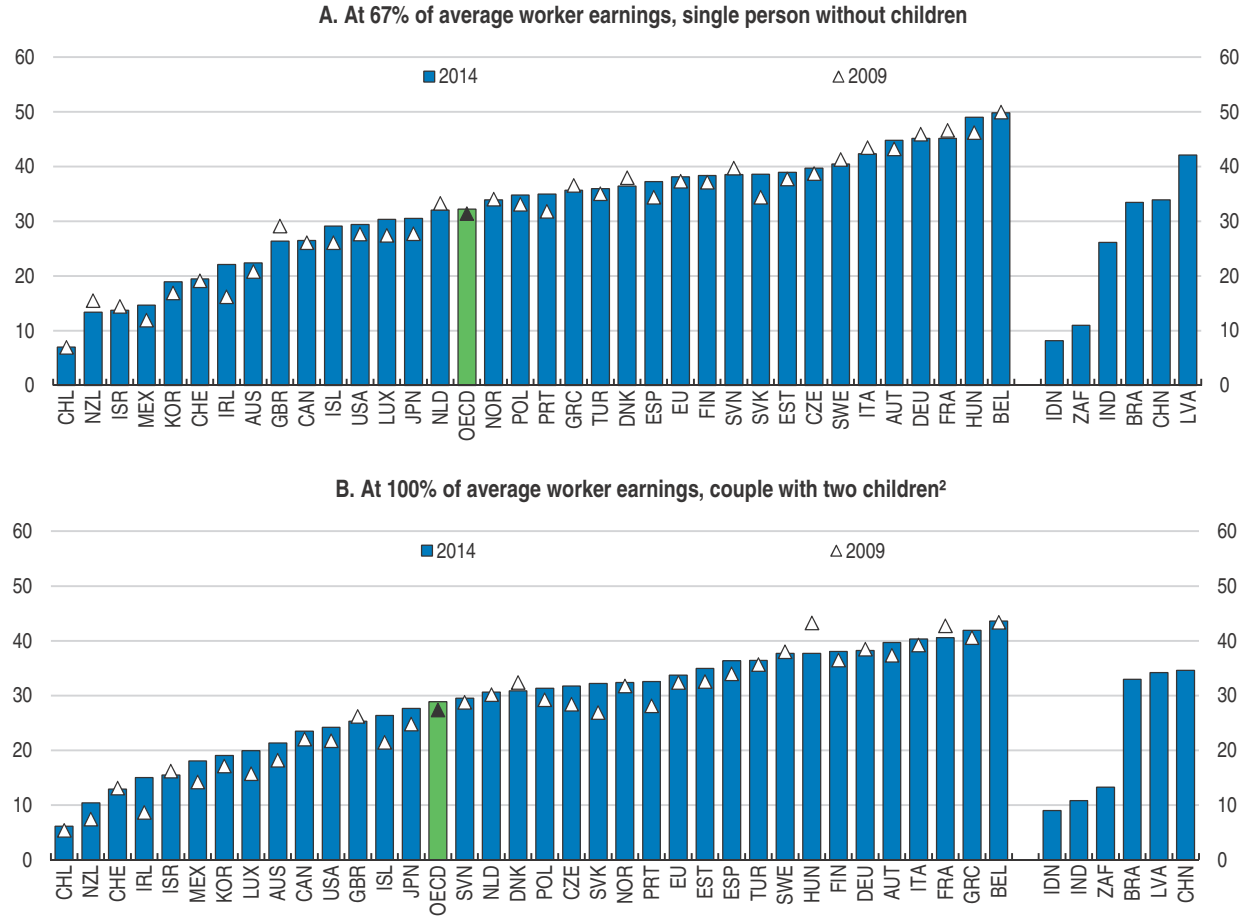
Figure 4.3. **Average tax wedge on labour**[1]

As a percentage of total labour compensation



1. Measured as the difference between total labour compensation paid by the employer and the net take-home pay of employees, as a ratio of total labour compensation. It therefore includes both employer and employee social security contributions. For India, the data cover manufacturing companies with 20 or more employees (which represent 5% of all companies in the sector); liability to health insurance and Employee Provident Fund contributions in India are restricted to employees in firms that have 20 or more employees. In China, a significant portion of workers are not covered by the social security system; hence their tax wedge is significantly lower than the figure reported here, which reflects the situation of workers covered.
2. Couple with two children, at 100% of average worker earnings for the first earner. Average of three situations regarding the wage of the second earner (0%, 33% and 67% of average worker earnings).

Source: OECD, *Taxing Wages Database;* For BIICS countries, data represent the latest figures based on the methodology described in : Gandullia, L., N. Iacobone and A. Thomas (2012), "Modelling the tax burden on labour income in Brazil, China, India, Indonesia and South Africa" *OECD Taxation Working Papers,* No. 14; for Latvia, data are based on the methodology described in *Taxing Wages*.

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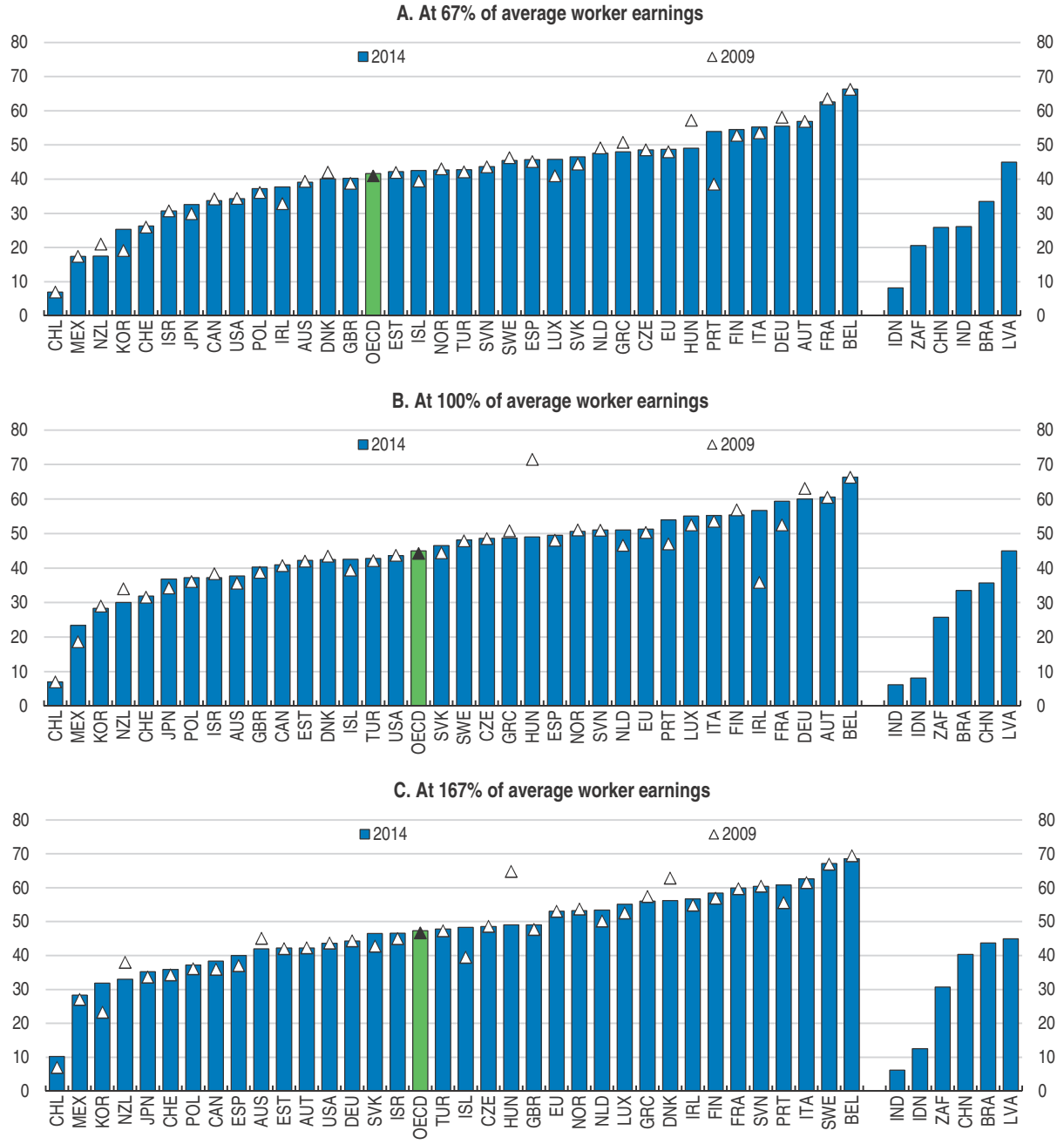
Figure 4.4. **Marginal tax wedge on labour**[1]

As a percentage of total labour compensation for single persons without children



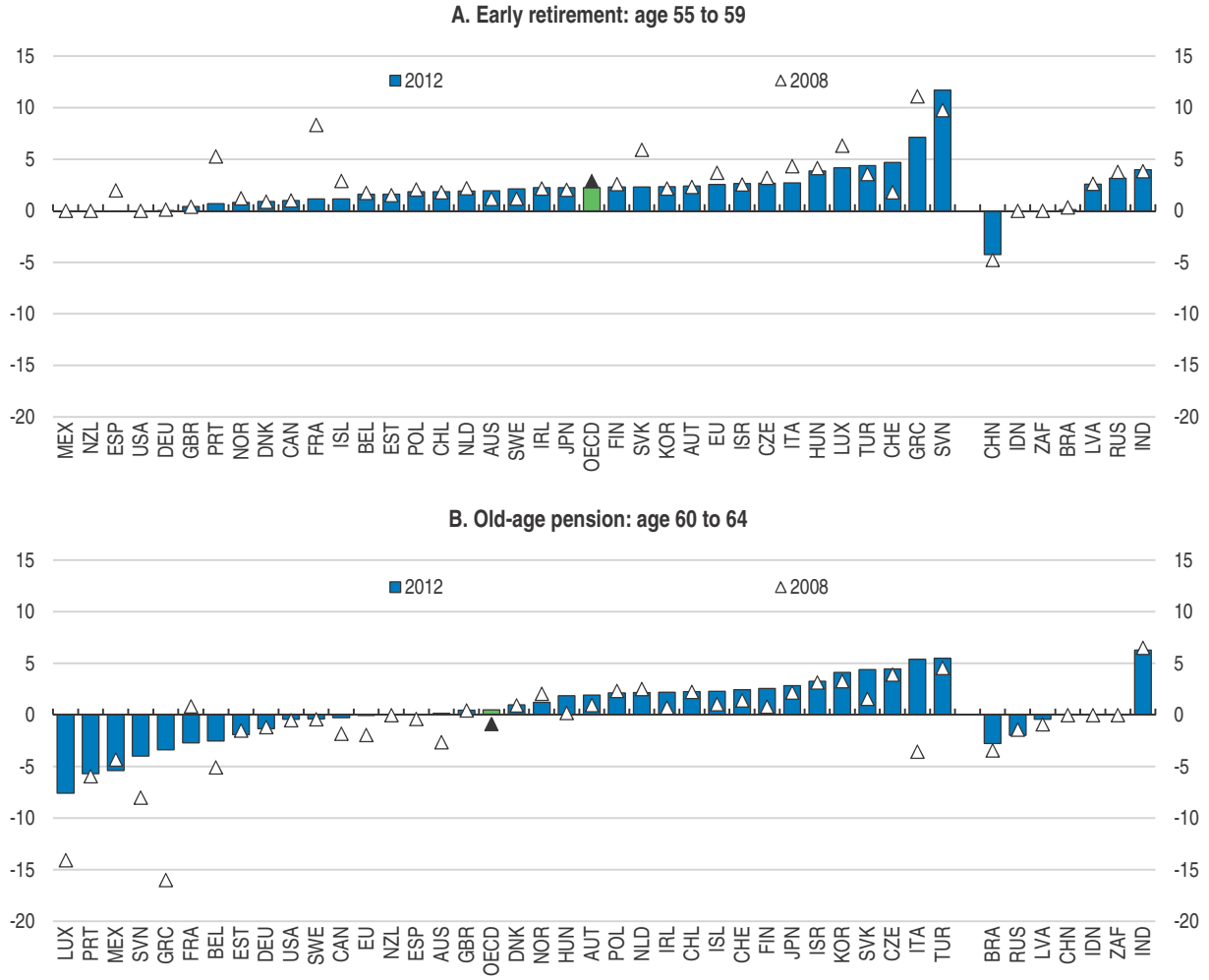
1. Measured as the difference between the change in total labour compensation paid by employers and the change in the net take-home pay of employees, as a result of an extra unit of national currency of labour income. The difference is expressed as a percentage of the change in total labour compensation. For India, the data cover manufacturing companies with 20 or more employees (which represent 5% of all companies in the sector); liability to health insurance and Employee Provident Fund contributions in India are restricted to employees in firms that have 20 or more employees. In China, a significant portion of workers are not covered by the social security system; hence their tax wedge is significantly lower than the figure reported here, which reflects the situation of workers covered.

Source: OECD, *Taxing Wages Database*; For BIICS countries, data represent the latest figures based on the methodology described in : Gandullia, L., N. Iacobone and A. Thomas (2012), "Modelling the tax burden on labour income in Brazil, China, India, Indonesia and South Africa" *OECD Taxation Working Papers*, No. 14; for Latvia, data are based on the methodology described in *Taxing Wages*.

