

PART I

Chapter 1

Responding to the Crisis while Protecting Long-term Growth

OECD countries have taken a wide range of measures in response to the crisis, notably in the areas of infrastructure investment, taxes, the labour market, regulatory reforms and trade policy. This chapter assesses the expected effects of these measures on long-run income levels, and examines structural policy challenges to deliver strong and sustainable growth going forward. The main conclusions are that OECD countries have so far avoided major mistakes – in particular concerning trade and labour market policies – but some risks remain. The crisis has in general reinforced the need for structural reforms. These reforms could help to speed up the ongoing recovery, strengthen public finances while protecting long-term growth and, in some cases, contribute to the resolution of global current account imbalances.

The OECD experienced a major financial crisis that led to the deepest recession since the Great Depression. GDP fell by four percentage points during 2009, industrial production and global trade shrank drastically before starting to recover from depressed levels in the second half of the year, and unemployment has risen into double digits in many OECD countries. Fortunately, governments and central banks swiftly took unprecedented steps to save the financial system, and thus avoid a complete economic collapse as in the 1930s. In addition, most governments adopted major fiscal stimulus packages, and the operation of automatic stabilisers also offered support. A wide range of other policy measures were undertaken that overall seem to have set the stage for a gradual recovery.

Although the worst may have been avoided, past experience with financial crises indicates that GDP and income levels are unlikely to return any time soon to their initially projected path. Recent OECD estimates put the permanent GDP loss at about three percentage points on average across the OECD, because of a long-lasting elevation of risk premia that will raise the cost of capital, as well as persistently higher structural unemployment (OECD, 2009b). There is a considerable amount of country-specific heterogeneity, mostly on the unemployment side (see Box 1.1), as well as large

Box 1.1. The effect of the crisis on potential output over the long term

Recent OECD analysis estimates that even as economies eventually recover, the crisis could well reduce medium-term potential output by about 3% in the OECD area compared with levels that would have prevailed otherwise, with much of the reduction occurring already by 2010 (see OECD, 2009b). As shown in the table below, there is a large cross-country variation in the expected impact of the crisis on potential output, reflecting partly differences in the size of the shock as well as structural policies. While the crisis will leave OECD countries poorer than they would otherwise have been, *growth* may not be affected by the crisis in the long term. It is nevertheless expected to slow (from the 2-2¼ per cent per annum achieved over the seven years preceding the crisis to around 1¾ per cent per annum on average in the long term) owing to unrelated reasons, not least slower growth in potential employment due to ageing populations.

Overall, two-thirds of the OECD-wide decrease in potential output is projected to come from a permanently higher cost of capital with the remainder coming from lower potential employment. Sharp falls in investment and higher capital costs – reflecting in part a permanent return to the higher levels of risk aversion that prevailed before the credit boom of the 2000s – have led to weak or negative growth in capital services in many countries. Among the G7 countries, growth in capital services over 2009-10 period is, for instance, about 2-3 percentage points per annum less than the average post-2000 growth rate.

Long-term unemployment and its associated “hysteresis” effects are expected to lower potential employment, particularly in European countries where response of long-term unemployment to poor economic conditions has traditionally been larger than in most other OECD regions. The expected decrease, based on historical relationships is, however,

Box 1.1. The effect of the crisis on potential output over the long term (cont.)

Steady-state effects of the crisis on potential output¹

Countries	Employment effect	Cost of capital effect	Total effect of the crisis
Australia	-0.5	-2.1	-2.6
Austria	-0.9	-1.7	-2.6
Belgium	-1.8	-1.9	-3.7
Canada	-0.5	-1.9	-2.4
Denmark	-0.7	-2.0	-2.7
Finland	-0.8	-1.9	-2.8
France	-0.9	-1.9	-2.8
Germany	-1.7	-2.2	-3.9
Greece	-1.0	-2.6	-3.6
Ireland ²	-9.8	-2.0	-11.8
Italy	-1.9	-2.1	-4.1
Japan	-0.4	-1.7	-2.1
Netherlands	-1.8	-2.0	-3.7
New Zealand	0.0	-2.4	-2.4
Poland	-2.0	-2.5	-4.5
Portugal	-1.2	-1.4	-2.7
Spain ²	-8.4	-2.1	-10.6
Sweden	-1.1	-1.9	-3.0
United Kingdom	-1.1	-1.8	-2.9
United States	-0.4	-2.0	-2.4
Simple average	-1.8	-2.0	-3.9
Weighted average	-1.1	-2.0	-3.1

1. The effects of the crisis on potential output are calculated through two distinct channels (see OECD, 2009b for further details): i) a fall in potential employment, which is mainly due to a rise in structural unemployment as a result of hysteresis-type effects; ii) the negative effect of a permanently higher cost of capital through higher risk *prima* on the long-term capital-labour ratio and thereby on productivity. The calculation of the effect of lower potential employment on potential output includes a “scaling” effect as other factors of production (capital) are reduced by the same proportion, so that an x% fall in potential employment also reduces capital inputs – and thereby potential output – by x%. Some OECD countries are excluded from the table as a full breakdown of the components of potential output is lacking, usually because data for capital services are not available.
2. For Ireland and Spain, the negative effect of the crisis on potential employment includes a substantial reduction in the labour force mainly resulting from a reversal of net immigration flows.

Source: 2009 OECD estimates.

surrounded by considerable uncertainty: it may be overestimated, as many countries have implemented important labour and product market reforms in the recent past that may belie historical relationships, but it could also be higher given the size of the shock. For Ireland and Spain, there is an additional negative impact on potential employment from a reduction in the labour force mainly due to a reversal of net immigration flows.

In addition, impacts on potential output via total factor productivity (TFP) and labour participation can also affect potential output, although they may be partially offsetting since both participation rates and total factor productivity are affected by opposing forces during downturns.* The overall effect of the crisis is therefore very uncertain, and the final impact on output will notably depend on structural policy responses.

* The long-term unemployed may cease actively searching for employment due to discouragement; conversely a loss of family income may induce those previously outside the labour force to seek employment. Likewise, productivity may rise in the aftermath of recessions as a result of the shutdown of the least efficient activities, of a reallocation of resources towards more productive uses, or because job losers may improve their human capital by seeking further education or training. It may also decline because of a loss of skills of long-term unemployed or a cut in R&D expenditures that could prematurely terminate promising research or cause a loss of project-specific human capital.

uncertainties regarding the estimates, particularly insofar as the response to the crisis has included a range of structural policy measures that could either amplify or mitigate expected long-term output losses.

Against this unprecedented cyclical background, which affected different countries to varying degrees, it is important to emphasise that the pre-existing differences in per capita GDP changed only little and that the differences remain very large. For instance, the average GDP per capita for the lower half of OECD countries is 37% below that of the average of the upper half (see Figure 2.1 in the Chapter 2). And for some countries, the gaps are much larger – around 60% for the five lowest-income OECD countries. Much of these differences in income can be explained by structural policy factors that have been explored in past OECD studies and previous editions of this annual benchmarking report. Those factors are the basis on which structural policy priorities are identified in *Going for Growth*. As a consequence, despite the seriousness of the crisis, most of the policy priorities previously identified in the *Going for Growth* exercise remain highly relevant. The relevance of the structural policy priorities in the context of large adverse economic shocks is further discussed in Box 1.2 of this chapter, as well as in the introduction to the country notes featured in Chapter 3.

Nevertheless, the crisis has deeply affected policy thinking in a range of areas, two of which are especially important in the context of *Going for Growth*: i) the role that regulation plays in financial markets, which has long been identified as a missing area of coverage in this exercise, but has not been fully explored so far for lack of data and empirical analysis;¹ and, ii) the issue of whether the effects of the structural reforms advocated in *Going for Growth* – and hence, their importance – may vary under the new economic environment created by the crisis.