StatLink http://dx.doi.org/10.1787/888933324113

Figure 4.5. **Changes in net pension wealth**[1]

As a percentage of gross annual individual earnings



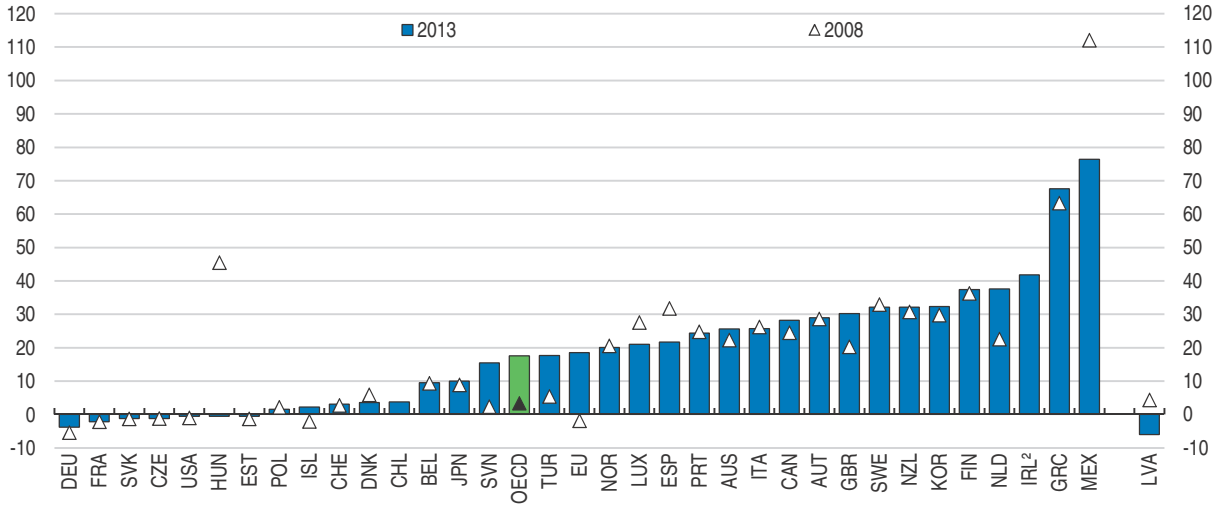
1. The change in pension wealth is a measure of the incentive to remain in the workforce for an additional period. It measures the increase in the level of pension entitlement one gains by remaining in employment for an additional year. The calculation is the annual average increase in males' pension wealth when working from age 55 to 59 (early retirement) and from age 60 to 64 (old-age pension). Net pension wealth is the present value of the flow of pension benefits, taking account of the taxes and social security contributions that retirees have to pay on their pensions. It is measured and expressed as a multiple of gross annual individual earnings in the respective country. See OECD (2013), Pensions at a Glance 2013: OECD and G20 Indicators for additional details.

Source: OECD, *Pension Models*.

StatLink http://dx.doi.org/10.1787/888933324127

Figure 4.6. **Difference in net transfers to government: single and equal dual-earner couples**[1]

Percentage points



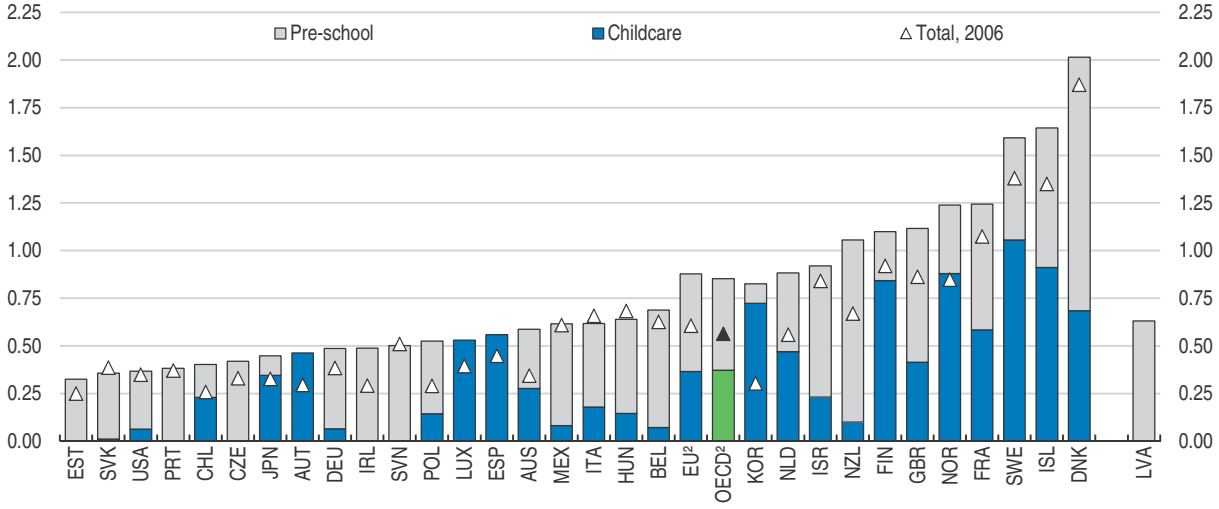
1. The figure highlights the differential tax / benefit "regime" between single and dual-earner couple families, for a given overall level of earnings – e.g. looking at couple families with incomes of 133% of average earnings. It shows the difference in net transfers to government between two household cases: (1) "Single-earner couples" – with one earner with 133% of average earnings and (2) "Equal dual-earner couples"- both spouses earn the same either average earnings or 67% of average earnings. The difference is in percentage points and computed as [(1)-(2)]/(1).
2. The value for 2008 is not reported as it is highly distorted due to the fact that the net transfers to government from single-earner couples is close to zero.

Source: OECD, *Tax-Benefit Models*.

StatLink http://dx.doi.org/10.1787/888933324131

Figure 4.7. **Public expenditure on childcare services**[1]

As a percentage of GDP, 2011



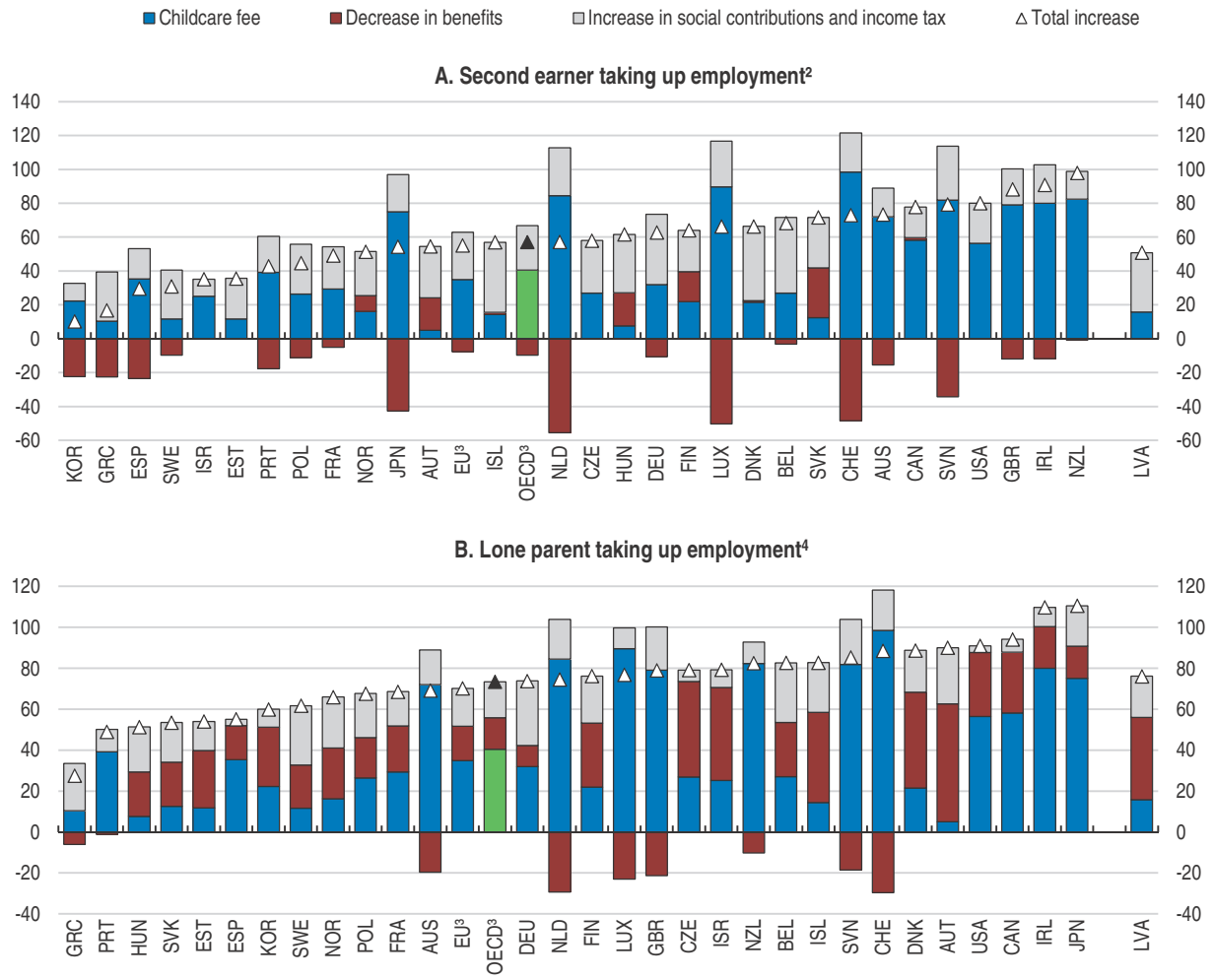
1. Childcare expenditure covers children under three enrolled in childcare and children between the ages of three and five enrolled in pre-school. Childcare refers to formal day-care services, such as day-care centres and family day-care. Pre-school includes kindergartens and day-care centres which usually provide an educational content as well as traditional care for children (ISCED 0 under UNESCO's classification system). Local government spending may not be properly captured in the data for federal countries.
2. EU and OECD averages exclude Canada, Greece, Switzerland and Turkey.

Source: OECD, *Family and Social Expenditure Databases*.

StatLink http://dx.doi.org/10.1787/888933324149

Figure 4.8. **Implicit tax on returning to work**[1]

As a percentage of gross earnings in new job, 2012



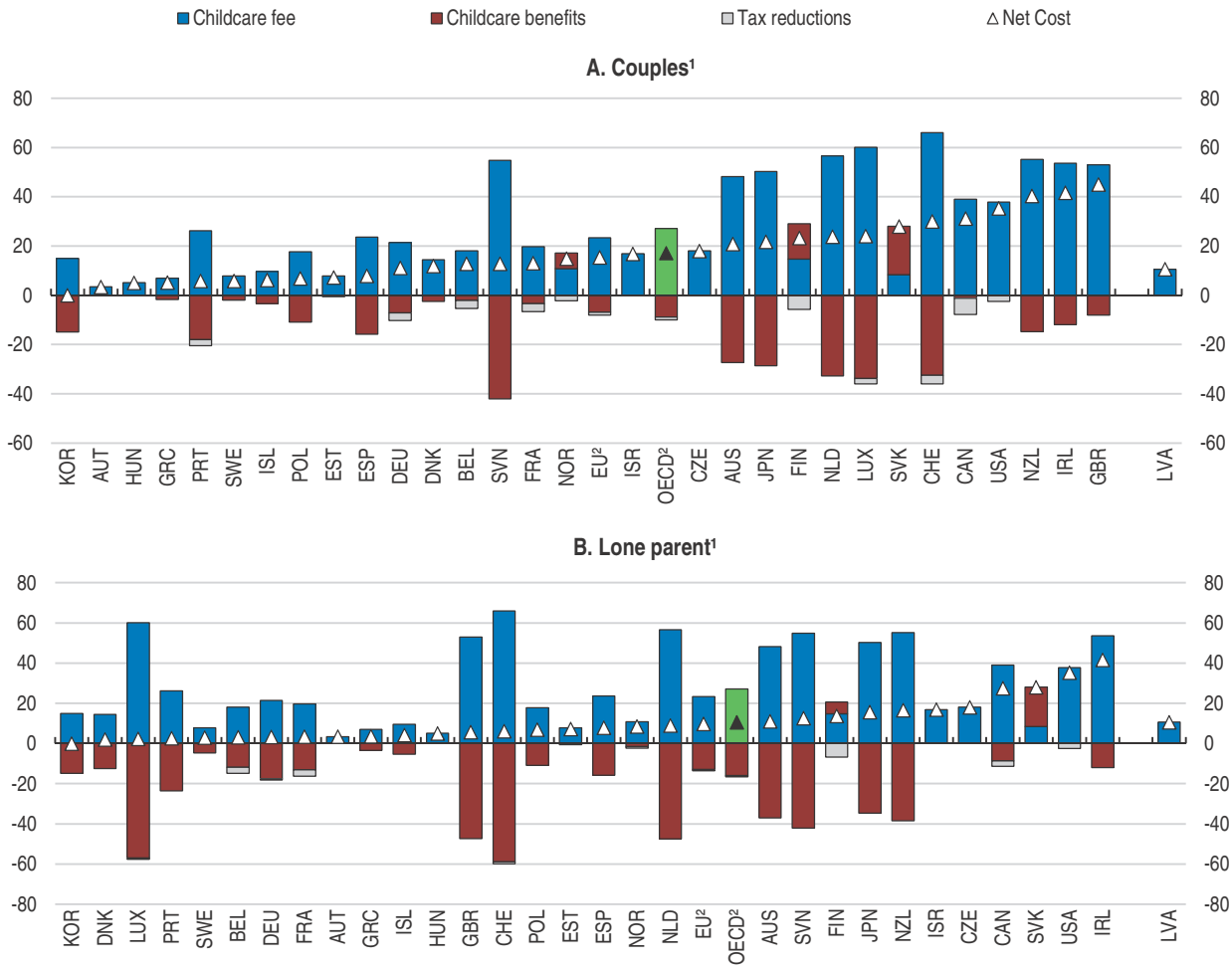
1. Net transfers and childcare fees for households with two children aged 2 and 3. Taking into account childcare fees and changes of taxes and benefits in case of a transition to a job paying two-thirds of average worker earnings.
2. Second earner taking up employment at 67% of average wage and the first earner earns 100% of average wage.
3. The OECD average excludes Chile, Italy, Mexico and Turkey.
4. Lone parent taking up employment at 67% of average wage.

Source: OECD, *Tax-Benefit Models*; *www.oecd.org/els/social/workincentives*.

StatLink http://dx.doi.org/10.1787/888933324153

Figure 4.9. **Net costs of childcare**

Childcare-related costs and benefits as a percentage of average wage, 2012



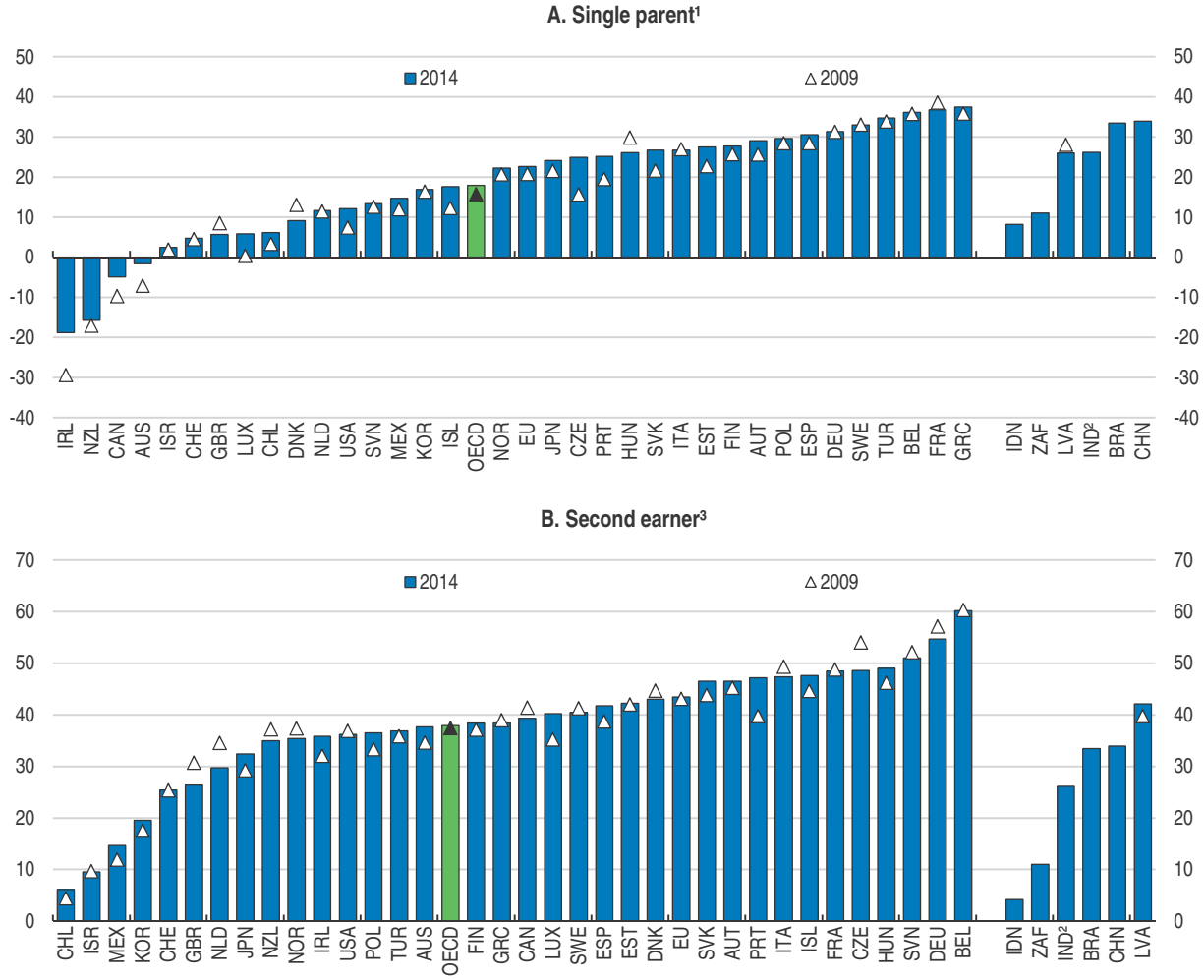
1. Couples where the first earner earns 100% of the average wage and the second earns 67% of the average wage. Lone parent earning 67% of the average wage. For Canada, the European Union, Finland, Norway, OECD, Slovak Republic, Slovenia and the United Kingdom, childcare benefits refer to childcare and other benefits.
2. EU and OECD averages exclude Chile, Italy, Mexico and Turkey.

Source: OECD, *Tax-Benefit Models*; *www.oecd.org/els/social/workincentives*.

StatLink http://dx.doi.org/10.1787/888933324163

Figure 4.10. **Average tax wedge: single parent versus second earner**

Percentage

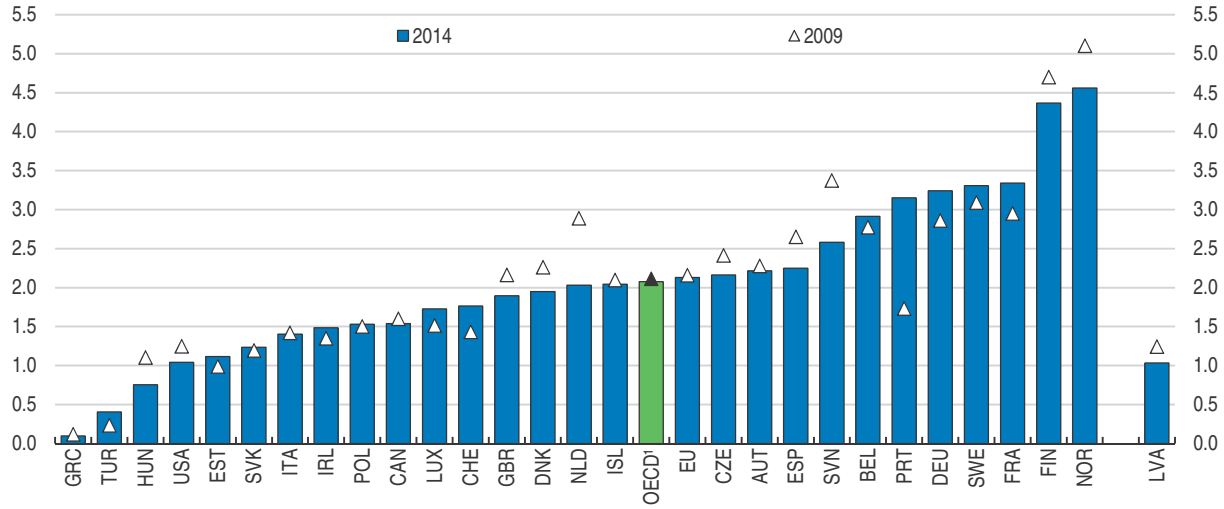


1. Single parent with two children earning 67% of the average wage.
2. Results apply only for the minority case where the employee works in a firm with more than 20 employees.
3. Average tax wedge faced by the second earner when earning 67 % of the average wage in a family with two children, where the first earner receives a full average wage.

Source: Taxing Wages 2015 (calculations based on data retrieved from OECD.Stat: http://dotstat.oecd.org/Index.aspx?DataSetCode=AWCOU) and Taxing Wages Models for non-OECD member countries.

StatLink http://dx.doi.org/10.1787/888933324177

Figure 4.11. **Number of weeks lost due to sick leave**



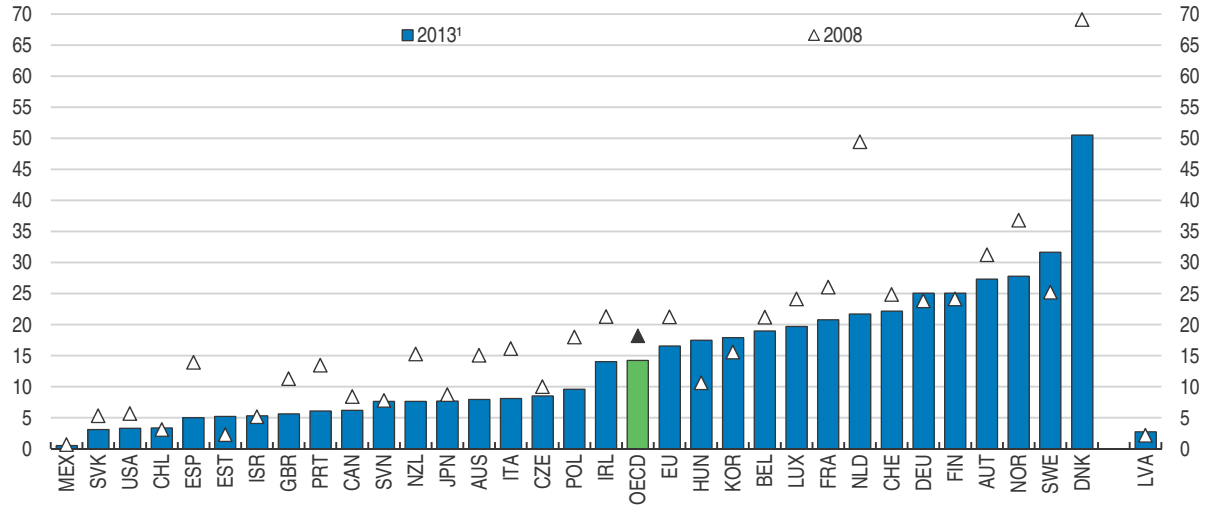
1. The OECD average excludes Australia, Chile, Israel, Japan, Korea, Mexico and New Zealand.

Source: OECD estimates based on the European Labour Force Survey (unpublished data), the Canadian Labour Force Survey and published U.S Current Population Survey estimates on lost working time rate due to injury or illness of full-time wage and salary workers.

StatLink http://dx.doi.org/10.1787/888933324184

Figure 4.12. **Public expenditure on active labour market policies per unemployed**[1]

As a percentage of GDP per capita



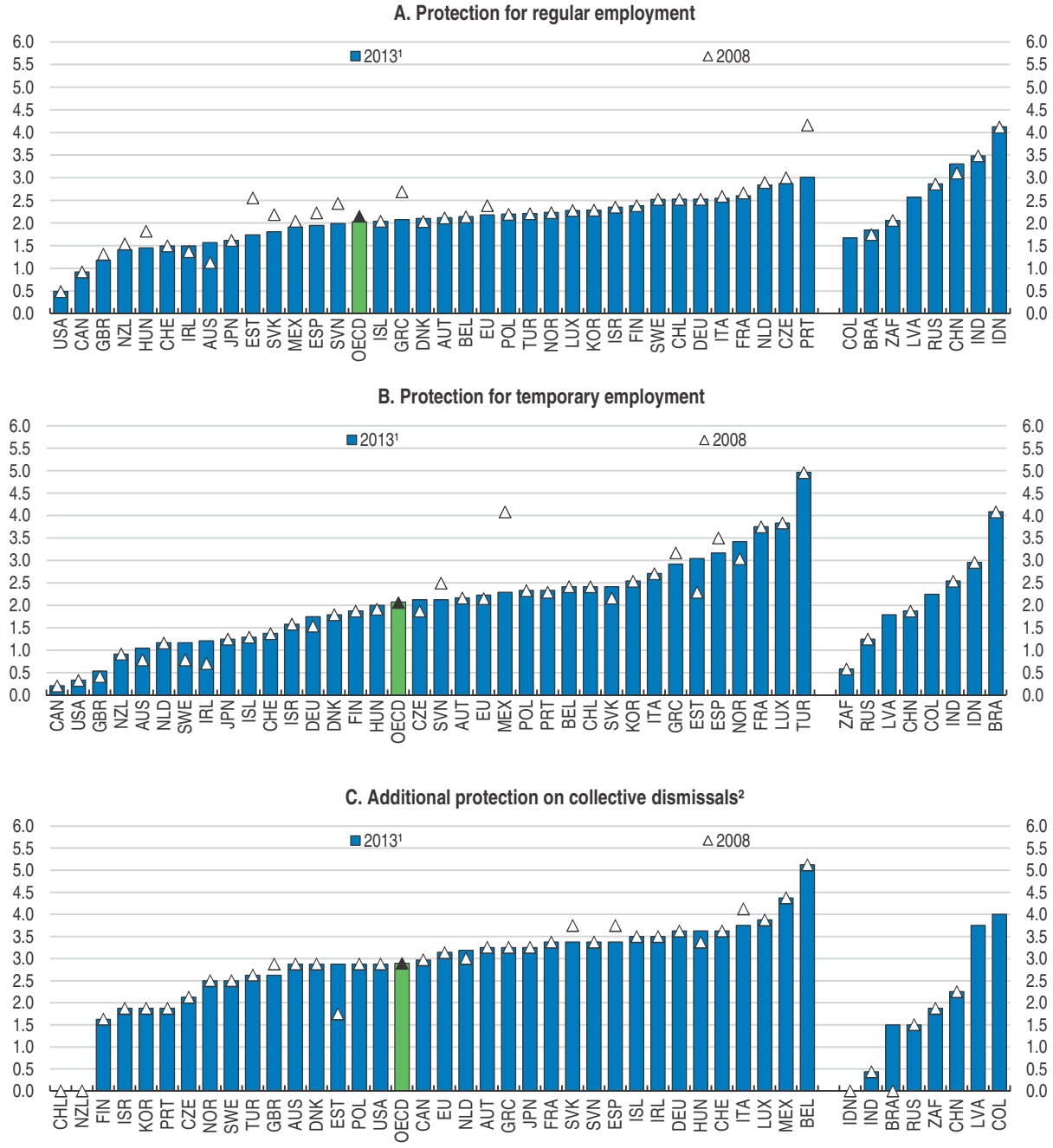
1. Data refer to 2012 for France, Korea, New Zealand, Poland and Spain; 2011 for Israel and the United Kingdom. OECD and EU averages exclude Greece, Iceland and Turkey.