As the recovery takes hold, the swift actions that were taken in response to the crisis will need to be reassessed as to whether they help support sustainable growth going forward. In last year's report, principles were enounced for policies that could give support to demand in the short term, while at the same time help to ensure sustainable long-term growth. This chapter examines the actual policy responses. Three main conclusions stand out:

- OECD countries have so far avoided the major structural policy mistakes of some past crises, such as the protectionist response of the 1930s or the Malthusian labour market policies of the 1970s. Many of the measures taken to stimulate R&D, boost infrastructure spending, lower the tax burden on low-income earners, scale up and strengthen active labour market policies and promote green growth, will help to contain the long-term damage of the crisis for material living standards and welfare.
- Going forward, some risks remain, however. With unemployment likely to remain high for some time, governments will face pressures to maintain or introduce labour market measures which, if entrenched, could permanently reduce labour utilisation. Likewise, depending on the magnitude and composition of adjustment in taxes and spending, the much-needed consolidation of public finances could affect long-term income levels.
- The urgency of structural reform has in general been reinforced by the crisis. This especially holds for the need to revamp financial regulation, which will require international co-ordination. But reforms are also needed in other areas where they could speed up the recovery, help consolidate public finances in a way that protects long-term growth and, in some cases, contribute to reduce current account imbalances. Such

reforms include, for instance, relaxing anti-competitive regulations in product markets, enhancing the efficiency of health and education spending, strengthening the job-search incentives and skills of the long-term unemployed through active labour market policies and unemployment benefit system reform, and reducing access to *de facto* early retirement pathways.

Last year, action in four broad policies was suggested, for which follow-up is reviewed: infrastructure investment, tax reforms, active labour market policies and regulatory reforms. Priorities for revamping the financial market regulation that contributed to the financial crisis are taken up first. Governments also took action in a number of other policy areas which either seems to have been inappropriate (*e.g.* trade barriers), or may have provided short-term economic stability but will need to be unwound going forward as the economy recovers (*e.g.* state ownership in banks). These policies are reviewed in the first half of the chapter.² The second half discusses the potential impact of the policies, the looming challenge of how to return to fiscal sustainability in a way that does not harm long-run growth and living standards, as well as the extent to which structural reforms could help address current account imbalances going forward.

1. Growth-enhancing structural policy responses to the crisis

1.1. Financial market measures

Financial systems provide an important role in facilitating the efficient allocation of capital, monitoring investments, diversifying risk, mobilising savings, and easing market transactions. To this extent, they promote better economic performance. However, with the growing complexity and sophistication of financial markets, the appropriate set of competitive regulations is not easy to identify. The recent financial crisis has revealed major weaknesses in the operation of financial regulatory and supervisory frameworks including ones that contributed to the build-up of leverage and risk appetite, and ultimately contributed to the recession (OECD, 2009a).

Emergency interventions were necessary and appropriate to stem the spread of systemic damage during the crisis, and to help restore normal functioning of financial markets. Virtually all OECD countries engaged in expansions of deposit insurance, guarantees of bank debt and injections of capital (Table 1.1). The gross value of this financial intervention amounted to over 50% of GDP for four countries (Ireland, Sweden, United Kingdom and the United States) and more than 10% of GDP for about half of the OECD countries (OECD, 2009b). While some of these measures do not necessarily imply actual spending and the net value of this intervention has been low so far, the long-term cost can be substantial for many countries. Some countries went so far as to *de facto* nationalise some banking activities, including Iceland,³ Ireland, the Netherlands, Portugal, the United Kingdom, and the United States. Moves to purchase and/or ring-fence toxic assets were undertaken or announced by Germany, Ireland, Korea, Switzerland, the United Kingdom and the United States. The rapid response to financial market distress has helped minimise the costs of the crisis in terms of lost output, since delays could have resulted in further deterioration of asset quality and an even larger recession.

Yet such interventions have also come with downsides, since durable state direct involvement in financial markets could harm competition, distort pricing of risk and delay required re-structuring, and thereby reduce longer-term growth. Therefore, the elaboration of exit strategies and the clarification of the longer-term regulatory framework are

Table 1.1. **Financial market measures taken**

Country	Government financial support for the financial sector	Increase deposit insurance	Nationalised banking activities	Plan to purchase toxic assets	Ban or restrict short-selling
Australia	X	X			X
Austria	X	X			X
Belgium	X	X			X
Canada	X				X
Czech Republic					
Denmark		X			X
Finland		X			X
France	X	Already high			X
Germany	X	X		X	X
Greece	X	X			
Hungary	X	X			
Iceland		X	X		X
Ireland	X	X	X	X	
Italy	X	X			X
Japan	X				X
Korea	X			X	
Luxembourg	X	X			
Mexico					
Netherlands	X	X	X		X
New Zealand		X			
Norway	X	Already high			X
Poland	X	X			
Portugal	X	X	X		X
Slovak Republic		X			
Spain	X	X			X
Sweden	X	X			
Switzerland	X	X		X	
Turkey	X				
United Kingdom	X	X	X		X
United States	X	X	X	X	X

Source: OECD (2009), *Economic Outlook No. 86* and OECD (2009i).

essential, although implementation of certain elements will have to follow the restoration of the banking sector to health. Moreover, the removal of financial support to the sector and the implementation of better regulations should be co-ordinated across countries to ensure a smooth exit and minimise regulatory arbitrage.

While many decisions are still to be made, the contour of the coming regulatory landscape is emerging as a variety of prudential regulatory reform proposals that have been put forward to strengthen financial stability without *a priori* stifling competition, from national governments, the Financial Stability Board (FSB), the IMF, the BIS and the EC. The overall consensus of these plans focuses on a broad set of principles that are needed to ensure that the precursors to the recent crisis do not re-emerge. These measures include (see in particular FSB, 2009 and OECD, 2009i, 2009n):

- *Strengthening the global capital framework.* New rules are needed that require a step-up in the amount and quality of capital that the financial system as a whole needs to carry, so that banks holding minimum required capital levels will be more viable in a future crisis, and confidence in the system as a whole will be maintained. This includes revising the

Basel II capital framework to specify, on a cyclical basis, the type and level of capital that financial institutions are required to maintain, so that larger buffers are available to cushion downturns.⁴ Since holding capital is costly, some cross-country co-ordination will ultimately be needed at least for internationally active firms. In the short term however, the implementation of new stricter rules may have to be differentiated across countries to ensure a smooth provision of credit.

- *Making global liquidity more robust.* Just as a strong capital base is a necessary condition for banking system soundness, so too is a strong liquidity base. Banks' resilience to system-wide liquidity shocks needs to be significantly increased and management of this risk strengthened. At the international level, new minimum global liquidity coverage ratios set by the Basel Committee could be applied by supervisors to global banks to ensure that cross-border liquidity problems do not reappear.
- *Reducing moral hazard posed by systemically important institutions.* Special measures should be taken to strengthen requirements on firms that raise greater systemic risks which are therefore more susceptible to moral hazard. Institutions need to be mandated to internalise the impact of risk-taking behaviour such as maturity timing mismatches on the overall stability of the financial system, through the use of additional charges such as greater capital and liquidity requirements and higher deposit insurance premiums. A requirement that such institutions provide plans as to how their complex financial structures will be resolved in the event of default, as well as transparent procedures for an orderly wind-down of systemically important non-depository financial institutions, would also mitigate systemic risks. Though difficult, outright limitations on firm size may also be used.
- *Expanding oversight of the financial system.* All systemically important activity should be subject to appropriate supervisory oversight and co-ordinated for internationally active firms. Initiatives to expand the perimeter of regulation need to be effectively and consistently implemented across all key jurisdictions. International co-operation is also helpful on issues such as cost sharing in the resolution of international banks' failures and the resolution of disputes.
- *Strengthening the robustness of the derivatives market.* Efforts need to be made to reduce systemic risks in the over-the-counter (OTC) derivatives market. These include strengthening capital requirements to reflect the risks of OTC derivatives, sharing information, and co-ordinating legal and standardisation efforts to move toward more centrally cleared contracts and collateralisation.
- *Strengthening accounting standards.* The International and US Financial Accounting Standards Boards have been considering approaches to improve and simplify financial instruments accounting, provisioning and impairment recognition, and off-balance sheet standards. These standards have not yet converged but they need to agree on simpler and more comparable rules that use a broad range of credit information, so as to recognise credit losses in loan portfolios at an earlier stage while mitigating pro-cyclicality of losses. This would also facilitate the development of comparable capital requirements across major jurisdictions.
- *Improving compensation practices.* Action should be taken to ensure that financial firms structure their compensation schemes in a way that does not incentivise excessive risk taking, including ensuring that the governance of compensation is effective, and that

payout schedules are in line with the time horizon of risks. Principles that have been issued by the FSB offer such guidelines.