Source: OECD, *Public expenditure and participant stocks on Labour Market Programmes and Economic Outlook Databases.*

StatLink http://dx.doi.org/10.1787/888933324193

Figure 4.13. **Employment protection legislation**

Index scale of 0-6 from least to most restrictive



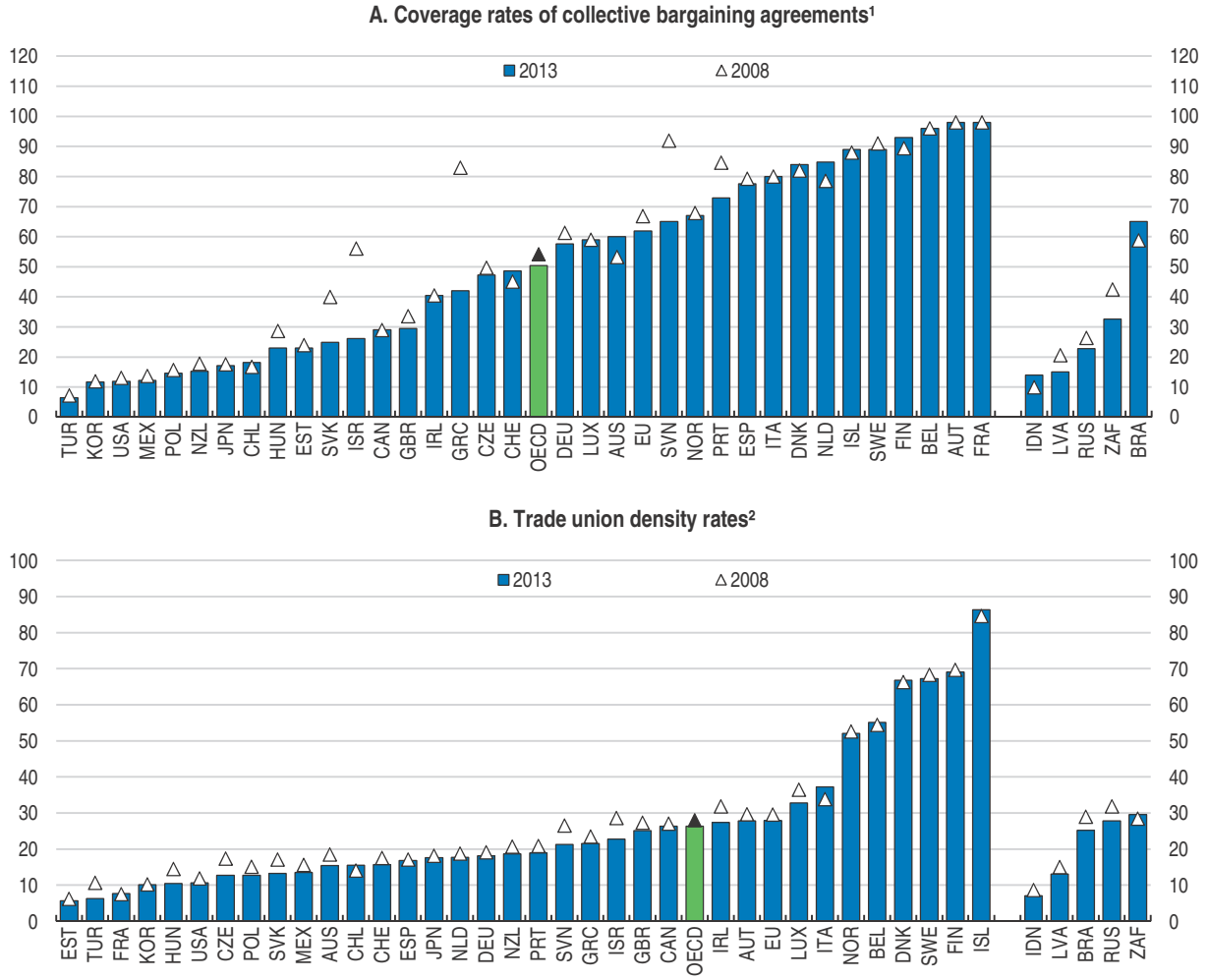
1. Data refer to 2014 for Colombia, Slovenia and the United Kingdom; 2012 for BRIICS countries and Latvia.
2. Values for 2013 are equal to zero for Chile, Indonesia and New Zealand.

Source: OECD, *Employment Protection Database*.

StatLink http://dx.doi.org/10.1787/888933324200

Figure 4.14. **Coverage rates of collective bargaining agreements and trade union density rates**

Percentage



1. The coverage rate is measured as the percentage of workers who are covered by collective bargaining agreements, regardless of whether or not they belong to a trade union. For 2013, data refer to 2012 for Australia, Estonia, France, Israel, Korea, Luxembourg, Mexico, Poland, Indonesia and South Africa; 2011 for New Zealand; 2010 for Italy; 2009 for Ireland. For 2008, data refer to 2009 for Chile, Denmark, Estonia, Hungary, Ireland, Mexico, Norway, Switzerland, Brazil, the Russian Federation and Latvia; 2007 for New Zealand, Poland and Sweden; 2005 for Italy; 2000 for Israel.
2. The union density rate is the percentage of workers belonging to a trade union. The rates refer to wage and salary workers. The last available year is 2014 for Australia, Canada, Chile, Iceland, Ireland, Japan, Mexico, New Zealand, Sweden, Switzerland, the United Kingdom and the United States; 2012 for Indonesia, Israel, Korea, Latvia, Luxembourg, Poland, Portugal and South Africa; 2011 for Brazil.

Source: OECD estimates and J. Visser, *ICTWSS Database, Version 5.0. Amsterdam: Amsterdam Institute for Advanced Labour Studies AIAS,* October 2015.

StatLink http://dx.doi.org/10.1787/888933324219

Figure 4.15. **Product market regulation and state control of business operation**

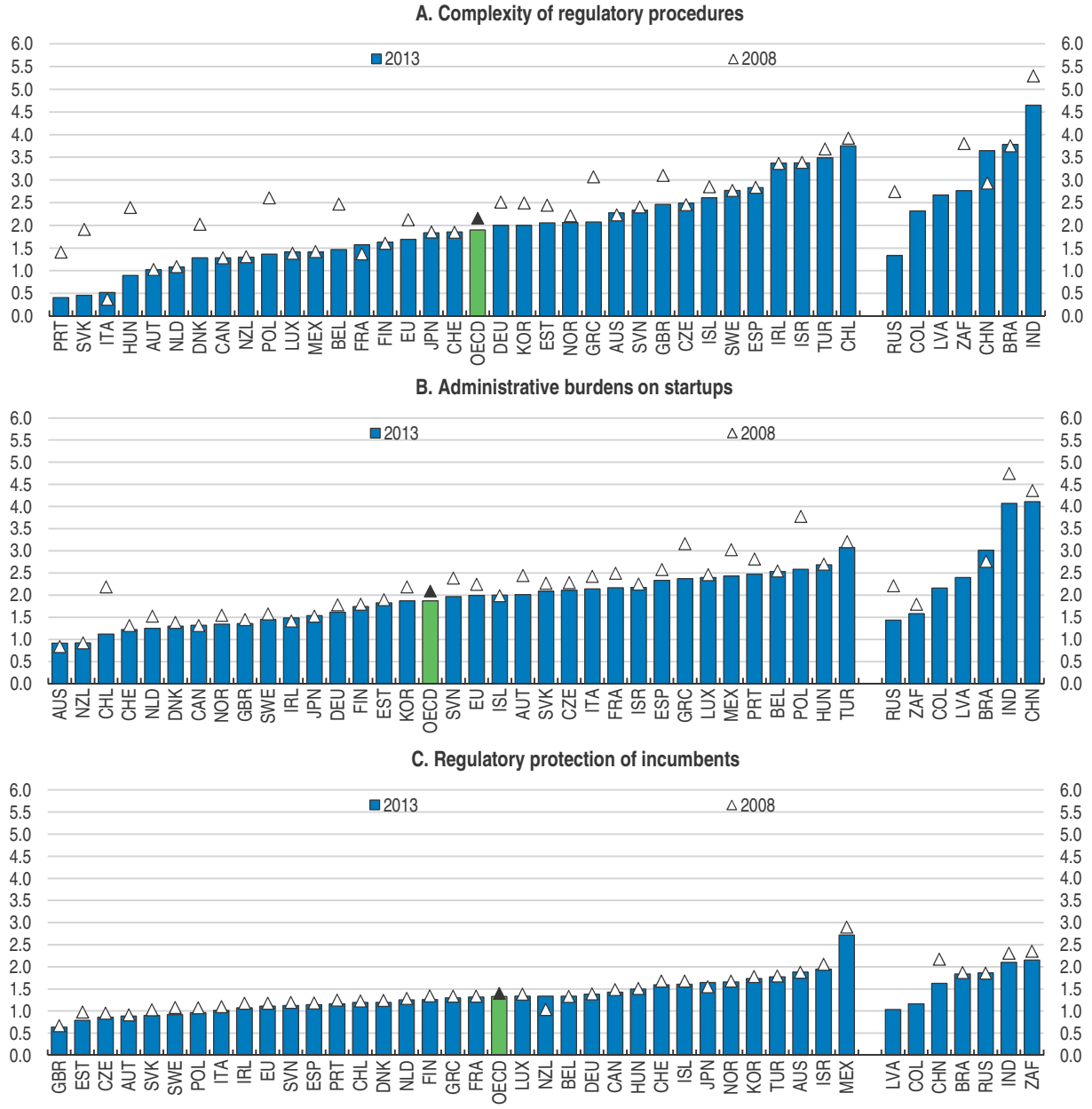
Index scale of 0-6 from least to most restrictive

Source: OECD, *Product Market Regulation Database* and Koske, I., I. Wanner, R. Bitetti and O. Barbiero, (2015), "The 2013 Update of the OECD Product Market Regulation Indicators: Policy Insights for OECD and non-OECD Countries", OECD *Economics Department Working Papers*, 1200/2015; OECD-WBG *Product Market Regulation Database* for Colombia.