Other forms of government intervention in financial markets, such as bans or restrictions on short-selling, have also been undertaken in about half of OECD countries. Where still in place, these measures need to be gradually withdrawn in order to allow for financial market's pricing mechanisms to work effectively, and resume their normal role in promoting efficient allocation of capital. Financing assistance such as broad credit guarantees to firms has also been introduced in a majority of OECD countries. Countries should re-evaluate such specialised lending measures as they exit from the crisis, starting at least with large firms which benefit most initially from the improvement in credit conditions. While such interventions may have been justifiable during the crisis given the very severe credit constraints that arose, they will need to be reviewed as credit conditions normalise and be scrapped unless they deal with previously unaddressed market failures.

1.2. Infrastructure measures

Last year's *Going for Growth* volume recommended introducing infrastructure projects that could be brought on stream quickly as a response to the crisis, and more broadly to improve the quality of existing capital structures, in areas that can enhance growth or welfare, such as education, health and "green" investments. Government expenditure on physical investment, much of which is carried out by local governments, has considerable potential to support short-term economic growth. Recent analysis suggests that short-run fiscal multipliers for investment are strong, possibly exceeding 1, and likely exceed those for most other types of fiscal stimuli (OECD, 2009a).

The impact on long-term growth is more uncertain, and depends on the appropriateness of the investment, which in turn depends on the amount of infrastructure already in place and the quality of the regulatory framework. In the past, the efficiency of infrastructure investment has varied widely. For example, for those OECD countries which had comparatively poorly developed energy and telecommunications networks in earlier periods, the efficiency impact in these areas has been high. Yet infrastructure provision levels are relatively high in nearly all OECD countries at present, meaning that there may be far fewer opportunities to obtain as large an impact as observed in the past (see *Going for Growth* 2009). Systematic cost-benefit analysis to screen projects, though time-consuming, helps deliver good returns and reduces the chance of waste. As well, countries with policies that support a competitive environment, bolstered by greater independence of regulators and transparent decision making, have been found to realise more efficient infrastructure investment.

Virtually all countries have increased infrastructure investment in the context of the crisis. As an indication, public investment in the typical OECD country has increased by about 1/3 per cent of GDP compared with its recent average (Table 1.2).⁵ These figures include infrastructure and other public investment introduced as a part of stimulus packages as well as what was introduced outside of packages. A few countries were however forced to substantially cut infrastructure investment because of the severity of the crisis and the resulting lack of fiscal space.

Several types of infrastructure measures were implemented by OECD countries (Table 1.3):

- Transportation infrastructure measures were introduced by virtually all countries. Such projects include high-speed rail links, airports, ports, waterways and major efforts to

Table 1.2. **Government investment as a share of GDP**

Country	Government investment as a share of GDP (%)					Gap from 2000-07 average (percentage points)			
	2000-07	2008	2009	2010	2011	2008	2009	2010	2011
Australia	2.4	2.7	2.9	3.3	3.4	0.4	0.5	1.0	1.1
Austria	1.2	1.1	1.2	1.2	1.2	-0.1	0.0	0.0	0.0
Belgium	1.7	1.7	1.8	1.8	1.9	0.0	0.1	0.1	0.2
Canada	2.5	3.3	3.9	4.0	3.9	0.7	1.3	1.5	1.4
Czech Republic	4.4	5.0	5.4	5.5	5.4	0.6	1.1	1.1	1.0
Denmark	1.8	1.8	2.2	2.4	2.3	0.0	0.4	0.6	0.5
Finland	2.6	2.6	2.8	2.7	2.8	-0.1	0.2	0.1	0.2
France	3.1	3.2	3.2	3.3	3.3	0.1	0.1	0.2	0.2
Germany	1.5	1.5	1.7	1.9	1.6	0.0	0.2	0.4	0.0
Greece	3.3	2.9	2.8	3.0	3.1	-0.4	-0.5	-0.3	-0.2
Hungary	..	..	..	..	..	..	..	..	..
Iceland	3.9	4.4	3.4	2.1	1.8	0.6	-0.5	-1.7	-2.1
Ireland	3.9	5.4	5.2	4.7	4.7	1.5	1.3	0.8	0.8
Italy	3.0	3.0	3.3	3.0	3.0	0.0	0.3	0.1	0.0
Japan	5.4	4.0	4.4	4.0	3.7	-1.4	-1.0	-1.4	-1.7
Korea	5.3	5.0	5.7	5.7	5.8	-0.3	0.4	0.4	0.5
Luxembourg	..	..	..	..	..	..	..	..	..
Mexico	..	..	..	..	..	..	..	..	..
Netherlands	3.3	3.5	3.8	3.9	3.7	0.1	0.5	0.6	0.4
New Zealand	4.5	4.7	5.5	6.3	6.4	0.2	0.9	1.7	1.9
Norway	2.8	3.1	3.5	3.7	3.7	0.2	0.7	0.9	0.9
Poland	..	..	..	..	..	..	..	..	..
Portugal	3.1	2.2	3.0	2.6	2.6	-1.0	-0.2	-0.5	-0.6
Slovak Republic	..	..	..	..	..	..	..	..	..
Spain	3.5	3.8	4.3	4.1	3.8	0.3	0.8	0.6	0.3
Sweden	2.7	3.1	3.5	3.6	3.6	0.3	0.8	0.9	0.8
Switzerland	2.3	1.9	2.1	2.1	2.0	-0.5	-0.3	-0.3	-0.3
Turkey	3.7	3.9	4.0	3.5	3.1	0.1	0.3	-0.2	-0.6
United Kingdom	1.5	2.5	3.1	3.2	3.1	1.0	1.6	1.7	1.6
United States	3.2	3.4	3.6	3.6	3.6	0.3	0.5	0.5	0.4
OECD	3.1	3.2	3.4	3.4	3.3	0.1	0.4	0.3	0.3

Source: OECD, *Economic Outlook 86 Database*.

improve road infrastructures (e.g. Australia, Canada, Czech Republic, Mexico, the Slovak Republic, Spain, Switzerland, the United States) or the quality of the public transport service (e.g. Italy). Most countries have relied on direct public investment, though a variety of other approaches has been taken, including the use of public-private partnerships and various types of regulatory incentives.

- More than half of countries have invested in telecom infrastructure, including improving access to broadband and other types of ICT infrastructure that have important synergies for R&D and innovation (especially Australia, Austria, Canada, Finland, France, Germany, Japan, Luxembourg, Portugal, the United Kingdom and the United States).
- A somewhat smaller but still substantial number of countries have invested in public utilities, notably energy and water, including Canada, Finland, France, Greece, Japan, Korea, New Zealand, Poland, Portugal, the Slovak Republic, Spain and the United States.

Beyond network infrastructure, almost two-thirds of OECD countries raised investment spending on education and health, in line with recommendations made in last

Table 1.3. **Infrastructure measures**

Country	Transport	Telecom	Energy	Water	Health	Education	Defense	Green investment ¹
Australia	X	X			X	X		X
Austria	X	X				X		
Belgium	X					X		X
Canada	X	X		X	X	X		X
Czech Republic	X							X
Denmark	X							X
Finland	X	X	X			X		X
France	X	X	X	X	X	X	X	X
Germany	X	X			X	X		X
Greece	X		X					
Hungary								
Iceland	----- General cut -----							
Ireland	----- General cut -----							
Italy	X	X						X
Japan	X	X	X	X	X	X	X	X
Korea	X		X	X	X	X	X	X
Luxembourg	X	X						
Mexico	X							
Netherlands	X				X	X		X
New Zealand	X		X			X		
Norway	X					X		X
Poland	X			X				X
Portugal		X	X			X		X
Slovak Republic	X	X	X					
Spain	X	X	X	X		X	X	X
Sweden	X					X		X
Switzerland	X							X
Turkey			X	X				
United Kingdom	X	X				X		X
United States	X	X	X	X	X			X

1. This column indicates whether the infrastructure investments announced in one or more of the seven sectors are intended to contribute to green growth.

Source: OECD (2009a), OECD (2009m), OECD (2009j), Responses to the European Commission questionnaire.

year's *Going for Growth*. Such investments have the potential to boost human capital, with large positive effects on long-term growth. In addition, investments in “green” infrastructure and technologies can also have positive effects on welfare (see Section 1.5), and complement tax-related measures that are discussed next.

1.3. Tax measures

The tax take has been reduced in many countries, with declines amounting to more than one percentage point of GDP in cyclically adjusted terms, including both the effects of specific tax measures and other unrelated factors such as the disappearance of the exceptional revenue buoyancy of the pre-crisis period (Table 1.4).⁶ There is a large degree of heterogeneity, however. Declines in cyclically adjusted tax receipts of more than 2½ per cent of potential GDP are estimated for 2008 to 2011 in Canada, France, Iceland, Ireland, Luxembourg, New Zealand, the Slovak Republic, Sweden and the United States, while Hungary, Italy, Korea, Japan and Portugal are expected to have higher tax revenues (as a share of potential GDP), although not all of these countries necessarily modified their tax policies.

Table 1.4. **Total tax revenue as a share of GDP, cyclically adjusted¹**

Country	Total tax revenue as a share of GDP (%)					Gap from 2000-07 (percentage points)			
	2000-07	2008	2009	2010	2011	2008	2009	2010	2011
Australia	30.8	30.2	28.5	28.1	28.4	-0.5	-2.3	-2.7	-2.3
Austria	44.6	44.1	43.3	43.4	43.1	-0.5	-1.4	-1.2	-1.5
Belgium	45.6	45.3	44.6	44.6	44.9	-0.3	-1.1	-1.0	-0.7
Canada	33.4	31.5	30.9	30.7	30.8	-1.9	-2.4	-2.7	-2.6
Czech Republic	35.7	35.8	35.4	35.6	35.8	0.1	-0.3	-0.1	0.1
Denmark	49.6	48.4	48.1	47.5	48.0	-1.3	-1.5	-2.1	-1.6
Finland	43.9	42.6	42.5	42.4	41.9	-1.3	-1.5	-1.6	-2.0
France	44.6	44.0	41.7	41.5	41.5	-0.7	-2.9	-3.1	-3.1
Germany	40.5	40.1	40.5	39.6	39.4	-0.4	0.0	-1.0	-1.1
Greece	34.1	34.6	33.2	34.4	34.4	0.5	-0.9	0.3	0.3
Hungary	38.0	40.0	41.1	40.9	40.2	2.0	3.1	2.8	2.2
Iceland	38.1	36.5	31.7	34.8	36.9	-1.6	-6.4	-3.3	-1.2
Ireland	31.2	30.1	27.6	28.8	29.2	-1.1	-3.6	-2.4	-2.0
Italy	41.1	42.5	42.6	42.8	42.5	1.4	1.5	1.7	1.3
Japan	27.6	28.6	28.0	27.9	28.1	1.0	0.4	0.2	0.4
Korea	24.4	26.6	25.4	25.2	25.3	2.2	1.0	0.7	0.9
Luxembourg	38.2	35.7	36.2	35.2	34.5	-2.5	-2.0	-3.1	-3.7
Mexico	..	..	..	..	..	..	..	..	..
Netherlands	38.4	38.9	37.2	38.5	38.7	0.5	-1.1	0.2	0.3
New Zealand	35.2	35.9	33.3	32.4	32.4	0.7	-1.9	-2.7	-2.8
Norway	46.1	44.7	42.9	43.8	45.0	-1.4	-3.1	-2.2	-1.0
Poland	33.0	34.2	31.9	30.7	30.0	1.2	-1.1	-2.3	-3.0
Portugal	35.6	37.5	36.5	36.7	36.6	1.9	1.0	1.1	1.1
Slovak Republic	31.8	29.2	29.0	28.3	28.2	-2.5	-2.8	-3.5	-3.6
Spain	35.4	33.7	33.1	35.6	35.9	-1.7	-2.3	0.3	0.5
Sweden	49.4	47.5	47.3	45.6	45.4	-1.9	-2.1	-3.8	-4.1
Switzerland	29.1	28.5	27.9	27.9	27.7	-0.7	-1.2	-1.2	-1.4
Turkey	..	..	..	..	..	..	..	..	..
United Kingdom	36.7	36.7	34.9	36.0	36.6	0.0	-1.8	-0.7	-0.1
United States	27.1	25.8	23.4	24.3	25.2	-1.3	-3.6	-2.8	-1.9
OECD	37.1	36.8	35.7	35.8	35.9	-0.4	-1.4	-1.3	-1.2

1. Total tax revenue includes direct taxes, indirect taxes, and social security contributions.

Source: OECD, *Economic Outlook 86 Database*.

Automatic fiscal stabilisers led to even larger declines in actual (non cyclically adjusted) tax receipts and provided further support to economic activity, especially in high-tax countries.

In last year's edition of *Going for Growth*, it was recommended that tax cuts focus on reducing the income and social security tax burden on low-income workers, as a way to both boost short-term spending – as this target group is more likely to spend rather than save additional net earnings – as well as lower the cost of labour and hence cushion employment levels. The extent of labour taxation can have substantial effects on labour supply and demand, especially in the long run. According to the conclusions of the OECD Jobs Strategy reassessment in 2006, a permanent one-percentage point reduction of the average tax burden on labour would increase the employment rate by about 0.4 percentage points in the typical country over the long run.⁷

Reflecting such considerations, tax measures in the dozen OECD countries that made significant use of tax cuts included reductions of the tax burden on low-income earners (Table 1.5). These include targeted tax measures, such as cuts in marginal income tax rates,

Table 1.5. Tax and R&D measures

Country	Income tax measures	Reductions in non-wage labour costs for new or continuing workers	Fiscal measures for low earners	Business taxes	Consumption tax decrease	Temporary consumption tax measure	General VAT rate change	Consumption tax measure for specific goods	Property tax measure	Green tax measure	R&D tax credits	Direct grants for private R&D	Other public R&D expenditures
Australia			X	X									
Austria	Cut of marginal rates		X	X	X	No	No	Yes				X	X
Belgium		X	X	X	X	Yes	No	Yes	X		X		
Canada	Cut of lowest marginal rate	X	X	X	X	No	Yes	No	X			X	
Czech Republic		X	X	X					X				X
Denmark	Cut of marginal rates		X		VAT base widening	No	Yes	No	X				
Finland	Cut of marginal rates	X	X	X	X	No	No	Yes			X		X
France			X	X	X	No	No	Yes	X		X		
Germany	Cut of lowest marg. rate	X	X	X	X	Yes	No	Yes	X				
Greece	Rise highest marg. rates		X	X	X	Yes	No	Yes				X	
Hungary	Lower band widening and rate cut	X	X	X	Rise	No	Yes	Yes	New tax				
Iceland	Expected		Perm rise incl. tax rate		Rise	No	No	Yes					
Ireland	Tax band widening		General rise in taxes	X	Rise	No	Yes	Yes	X		X		
Italy				Rise	X	Yes	No	Yes	Cut		X		
Japan		X		X					X		X		X
Korea	Cut of marginal rates		X	X	X	No	No	Yes	Cut		X		
Luxembourg	Indexation of tax brackets			X	X	Yes	No	Yes				X	
Mexico		X		X	X	Yes	No	Yes					
Netherlands				X	X	No	No	Yes			X		
New Zealand	Cut of marginal rates	X	X						X		Removal		
Norway				X					X		X		
Poland	Cut of marginal rates	X		X	Rise	No	No	Yes			X		
Portugal		X		X					Cut		X		
Slovak Republic	Allowance		X	X							X		
Spain	Tax credit	X	X	X	Rise announced				Cut		X		X
Sweden	Tax credit, allowance	X	X	X	X	No	Yes	No			X		X
Switzerland	Cut of marginal rates			X	X	No	No	No					
Turkey		X				Yes	No	Yes					
United Kingdom			X	X	X	Yes	Yes	Yes					
United States	Rise		X	X	X	Yes	Yes	Yes	Rise		X		X

Source: OECD (2009a), OECD (2009j), OECD (2009k), Responses to the European Commission questionnaire.

increases in exemption levels, and decreases in social security contributions on low-wage workers. Provided they are adequately financed and thereby sustainable, such measures should help boost both short and long-term employment. Countries that cut taxes but did not take such measures included Italy, Japan, Luxembourg, Mexico, Netherlands, Norway, and Turkey.