StatLink http://dx.doi.org/10.1787/888933324229

Figure 4.16. **Barriers to entrepreneurship**

Index scale of 0-6 from least to most restrictive

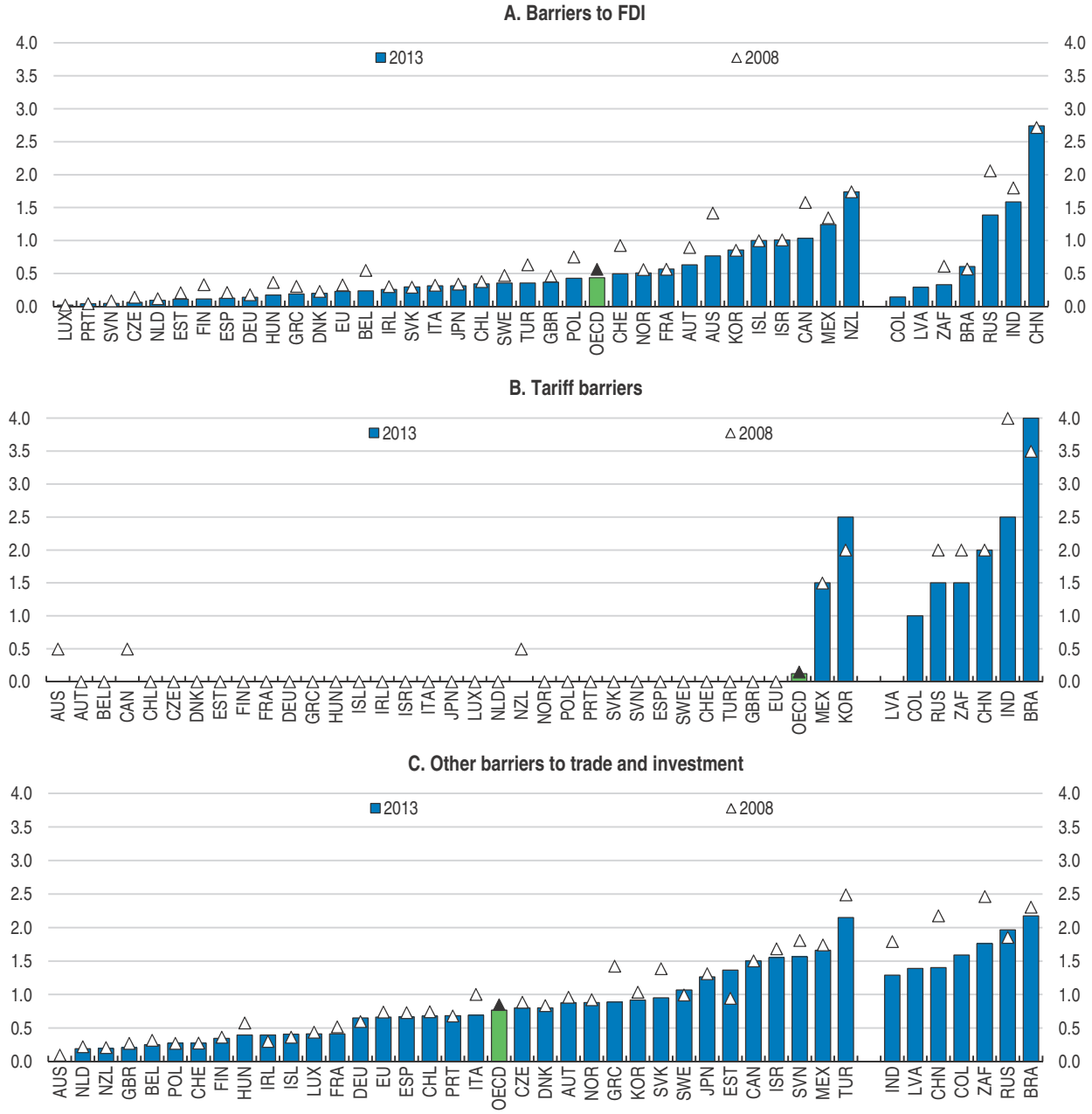


Source: OECD, *Product Market Regulation Database* and Koske, I., I. Wanner, R. Bitetti and O. Barbiero, (2015), "The 2013 Update of the OECD Product Market Regulation Indicators: Policy Insights for OECD and non-OECD Countries", OECD *Economics Department Working Papers*, 1200/2015; OECD-WBG *Product Market Regulation Database* for Colombia.

StatLink http://dx.doi.org/10.1787/888933324232

Figure 4.17. **Barriers to trade and investment**

Index scale of 0-6 from least to most restrictive

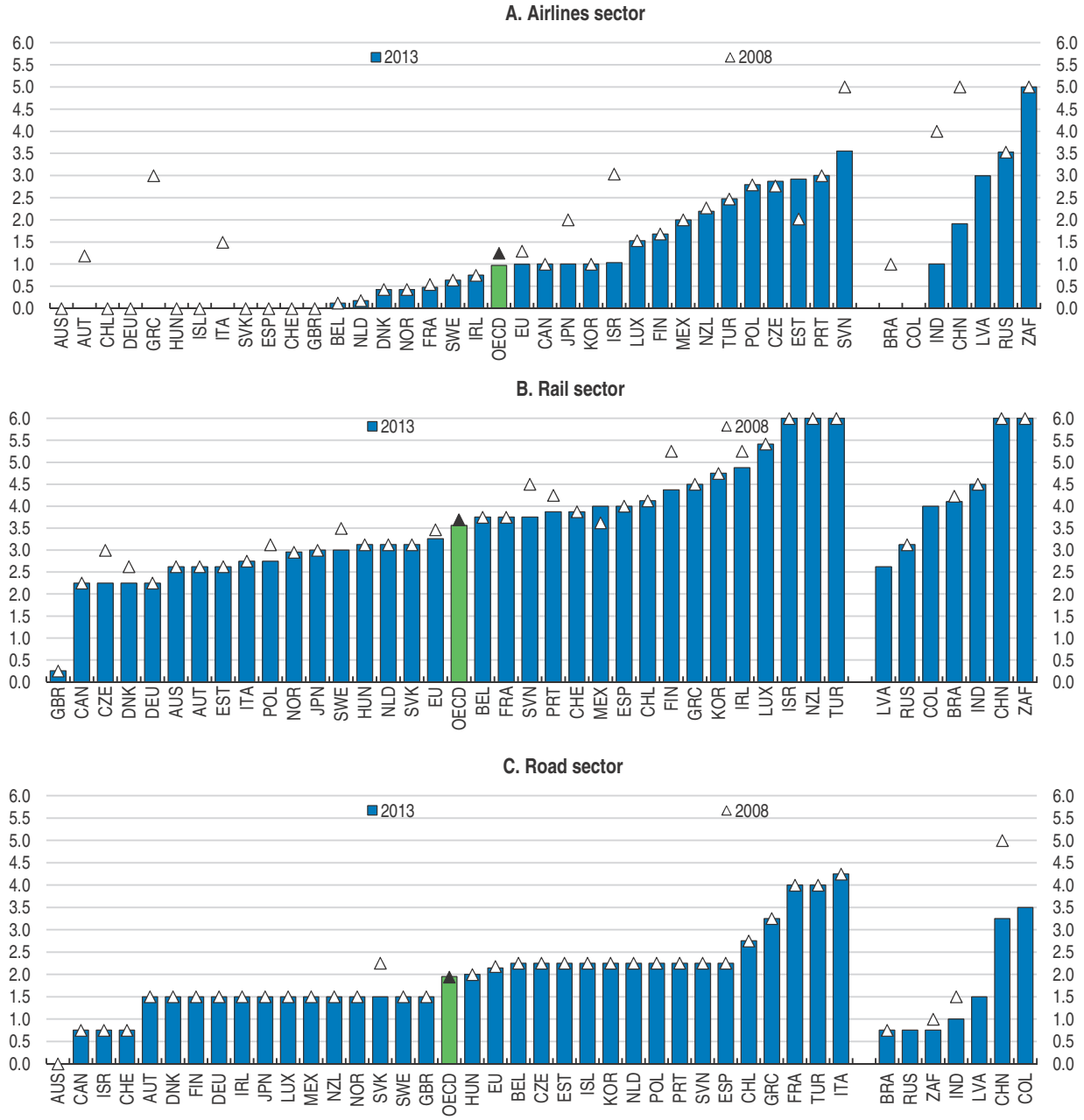


Source: OECD, *Product Market Regulation Database* and Koske, I., I. Wanner, R. Bitetti and O. Barbiero, (2015), "The 2013 Update of the OECD Product Market Regulation Indicators: Policy Insights for OECD and non-OECD Countries", OECD *Economics Department Working Papers*, 1200/2015; OECD-WBG *Product Market Regulation Database* for Colombia.

StatLink http://dx.doi.org/10.1787/888933324249

Figure 4.18. **Sectoral regulation in the transport sector**

Index scale of 0-6 from least to most restrictive

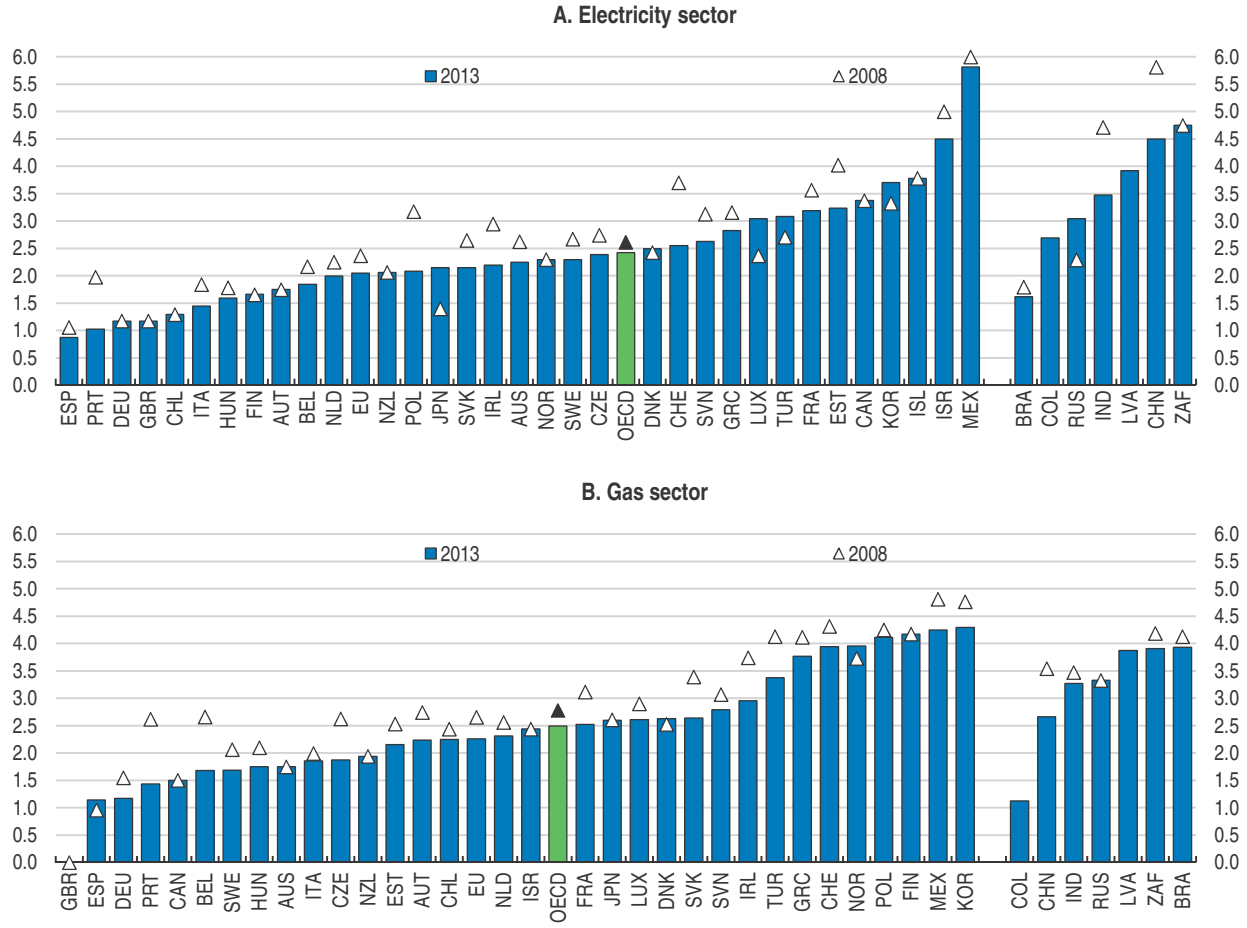


Source: OECD, *Product Market Regulation Database* and Koske, I., I. Wanner, R. Bitetti and O. Barbiero, (2015), "The 2013 Update of the OECD Product Market Regulation Indicators: Policy Insights for OECD and non-OECD Countries", OECD *Economics Department Working Papers*, 1200/2015; OECD-WBG *Product Market Regulation Database* for Colombia.