Aside from the level of taxes, changes in a country's tax composition might also affect long-run economic efficiency and growth. Recent work at the OECD suggests that corporate and labour taxes may be more damaging for economic efficiency than taxes on consumption and immovable property (Johansson *et al.*, 2008). So, measures taken in response to the crisis may also yield longer-term effects on growth insofar as they enhance the tax structure.

Virtually all countries undertook at least some action in the area of business or corporate taxation, generally reducing taxes, except in the case of Italy, which raised them. Tax cuts on business may have had little immediate impact, given the weak current profitability of most companies. However, they might be expected to enhance growth over the longer term.

About half of OECD countries cut their consumption taxes in the context of the crisis, a shift in tax composition which if announced as permanent may have relatively limited short-term stimulus effect, and may not be very beneficial to long-term growth insofar as it entails a shift towards other more distortive taxes (permanent consumption tax cuts have been announced in the cases of Austria, Finland, France, Korea, the Netherlands, Sweden and Switzerland and temporary ones, which may bring forward consumption and may thus be more cost-effective, in Belgium, Germany, Greece, Italy, Luxembourg, Mexico and the United Kingdom). Furthermore, about half of the countries that cut their VAT rates targeted specific sets of goods or services, an approach which may create distortions in the tax system, especially if this reflects primarily lobbying by special interest groups.

Only six countries have made any change to their property taxes, with Italy, Korea and Portugal cutting real estate taxes and Spain eliminating its wealth tax (since 2008), whereas Hungary has introduced a new country-wide real estate tax and the United States will allow its inheritance taxes to resume after 2010 (with an exemption level of USD 1 million). While the ongoing fragility of the housing sector suggests that it is too early to consider raising property taxes to offset tax cuts on income and consumption, this is an option countries should strongly consider as they seek to return to sustainable fiscal policy.

1.4. Measures directed at stimulating innovation

In light of the crisis, three-quarters of OECD countries took action in the area of tax support for R&D (see Table 1.5), which as a complement to sound framework conditions (and high-quality ICT infrastructure, already mentioned) can help to stimulate innovation and improve long-term economic growth (see *Going for Growth 2006* and OECD, 2009c). Regulatory measures in support of R&D and innovation were also taken by Japan, Korea and the United States (see Table 1.9). In the short term, the growth impact of such measures is small, but by stimulating short-term demand for researchers and ensuring the continuity of projects, it can reduce the loss of human capital that might otherwise occur.

Countries were fairly evenly split between those that increased R&D tax credits and those that provided additional direct grants for private R&D, with some countries carrying out both measures (France, Japan, Norway, Portugal, Slovak Republic and the United States). A smaller number of countries also increased direct funding for public R&D. However, some types of public R&D support have been shown to have a crowding-out effect

on private R&D, possibly reducing the marginal return to government support. Thus, it is important that the policy measures are designed carefully in order that they provide strong incentives to augment innovation investments that have high social returns (Jaumotte and Pain, 2005).

1.5. Tax and spending measures to promote green growth

Many of the measures countries have taken to address the crisis have aimed to foster green growth, notably in the areas of infrastructure and taxation. Green growth has been put forward as a new paradigm to achieve simultaneously strong economic growth and a shift towards a cleaner economy, with particular emphasis on low carbon emissions. In 2009, OECD Ministers adopted a Green Growth Declaration with the aim of pursuing a shift towards sustainable low-carbon growth (OECD, 2009d).

In the area of capital structures, a range of efforts have been made to enhance the energy efficiency of buildings as well as to upgrade transport systems. Two-thirds of OECD countries (Australia, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Italy, Japan, Korea, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, the United Kingdom and the United States) have made investments that are intended to contribute to green growth (see Table 1.3). While most of these projects are in transport, such as high-speed rail and public transit, renewable energy generation projects were also an important focus. Some governments have devoted large parts of their stimulus to such efforts (notably Australia, Japan and Korea), and sought to stimulate the development of a new range of jobs related to cleaner production through tax incentives. However, unless used as a complement to more cost-effective policies – typically involving the pricing of environmental externalities and narrowly targeted (*e.g.* green R&D) subsidies, public spending on green investment and emission-reducing subsidies would prove to be relatively costly ways to lower emissions in the long term.

Green policy initiatives in the area of taxation have complemented investment measures. Efforts have been undertaken in half of OECD countries (Belgium, Canada, the Czech Republic, Denmark, France, Germany, Italy, Japan, Korea, the Netherlands, Portugal, Spain, Sweden, the United Kingdom and the United States) to promote cleaner energy consumption and the development of cleaner technologies through tax policy (see Table 1.5). This type of initiative includes tax subsidies on environment-related R&D, as well as taxes on pollution and energy consumption, that could help to achieve existing and future emission reduction objectives at a lower cost.

Some measures taken have uncertain environmental outcomes, such as car scrapping schemes, which help to remove less efficient vehicles from the roads, but may also encourage greater material consumption, vehicle use and ultimately increased emissions. Some industry support schemes have sought to have more environmentally-neutral effects by tying support to the development of less polluting vehicles. Such schemes should be carefully evaluated however, as there are often cheaper ways to achieve similar environmental objectives. More broadly, a cost-effective green growth strategy would primarily price pollutant emissions and use other policy instruments such as R&D support policies, regulations and standards or infrastructure spending to address other specific market failures. In the area of climate change mitigation, co-ordination across countries would also greatly lower the overall cost of meeting environmental objectives (OECD, 2009e). In the future, especially as a follow-up to the 2009 United Nations Framework Convention on Climate Change Conference in Copenhagen, broader use of environmental

taxes and other market-based instruments, such as cap-and-trade schemes with auctioned permits, could also contribute to fiscal consolidation and improve the overall efficiency of the tax system from a broad perspective including environmental considerations.

1.6. Labour market measures

Active labour market policy measures

Labour market policies can help to mitigate the negative employment effects of the crisis in the short term and to reduce the hysteresis that can result from a prolonged downturn over the longer run. Active labour market programmes (ALMPs) can help workers acquire new skills and in turn facilitate job transitions. While evaluations show highly variable – and in some cases even negative – returns (see OECD, 2006), the pay-off from ALMPs may be larger in the current situation since crises lengthen the expected duration of employment spells. This may for instance be the case for training programmes, as the need for job losers to change industry and upgrade skills is often larger, and the opportunity cost of training lower, in the wake of major recessions.⁸ Compulsory training programmes have also been found to facilitate the take-up of new jobs. It is also important to scale up ALMP expenditures as unemployment rises, in order to avoid the inefficient cuts in spending per unemployed that have typically been seen in past downturns. In terms of allocating ALMP spending, policies that can help reduce long-term unemployment at the current juncture include devoting greater resources not only to training programmes but also to helping workers search for employment, as well as targeting ALMPs on particular groups of workers that may be especially vulnerable to withdrawal or have difficulties entering or re-entering the workforce, such as youths or older workers (OECD, 2009f).

Resources devoted to enhancing and introducing new ALMPs during the crisis varied considerably across countries. Several countries dramatically increased their expenditure, most notably Korea, Japan, Mexico, Poland, Spain and the United Kingdom, although from a relatively low base (overall, about 0.6% of GDP on average). These countries all increased their spending by more than a quarter, with Spain's expenditure on such programmes reaching over 1% of GDP. More qualitatively, over two-thirds of countries made adjustments to their job search assistance programmes, with all but three of the remainder strengthening activation requirements to help the unemployed to find work (Table 1.6).

A strong emphasis has been put on training programmes for the unemployed. Virtually all OECD countries have made some efforts to expand and/or strengthen training, despite concerns about the feasibility of scaling up such programmes very quickly to meet the sharp increase in need while still retaining their effectiveness. Some programme design features need to be examined, since for instance, very few of these new programmes appear to be compulsory, weakening their potential positive effect on return to work through job-search incentives. In addition, some training through ALMPs is being offered to existing (employed) workers as well, and its effectiveness has not been clearly demonstrated and needs to be carefully monitored.

Many countries have also developed special measures dedicated to youths and others at the margin of the workforce. Such measures may be valuable in helping the transition of these vulnerable groups into the workforce, as well as from unemployment into employment (OECD, 2009f). They include training programmes, special job search assistance, apprenticeships and

Table 1.6. **Measures taken in the area of ALMPs**

Country	Activation requirements to help unemployed find work	Job search assistance and matching for unemployed	Training programmes to help unemployed find work	Training for existing workers	Apprenticeship schemes	Short-time work measures
Australia	X	X	X	X	X	
Austria		X	X	X	X	X
Belgium		X	X			X
Canada		X	X	X	X	X
Czech Republic	X					X
Denmark	X		X		X	X
Finland	X	X	X	X	X	X
France		X	X	X	X	X
Germany		X	X	X		X
Greece		X	X	X		
Hungary						X
Iceland		X	X	X		X
Ireland	X	X	X		X	X
Italy	X	X	X			X
Japan		X	X			X
Korea	X	X	X			X
Luxembourg						X
Mexico		X	X			X
Netherlands		X	X	X	X	X
New Zealand	X	X	X	X		X
Norway		X	X			X
Poland	X	X	X	X		X
Portugal	X	X	X	X	X	X
Slovak Republic				X		X
Spain	X	X	X	X		X
Sweden		X	X	X		
Switzerland						X
Turkey	X		X			X
United Kingdom	X	X	X	X	X	
United States		X	X	X		X

Source: OECD (2009f), OECD (2009k).

job subsidies. More than three-quarters of countries have implemented some type of programme dedicated to youth and most of the remainder have targeted other vulnerable groups, such as low-skilled workers, temporary workers and small businesses.

Short-time work schemes

An overwhelming majority of OECD countries have responded to the recent crisis by introducing or expanding short-time work schemes, which aim to reduce the labour costs of companies in temporary distress, cushion the incomes of workers and preserve jobs that would be viable in the long run (Table 1.6). Measures undertaken consist in extending the coverage of existing schemes to workers or firms not previously eligible (*e.g.* Belgium, France, Germany, Italy, Japan, Portugal), as well as in increasing the compensation paid to short-time workers (*e.g.* Belgium, France, Korea, Portugal and Turkey) and/or the maximum duration of benefits/subsidies (*e.g.* Austria, Canada, Finland, France, Germany, Luxembourg, Portugal, Switzerland, Turkey). Short-time work schemes have good resilience properties as they tend to limit hysteresis effects (Box 1.2). They should therefore be preferred to

Box 1.2. **How do structural policies affect the reaction of economies to macroeconomic shocks?**

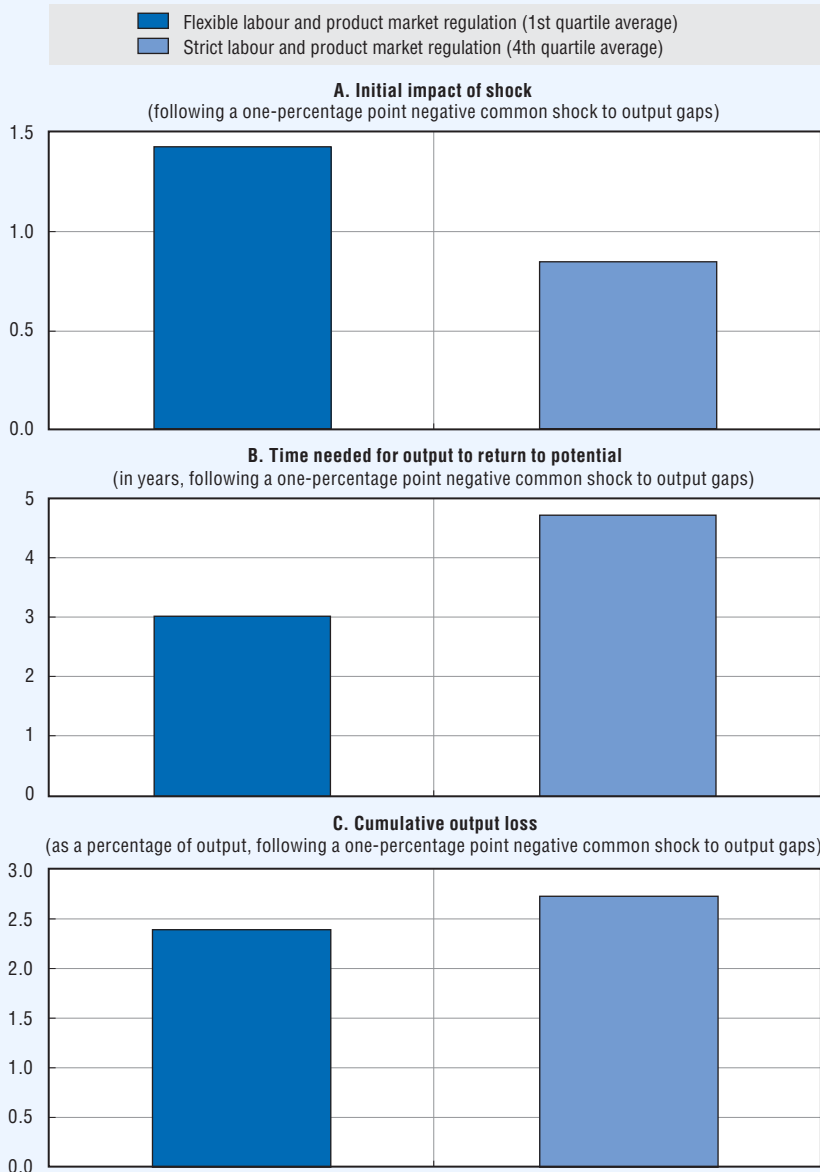
Many policy priorities identified in *Going for Growth* influence not only long-term material living standards but also how economies react to various macroeconomic shocks. Structural policy settings are likely to affect economic resilience, i.e. the ability of an economy to contain output losses in the aftermath of shocks. Resilience reflects both the size of the impact of the shock and its subsequent persistence. Because structural policy settings may have conflicting effects on these two dimensions of resilience, their overall impact is ambiguous *a priori*. For example, strict job protection may mitigate lay-offs and thereby dampen the short-term impact of adverse shocks, but by impeding the wage and employment adjustment process it can depress labour demand and delay the return of employment and output to their initial levels (Blanchard and Summers, 1986). Likewise, high and long-lasting unemployment benefits and other social transfer programmes may support short-term aggregate demand and the economy, while at the same time reducing job-search intensity (Machin and Manning, 1999) and willingness to accept job offers. At a broader level, there is some recent theoretical evidence to suggest that more rigid structural policy settings may lead to smaller but more persistent output reactions to certain shocks (Cacciatore and Fiori, 2009). This may hold especially for policies or institutions that increase wage or price stickiness (e.g. stringent EPL, high coverage of collective agreements bargained between unions and firms, and restrictive PMR), as these should trigger smaller but longer-lived responses of central banks to shocks (Duval and Vogel, 2008).^{*} In normal times, provided it is achieved in a way that does not hamper the stability of the financial system, competition in financial markets may also be an important determinant of economic resilience to shocks, in particular by influencing the strength of monetary policy transmission channels. For instance, countries with the most liberalised financial markets have been found to exhibit larger wealth effects from housing and financial assets (Catte *et al.*, 2004), thereby facilitating the macroeconomic stabilisation role of central banks. Given the peculiar nature of the recent crisis, these financial market transmission mechanisms have not operated as they had in the past. Their existence nevertheless underlines the need for regulation of securities markets to strike a delicate balance between stability and competition (see Chapter 6).