StatLink http://dx.doi.org/10.1787/888933324253

Figure 4.19. **Sectoral regulation in the energy sector**

Index scale of 0-6 from least to most restrictive

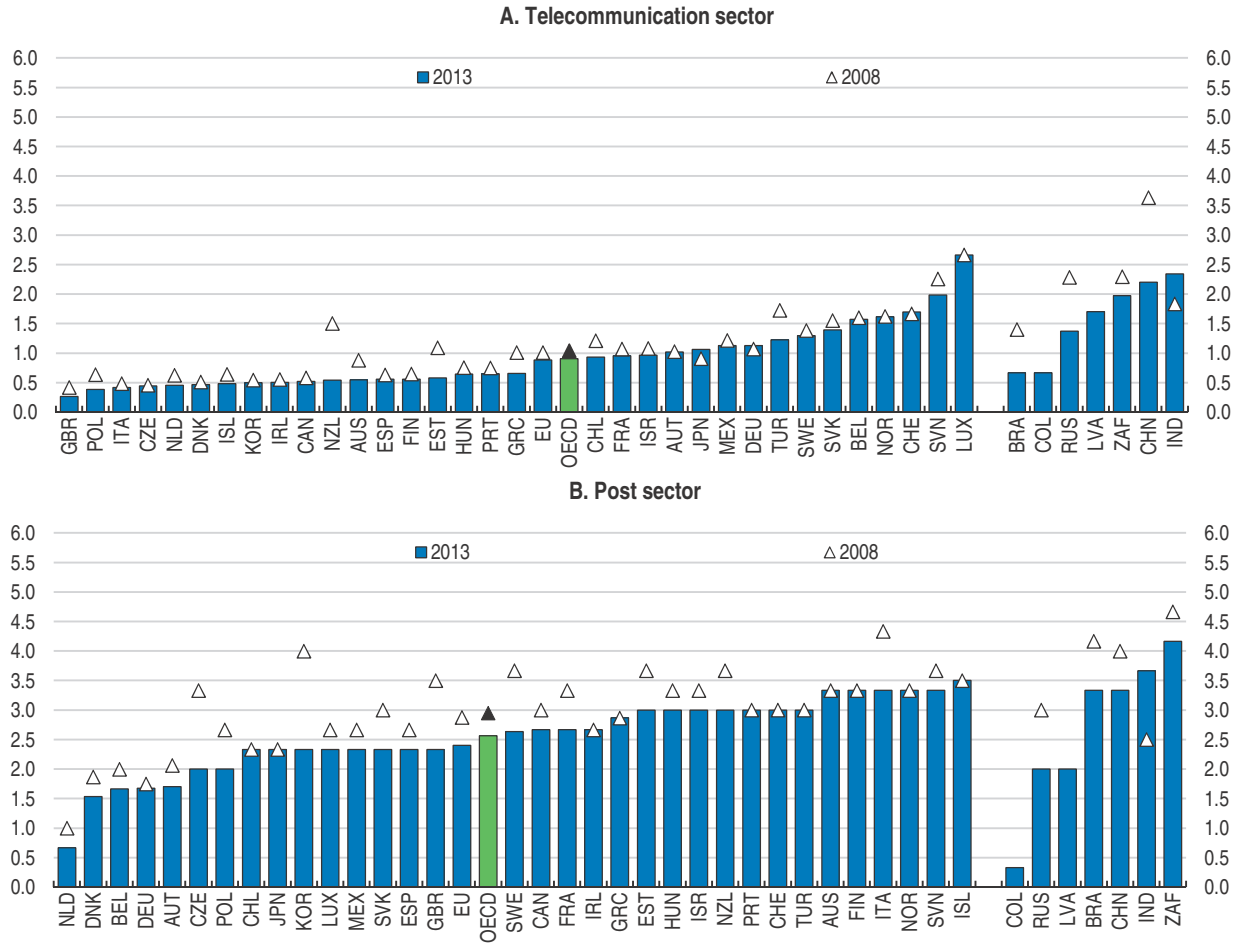


Source: OECD, *Product Market Regulation Database* and Koske, I., I. Wanner, R. Bitetti and O. Barbiero, (2015), "The 2013 Update of the OECD Product Market Regulation Indicators: Policy Insights for OECD and non-OECD Countries", OECD *Economics Department Working Papers*, 1200/2015; OECD-WBG *Product Market Regulation Database* for Colombia.

StatLink http://dx.doi.org/10.1787/888933324263

Figure 4.20. **Sectoral regulation in the post and telecommunication sectors**

Index scale of 0-6 from least to most restrictive

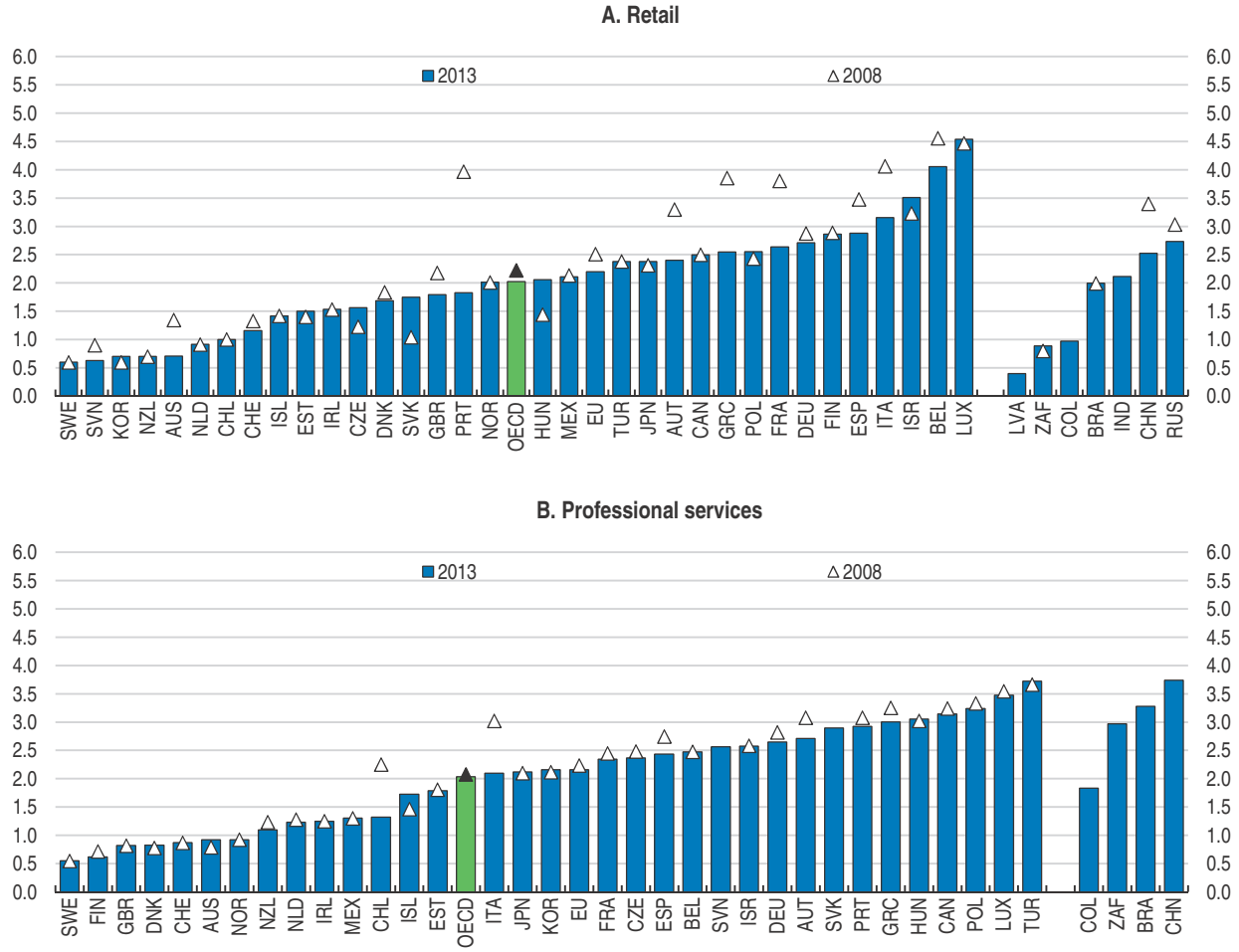


Source: OECD, *Product Market Regulation Database* and Koske, I., I. Wanner, R. Bitetti and O. Barbiero, (2015), "The 2013 Update of the OECD Product Market Regulation Indicators: Policy Insights for OECD and non-OECD Countries", OECD *Economics Department Working Papers*, 1200/2015; OECD-WBG *Product Market Regulation Database* for Colombia.

StatLink http://dx.doi.org/10.1787/888933324272

Figure 4.21. **Sectoral regulation in retail and professional services**

Index scale of 0-6 from least to most restrictive

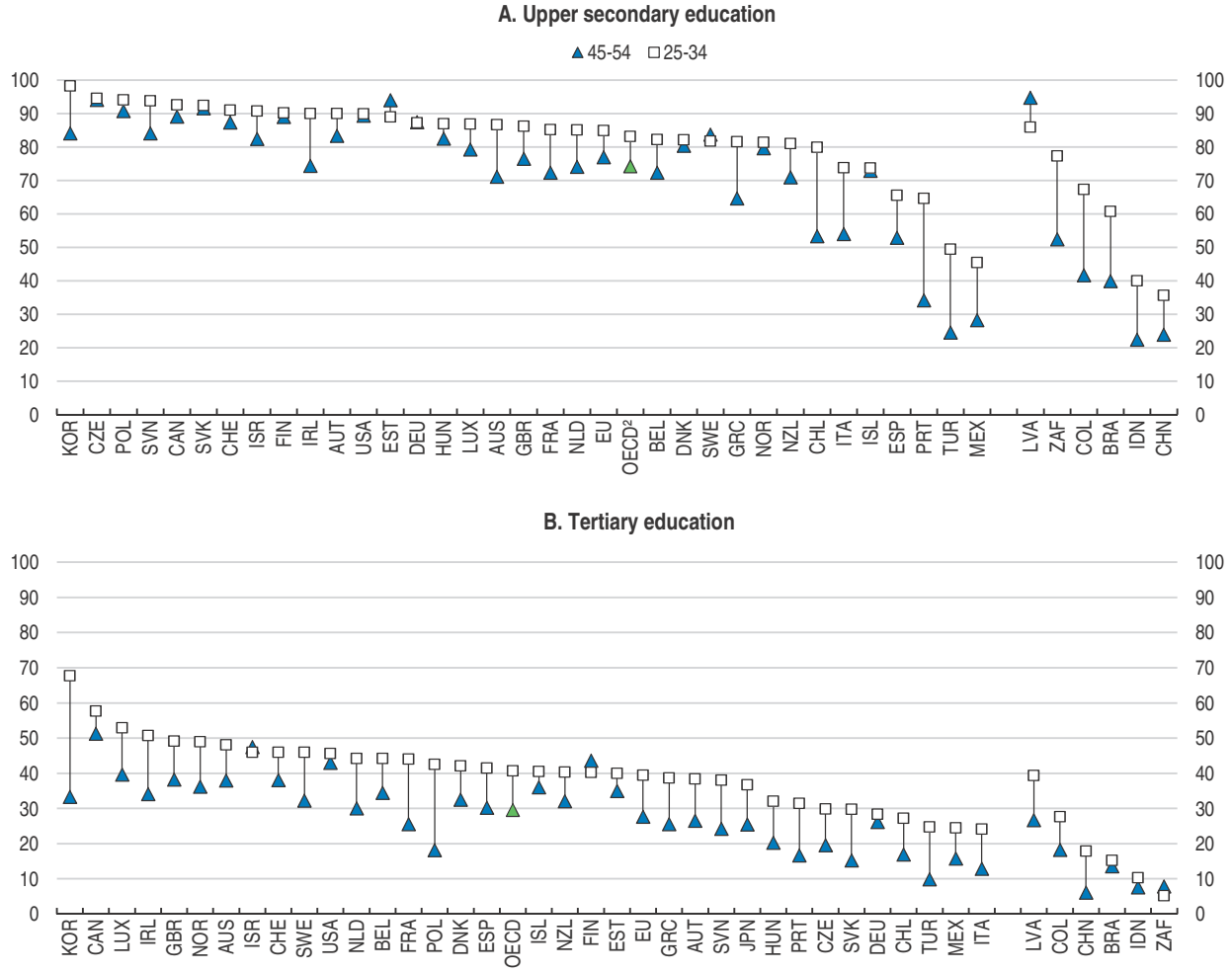


Source: OECD, *Product Market Regulation Database* and Koske, I., I. Wanner, R. Bitetti and O. Barbiero, (2015), "The 2013 Update of the OECD Product Market Regulation Indicators: Policy Insights for OECD and non-OECD Countries", OECD *Economics Department Working Papers*, 1200/2015; OECD-WBG *Product Market Regulation Database* for Colombia.

StatLink http://dx.doi.org/10.1787/888933324281

Figure 4.22. **Educational attainment**

As a percentage of population aged 25-34 and 45-54, 2014[1]



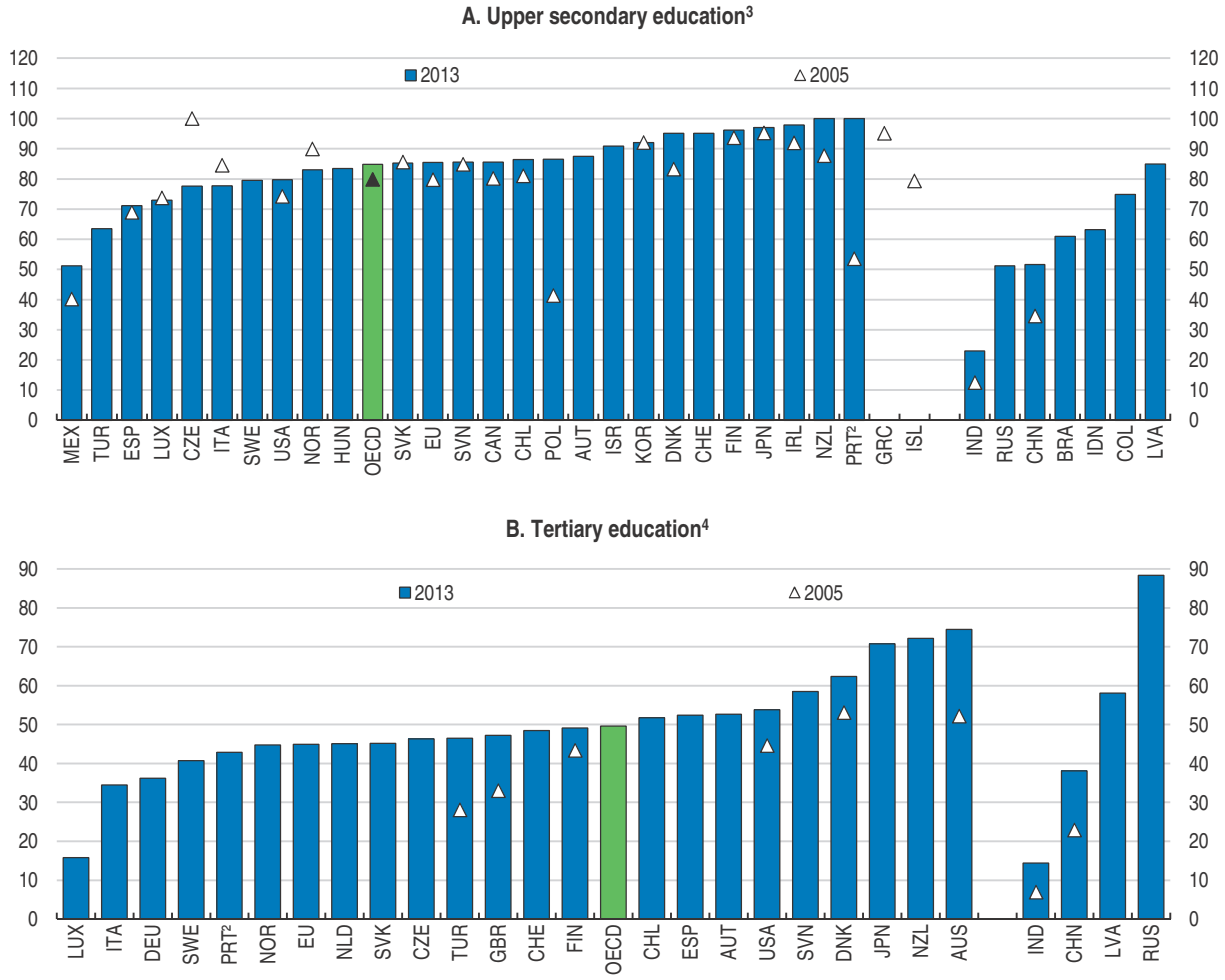
1. Data refer to 2013 for Brazil, Chile and France; 2012 for South Africa; 2011 for Indonesia; 2010 for China.
2. Data are missing for Japan.