OECD empirical evidence finds support for conflicting effects of structural policy settings on resilience, but suggests that the net impact of more rigid policies may be detrimental (Duval and Vogel, 2007). As an illustration, some of these recent empirical results are used here to assess the overall impact of labour and product market regulations (as measured by a synthetic indicator of product market regulation, employment protection legislation, the level and duration of unemployment benefits and the wage bargaining system) on two alternative measures of resilience, namely the time needed for output to return to potential and the cumulative output loss in the aftermath of a common shock that reduces GDP by 1% on average in all OECD countries. This analysis abstracts from the possible effects of shocks on the level of potential output itself. As shown on the figure below, the initial impact of such a shock is estimated to be almost twice as large on average in a group of countries with relatively flexible labour and product markets (Canada, Great Britain, New Zealand, United States) than in counterparts with more stringent regulations

^{*} However, not all policy settings necessarily entail a trade-off between mitigating the impact of shocks and its persistence. For instance, the short-time work schemes implemented or reinforced by many OECD countries as a response to the recent crisis may cushion the initial impact of shocks, but unlike EPL they may have limited detrimental impact on subsequent wage adjustment and thereby may allow quicker return to potential.

Box 1.2. How do structural policies affect the reaction of economies to macroeconomic shocks? (cont.)

Structural policy influences on resilience to macroeconomic shocks



Source: OECD estimates based on Duval et al. (2007).

StatLink  <http://dx.doi.org/10.1787/786563271873>

(Austria, France, Netherlands, Portugal). But despite this, the cumulative output loss appears to be somewhat smaller in less regulated countries, as it takes over a year and half less for output to get back to potential, compared with more regulated counterparts. In the current context, this implies *ceteris paribus* that comparatively stringent policy settings may have dampened the initial impact of the crisis in most continental European countries, but could now delay economic recovery and possibly lead to larger cumulative output losses overall than in more flexible English-speaking and Nordic countries. Such a pattern was observed for instance in the aftermath of the 2000-2001 global economic

Box 1.2. How do structural policies affect the reaction of economies to macroeconomic shocks? (cont.)

downturn. It should however be noted that the effects of structural policies on resilience discussed here are of a relatively small scale compared with their impact on long-term income levels.

Two lines of empirical evidence suggest that structural policy settings may likewise determine the extent to which unemployment is durably affected by temporary adverse macroeconomic shocks. First, the long-term unemployed have been found to have less impact on market wages than their short-term counterparts, implying that increases in the prevalence of long-term unemployment could raise non-accelerating inflation rates of unemployment (NAIRUs) (Llaudes, 2005). Second, recent OECD work points to significant cross-country differences in the response of long-term unemployment to shocks on overall unemployment, with stringent PMR and high long-term unemployment benefit replacement rates amplifying the response, and public spending on ALMPs dampening it (OECD, 2009m).

stringent employment regulation to support employment during a short downturn, as they allow for a quicker return to potential and are expected to have less adverse effects on structural unemployment notably by limiting losses of firm-specific human capital. However, short-time work schemes could also delay economic recovery by hampering the reallocation of resources towards new and more productive activities. This type of measure should therefore be temporary, with clear incentives for workers and firms to exit the scheme as activity recovers, since otherwise it may turn into a permanent reduction in available labour input.

Labour market support measures

Half of the OECD governments have taken measures with respect to unemployment benefits in the context of the crisis (Table 1.7). About half of these actions have broadened eligibility criteria, thereby helping to expand the share of the working-age population covered by unemployment insurance. If combined with the enforcement of job search requirements, this will reduce the risk of poverty among some job losers, but also help them to keep contact with the labour market. At the same time, some countries have permanently increased benefit duration (France, Spain) and/or replacement rates (Belgium, Greece, Poland and Turkey). These measures may reduce precautionary saving and therefore help sustain aggregate demand but could damage long-run labour market performance, especially where benefit duration and/or levels were already fairly high (Belgium), since they reduce job-search incentives, unless accompanied by strong activation policies (OECD, 2006). Recent measures – but also pre-crisis support where excessive – should thus be re-assessed as the crisis passes to ensure that long-term unemployment levels do not rise. Temporary measures taken by other countries (Canada, Japan, Portugal and the United States) have been more consistent with the goal of maintaining long-run labour market performance. The crisis has also confirmed that reforms of job protection that promote atypical work patterns through temporary contracts, rather than addressing the stricter protection awarded on permanent contracts, not only raise labour market segmentation and insecurity, but also imply the risk of hardship as temporary workers have often not been covered by unemployment insurance.

Table 1.7. **Labour market measures taken**

Country	Eligibility for unemployment benefits	Change in duration of unemployment benefits	Change in replacement rate
Australia	Temporary easing		
Austria			
Belgium			Permanent rise
Canada	Adjusted to unemployment	Adjusted to unemployment	Temporary rise
Czech Republic			
Denmark			
Finland	Permanent easing		Temporary rise
France	Permanent easing	Proportional to affiliation period	
Germany			
Greece			Permanent rise
Hungary			
Iceland			
Ireland			
Italy			
Japan	Permanent easing	Temporary rise	
Korea			
Luxembourg			
Mexico			
Netherlands			
New Zealand	Temporary easing		
Norway	Permanent easing	Temporary rise	
Poland		Permanent reduction	Permanent rise
Portugal	Temporary easing	Temporary rise	
Slovak Republic			
Spain	Temporary easing	Rise	
Sweden	Temporary easing		
Switzerland			
Turkey			Permanent rise
United Kingdom			
United States	Temporary easing	Temporary rise	Temporary rise

Source: OECD (2009k).

In the context of rising unemployment, there may also be a temptation to open pathways to early retirement for older workers who lose jobs and to relax criteria for long-term sickness or disability benefits for job losers with some health problems. Such policies were pursued and failed in the past – notably in the 1970s and the 1980s – undermining labour supply and growth for a generation, without creating the job opportunities for younger workers that were envisioned (Duval, 2003; OECD, 2006). Fortunately, these schemes have not been expanded so far in the response of OECD countries to the current crisis, but caution will be needed to ensure that early retirement does not rise *de facto* via some relaxation of eligibility criteria to existing social transfer programmes (*i.e.* unemployment benefit or disability schemes). Besides, even without any policy change, damaging early exit from the labour force may occur regardless as a result of early retirement options that are still in place in many countries.

1.7. Regulatory and industry support measures

During a particularly large cyclical shock, some “temporary support” to certain sectors might help to delay or prevent irreversible capital scrapping and the associated sunk costs

in otherwise viable firms and industries. However, it is important that such measures be temporary, do not delay necessary industry restructuring and are not allowed to durably hamper competition. Otherwise they can reduce the incentives for new firms to enter markets and prevent resource reallocation throughout the economy, thereby impinging on productivity growth. Subsidies to particular domestic industries can also represent a form of trade protectionism insofar as they give domestic firms particular advantages over their foreign competitors (see *e.g.* OECD, 2009g).