Source: OECD, *Education at a Glance 2015: OECD Indicators*.

StatLink http://dx.doi.org/10.1787/888933324290

Figure 4.23. **Graduation rates in upper secondary and tertiary education**[1]

Percentage



1. Graduation rates represent the estimated percentage of people from a given age cohort that is expected to graduate at some point during their lifetime. This estimate is based on the number of graduates in a given year, regardless of their age, divided by the size of the average cohort of the typical age of graduation. In panel A, OECD and EU averages exclude Australia, Belgium, Estonia, France, Germany, the Netherlands, the United Kingdom and exclude for 2005 only Austria, Hungary, Israel, Sweden, Switzerland and Turkey. In panel B, OECD and EU averages exclude Belgium, Canada, Estonia, France, Greece, Hungary, Iceland, Ireland, Israel, Korea, Mexico and Poland.
2. Estimated graduation rates can be very high, even above 100%, when a significant number of people above the typical age of graduation returns to school. One such example is the New Opportunities programme in Portugal.
3. First-time graduation rates for ISCED 3. The last available year is 2014 for China and India; data refer to 2007-08 instead of 2005 for India. For Brazil and the Russian Federation, data refer to graduation rate at upper secondary level for typical age from the general programmes except for India for which upper secondary education is defined as persons aged 19 year olds who completed upper secondary education.
4. First-time graduation rates for ISCED 5 to 7. Data refer to 2014 for China and India and to 2007-08 instead of 2005 for India. For India, tertiary education refers to the 24 year olds and over who have graduated.

Source: OECD, *Education at a Glance 2015: OECD Indicators*; CEIC for China data; India National Sample Survey.

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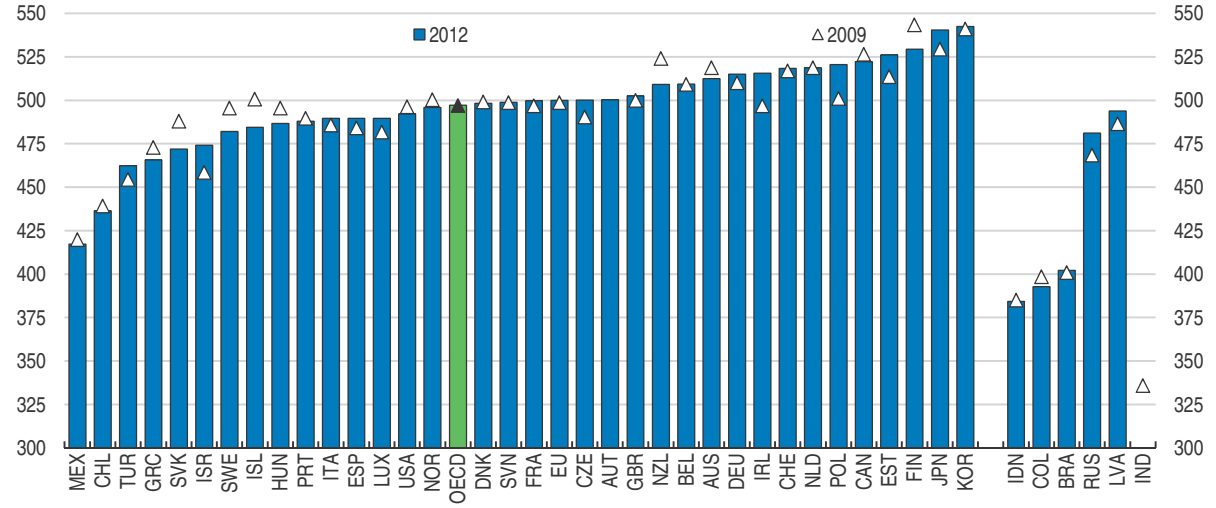
Figure 4.24. **Educational achievement**

Average of PISA scores in reading, mathematics and science[1]



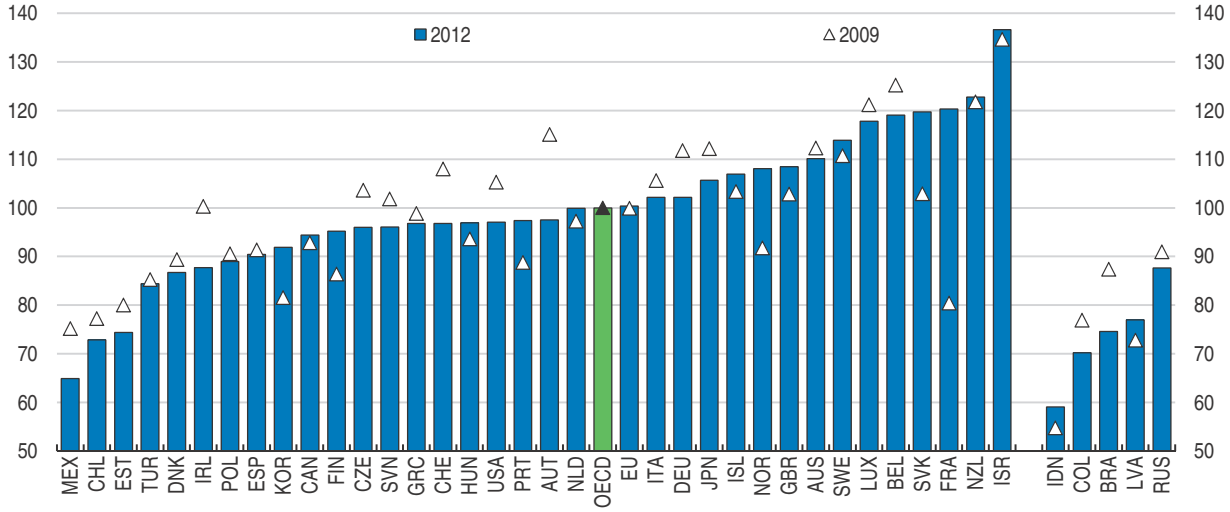
1. PISA is the Programme for International Student Assessment. Data for India is the average for 2010 of the states of Tamil Nadu and Himachal Pradesh and therefore may not be representative of nation-wide outcomes.

Source: OECD (2014), *PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading and Science*, PISA.

StatLink http://dx.doi.org/10.1787/888933324311

Figure 4.25. **Variance of educational achievement**

Total variance in PISA scores in reading, mathematics and science[1]



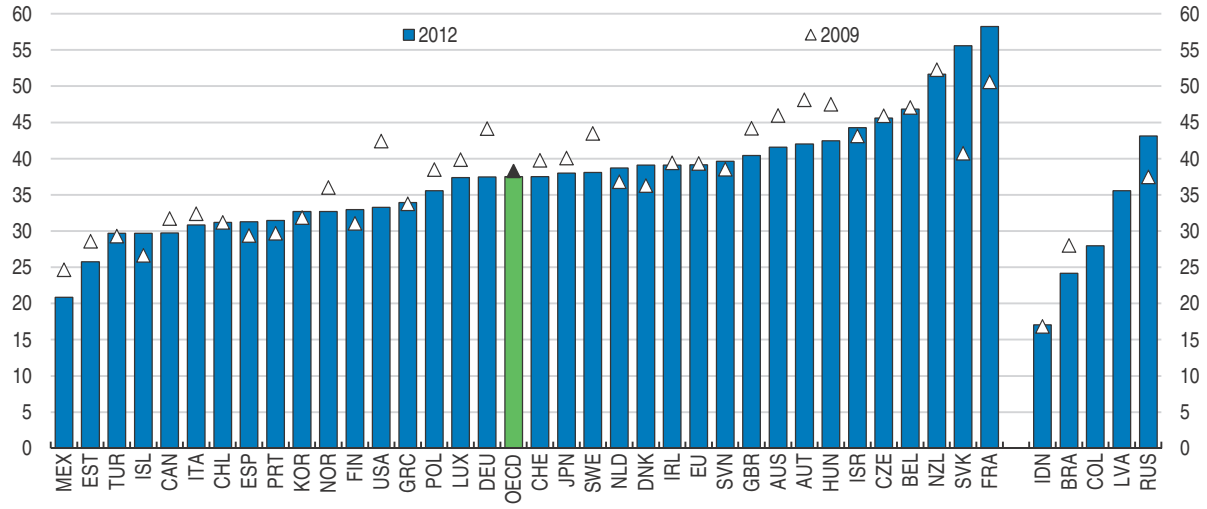
1. PISA is the Programme for International Student Assessment. OECD = 100. Average of PISA scores in mathematics and science only in 2009 for France. The variance components in mathematics, sciences and reading were estimated for all students in participating countries with data on socio-economic background and study programmes. The variance in student performance is calculated as the square of the standard deviation of PISA scores in reading, mathematics and science for the sample of students used in the analysis.

Source: OECD (2014), *PISA 2012 Results: What Students Know and Can Do (Volume I, Revised edition, February 2014): Student Performance in Mathematics, Reading and Science*, PISA; OECD (2013), *PISA 2012 Results: Excellence through Equity (Volume II): Giving Every Student the Chance to Succeed*, PISA.

StatLink http://dx.doi.org/10.1787/888933324326

Figure 4.26. **Influence of socio-economic and cultural background on student reading performance**[1]

Strength of the link between the reading score and the socio-economic index



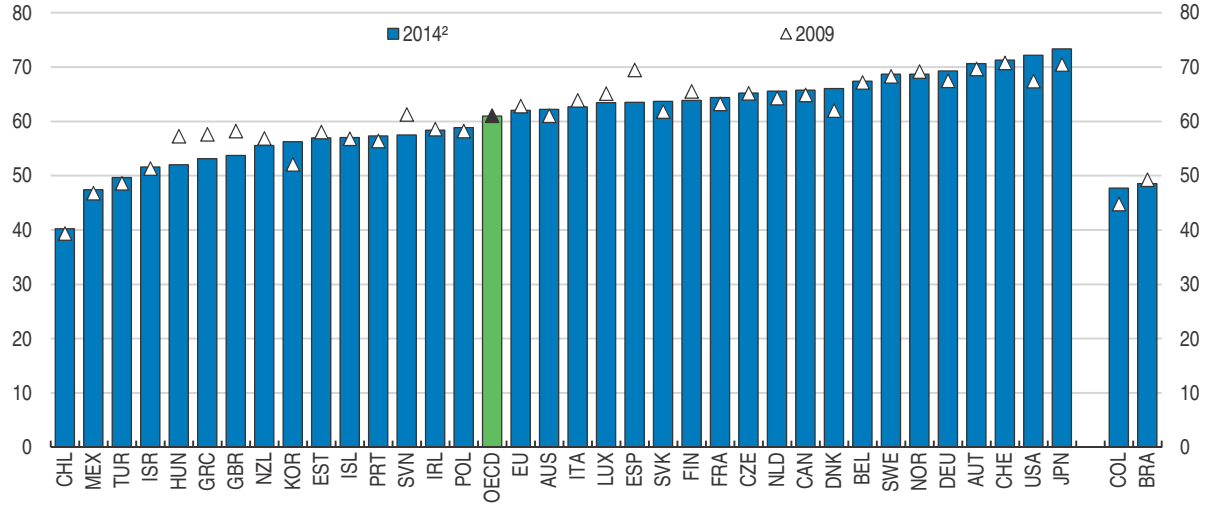
1. Defined as the estimated coefficient from the country-specific regression of PISA reading performance on corresponding index of economic, social and cultural status (ESCS).

Source: OECD (2011), *Education at a Glance 2011: OECD Indicators;* OECD (2013), *PISA 2012 Results: Excellence through Equity (Volume II): Giving Every Student the Chance to Succeed,* PISA.

StatLink http://dx.doi.org/10.1787/888933324331

Figure 4.27. **Share of direct taxes**[1]

As a percentage of total tax revenue



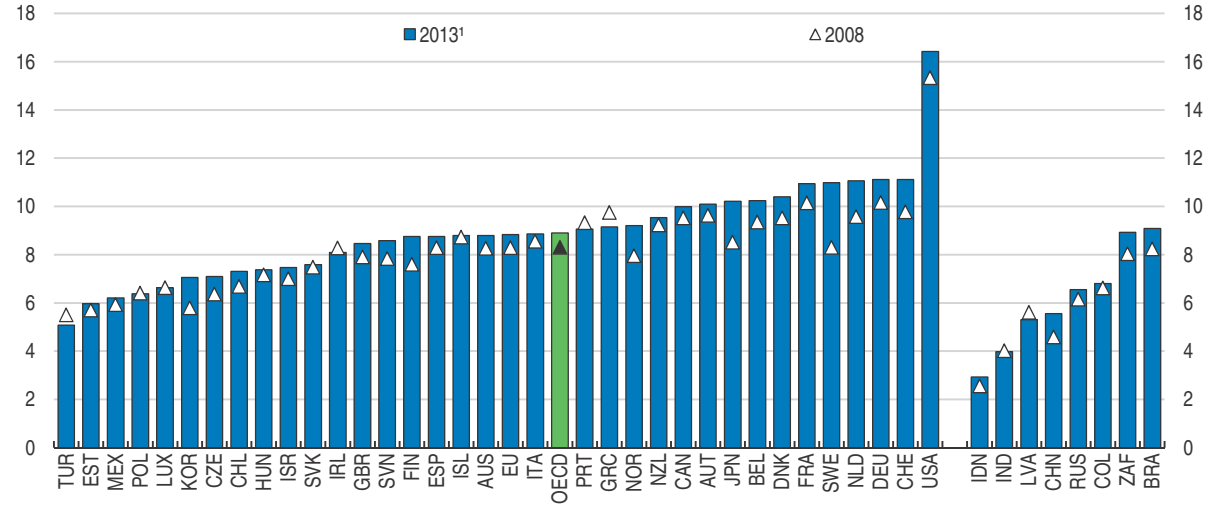
1. Direct taxes aggregate taxes on income, profits and capital gains, social security contributions and taxes on payroll and workforce.
2. The last available year is 2013 for Australia, Brazil, Colombia, Japan, Mexico, the Netherlands and Poland.

Source: OECD, *Revenue Statistics Database.*

StatLink http://dx.doi.org/10.1787/888933324343

Figure 4.28. **Health expenditure**

As a percentage of GDP



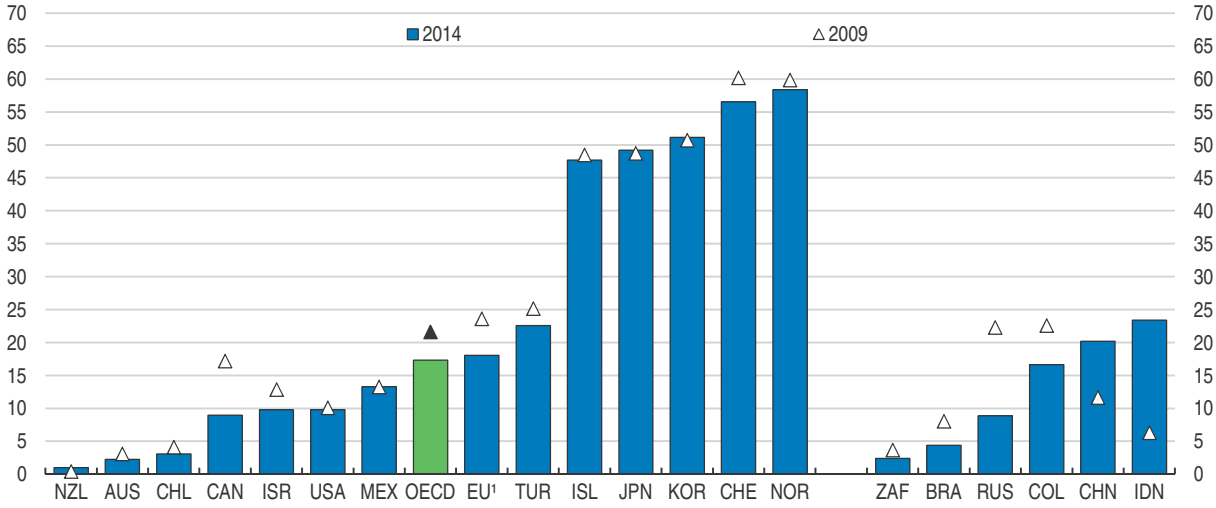
1. Data refer to 2014 for Canada, China, Finland, Germany, Iceland, Italy, Japan, Korea, the Netherlands, Norway, Portugal, Slovenia and Switzerland; 2012 for Australia, Ireland, Luxembourg.

Source: OECD, *Health Database and China National Bureau of Statistics*.

StatLink http://dx.doi.org/10.1787/888933324352

Figure 4.29. **Producer support estimate to agriculture**

As a percentage of farm receipts



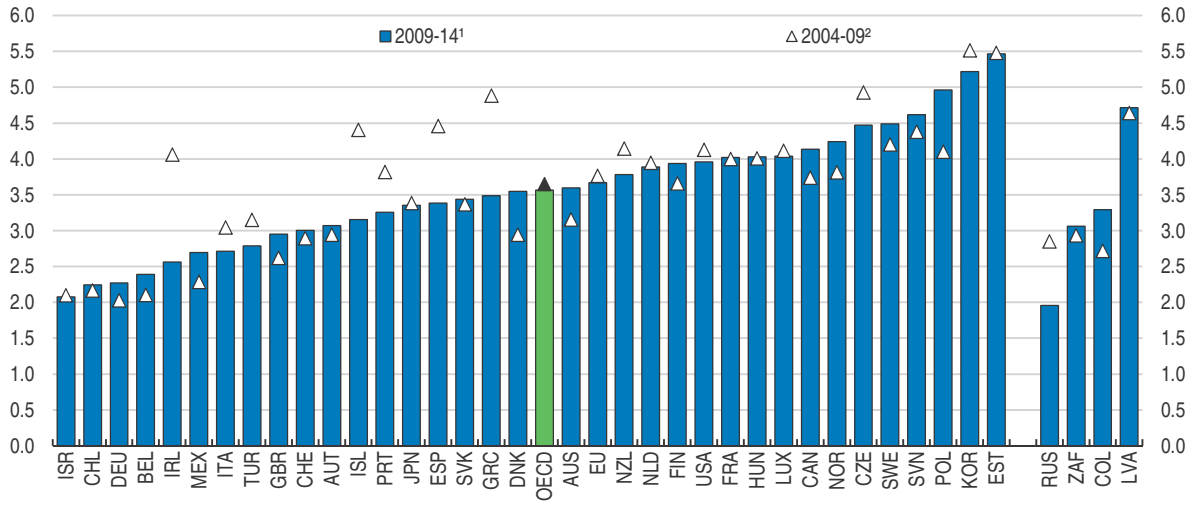
1. EU refers to all 28 members of the European Union.

Source: OECD, *Producer and Consumer Support Estimates Database*.

StatLink http://dx.doi.org/10.1787/888933324368

Figure 4.30. **Public investment**

As a percentage of GDP



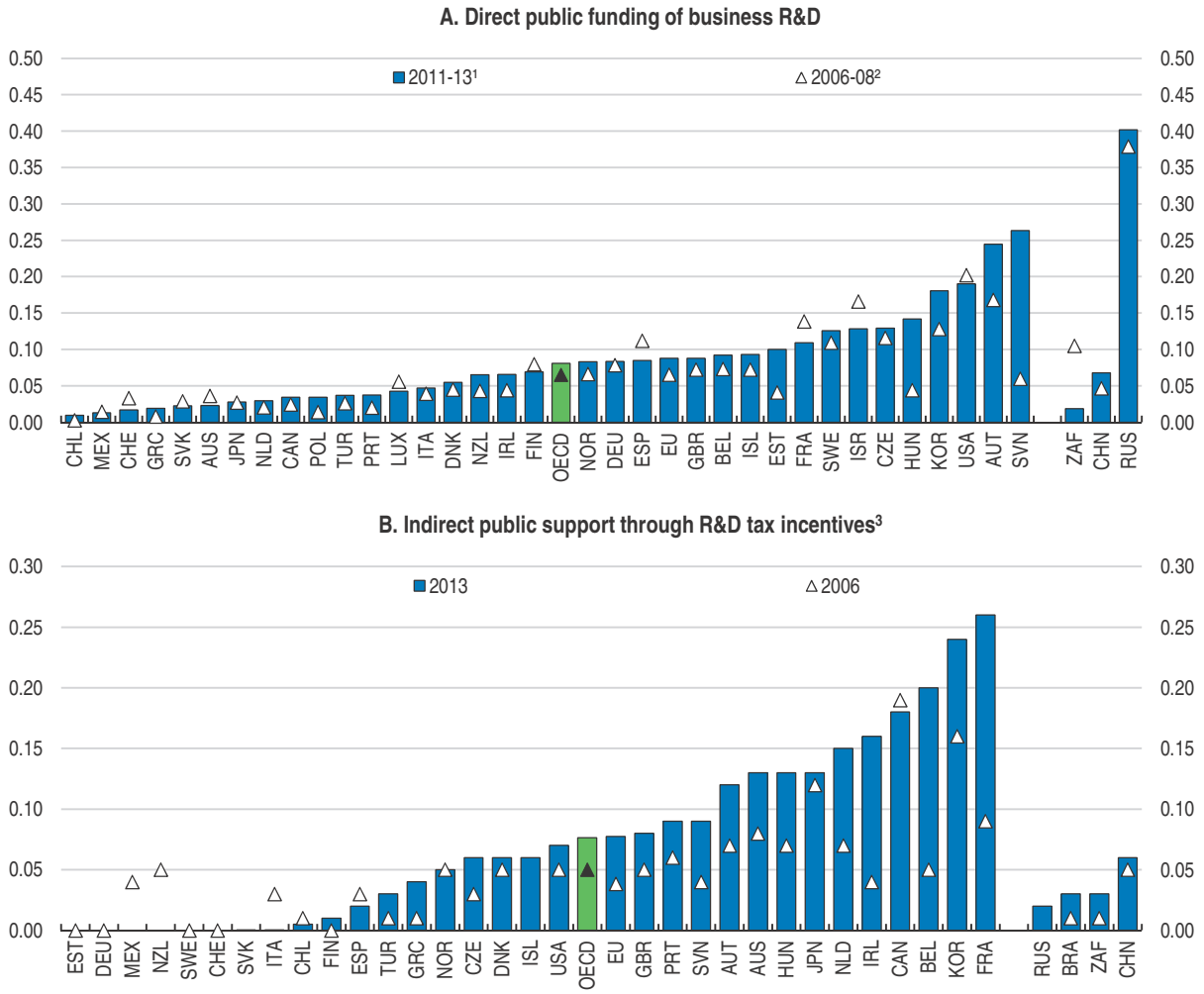
1. Average 2009-13 for Chile, Korea, Mexico, New Zealand, the Russian Federation and Colombia.
2. Average 2006-09 for Turkey.

Source: OECD, *Economic Outlook Database*.

StatLink http://dx.doi.org/10.1787/888933324378

Figure 4.31. **Financial support for private R&D investment**

As a percentage of GDP



1. Average of years 2011 and 2013 for Iceland, New Zealand and Sweden; average of years 2011 and 2012 for France, Ireland, Israel, Italy, Portugal and South Africa; 2012 for Switzerland; 2011 for Australia, Austria, Belgium and Mexico; 2009 for Luxembourg.
2. Average of years 2006 and 2007 for Austria; average of years 2007 and 2008 for Chile and Denmark; 2007 for Greece, Luxembourg, the Netherlands, New Zealand and Sweden; 2008 for Switzerland.
3. The last available year is 2012 for Belgium, Brazil, Ireland, Spain, Switzerland, the United States and South Africa; 2011 for Australia, Iceland, Mexico and the Russian Federation. Instead of 2006, data refer to 2007 for Belgium, Denmark, Italy, Korea, Mexico, Slovenia and Sweden; 2008 for Chile, New Zealand, Switzerland and Turkey; 2009 for China.

Source: Panel A: OECD, *Science and Technology Indicators Database*; Panel B: OECD, *R&D Tax Incentives Database*, *www.oecd.org/sti/rd-tax-stats.htm*, December 2015.

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Economic Policy Reforms

Going for Growth Interim Report

Going for Growth is the OECD's regular report on structural reforms in policy areas that have been identified as priorities to boost incomes in OECD and selected non-OECD countries (Brazil, China, Colombia, India, Indonesia, Latvia, Russian Federation and South Africa). Policy priorities are updated every two years and presented in a full report, which includes individual country notes with detailed policy recommendations to address the priorities. The next full report will be published in 2017.

This interim report takes stock of the actions taken by governments over the past year in the policy areas identified as priorities for growth. This stocktaking is supported by internationally comparable indicators that enable countries to assess their economic performance and structural policies in a wide range of areas.

Contents

Chapter 1. Overview of structural reforms in the policy areas identified as priorities for growth

Chapter 2. Reform priorities in a difficult macro context

Chapter 3. From GDP to average household income: A look at the transmission channels

Chapter 4. Structural policy indicators

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