Direct and indirect subsidies to particular sectors – some of which were already in place before the crisis – have been frequent, with one-third of OECD countries (Australia, Canada, France, Germany, Italy, Korea, Portugal, Spain, Sweden, the United Kingdom and the United States) offering some type of financial support for their automotive industries, and many countries engaging in activist interventions to forestall plant closure through managed bankruptcies and government-sanctioned mergers (see Table 1.8). Within the European Union, the amount of fiscal support for business has been considerable,

Table 1.8. **International trade and industry support measures taken**

Country	Tariff barriers and tariff rate quotas	Non-tariff restrictions ¹	Anti-dumping measures	Procurement measures	Subsidies for the auto industry (or related sectors)	Subsidies for other sectors and export refunds
Australia					X	
Austria						
Belgium						
Canada	X	X	X		X	
Czech Republic						
Denmark						
Finland						
France					X	
Germany					X	
Greece						
Hungary						
Iceland						
Ireland						
Italy					X	
Japan		X				
Korea	X				X	
Luxembourg						
Mexico	X	X				
Netherlands						
New Zealand						
Norway						
Poland						
Portugal					X	X
Slovak Republic						X
Spain					X	
Sweden					X	
Switzerland						X
Turkey	X	X	X			
United Kingdom					X	
United States	X		X	X	X	X
European Union	X		X			X

1. Examples of measures included: import quotas; licensing requirements; safeguard measures; import bans. Source: Gamberoni and Newfarmer (2009), OECD (2009h) and WTO (2009).

amounting to a quarter of a per cent of GDP in the median member state during the first half of 2009, and extending to the construction and tourism industries (EC, 2009a). This support may have insulated some sectors from the full shock of the crisis, and OECD investment guidelines, as well as EU and WTO rules, provide for emergency measures in response to a crisis. However, if these measures are not withdrawn sufficiently rapidly, they could have long-lasting distorting effects on firm dynamics (entry and exit) and competition, and thereby significantly hamper the structural changes needed (such as in the automobile industry, see OECD, 2009l) and reduce long-run productivity levels (OECD, 2003; *Going for Growth* 2007).

So far, the pressure to take more explicit protectionist measures has mostly been resisted during the crisis, and OECD countries have generally kept their WTO commitments to open markets. Besides, several measures have been taken to facilitate trade and investment following specific commitments of countries in the G20 (OECD-UNCTAD-WTO, 2009). Nevertheless, there has been a 28% increase in anti-dumping actions since 2008, after a long period of gradual decline from 2001 to 2007 (WTO, 2009), and a notable increased use of safeguards since the end of 2008 (EC, 2009b). Only a few OECD governments have imposed new tariff barriers: Turkey on iron and some cereal and fruit products, Korea on imports of crude oil, Canada on milk protein substances in the form of a tariff rate quota (see Table 1.8). Retaliatory duties have also been imposed by the European Union, Turkey and the United States in response to anti-dumping cases or as safeguard measures. Besides the European Union (which has decided to extend tariffs on shoe imports from China and Vietnam), three OECD countries (Canada, Turkey and the United States) initiated anti-dumping procedures. The United States initially imposed non-tariff barriers in the form of procurement requirements as part of its stimulus package ("Buy American"), but these provisions were later watered down. However, it is in the areas where WTO rules are either weak or non-existent that trade distortive measures may become more frequent. In particular, some local governments in OECD countries have imposed procurement requirements that discriminate against non-locally sourced products. Restrictive actions have been more frequent outside of the OECD though, with around half of the actions among developing countries involving new import duties (Gamberoni and Newfarmer, 2009). Any scaling-up of the limited range of restrictive trade measures taken so far could have serious consequences on growth given the fragility of the economic recovery (Box 1.3), and could have longer-lasting effects if they undermine broader efforts at trade liberalisation such as the long-delayed Doha Round.⁹

More generally, overly stringent product market regulations (PMR) have direct negative effects on both short and long-run economic performance by inhibiting competition and stymieing resource reallocation (Conway et al., 2006). In the context of the crisis, entry barriers to new firms and innovative technologies in particular (e.g. restrictions on networks that inhibit broadband access) could lower output in the short run, as well as slow productivity catch-up over the longer term.

In their response to the crisis, about a dozen OECD countries have taken various measures to reduce anti-competitive PMR (Australia, Belgium, Czech Republic, Hungary, Italy, Japan, Luxembourg, Mexico, Netherlands, Poland, Slovak Republic, Sweden and Spain) (Table 1.9). These measures included reduction of entry barriers through simplification of business start-up procedures, speeding up of administrative procedures, as well as adaptation of bankruptcy procedures to facilitate rapid restructuring. Such initiatives should make it easier for new firms to enter existing industries, and improve

Box 1.3. The possible effects of trade-restrictive measures

Protectionist pressures in OECD countries have so far been largely resisted, and although a number of G20 countries have used antidumping, safeguard measures and countervailing duties, these affected less than 0.5% of the total merchandise imports of G20 countries (Bown, 2009). Furthermore, some existing empirical evidence indicates that (most favoured nation) international tariff hikes implemented in the aftermath of sharp economic downturns have typically been small since the mid-1990s (Foletti *et al.*, 2009).

However, a number of factors that might still increase protectionist pressures going forward call for strong vigilance (Evenett, 2009): fiscal packages have not yet been fully spent and some of their distorting effects could gradually appear; the temptation of protectionism could increase as unemployment continues to rise; with the limited room for manoeuvre of monetary and fiscal policies, governments may be tempted to resort to trade and industrial policies in case of another weakening of economic activity; a significant increase in the use of trade-distorting measures by one single major country or area might trigger a domino effect. For instance, the European Commission estimates that from October 2008 to October 2009, 223 trade restrictive measures have been reported as planned or introduced, with a sharp increase in the number of initiations of trade defence instruments that may be used in a non-WTO compatible way to protect domestic industries (EC, 2009b). One “gravity”-based measure of *implicit* trade costs, by Jacks *et al.* (2009), suggest that trade frictions, including credit constraints, may have risen much more than explicit measures indicators suggest.

What could be the impact on international trade and economic growth of a worst-case scenario? During the Great Depression, world trade was divided by three and it is estimated that 25% to 50% of this collapse can be attributed to protectionist measures (Foletti *et al.*, 2009). Feeding these figures into recent OECD growth equations (OECD, 2003; Boulhol *et al.*, 2008) suggests that a trade collapse similar to that experienced during the Great Depression could cut long-run GDP per capita levels by between 3% and 6%. This estimate is however surrounded by considerable uncertainty, and amplifying mechanisms may imply an even larger reduction in long-run GDP per capita levels in the presence of such a large trade fall.

More restrictive product market regulations and higher other behind-the-borders barriers to trade would also be detrimental to living standards. As an illustration, past OECD work can be used to assess the potential impact of bringing OECD indicators of product market regulation back to their 2003 levels. Based on estimates in Nicoletti *et al.* (2003) and Boulhol *et al.* (2008), such a scenario could lead to a decrease in international trade of goods of about 20%, which in turn might lower GDP per capita by about two per cent in the long run. While they might be seen as fairly large, these figures do not take into account the effects from possible changes in trade between OECD and non-OECD countries, such as reduced trade in services, FDI restrictions, or increases in tariff barriers.

competition, new product innovation and productivity growth, *ceteris paribus*. These reforms will need to be maintained over the longer term in order to yield durable benefits on incomes.

Table 1.9. **Positive product market regulation measures taken**

Country	Easing entry barriers and promotion of small businesses and entrepreneurship	Regulatory reforms in support of R&D and innovation
Australia	X	
Austria		
Belgium	X	
Canada		
Czech Republic	X	
Denmark		
Finland		
France		
Germany		
Greece		
Hungary	X	
Iceland		
Ireland		
Italy	X	
Japan	X	X
Korea		X
Luxembourg	X	
Mexico	X	
Netherlands	X	
New Zealand		
Norway		
Poland	X	
Portugal		
Slovak Republic	X	
Spain	X	
Sweden	X	
Switzerland		
Turkey		
United Kingdom		
United States		X

Source: OECD (2009m), Responses to the European Commission questionnaire.

2. Sustainable growth after the crisis

Some of the structural policy measures described so far have helped OECD economies avoid the worst outcomes, by supporting short-term activity without significantly compromising longer-term growth or even, in some cases, enhancing it. To this extent, they have generally been consistent with the recommendations in last year's edition of *Going for Growth*. However, as noted, other policy measures with negative longer-term repercussions have also been undertaken.

The future structural policy agenda will not only be driven by the desire to raise incomes in the long run, but also by the need to restore sustainability of government finances. In particular, the relative magnitude and form of future spending cuts and/or tax increases will affect growth going forward. This section first discusses the impact of recent policies and the scope for further growth-enhancing measures, and then examines fiscal consolidation paths. Overall, the need to consolidate is more urgent than in the past, increasing the need for reforms. At the same time, the necessary reforms may be easier to undertake politically in the current crisis situation.

2.1. The impact of crisis policies on long-term growth

The impact of the measures discussed above on trend output is uncertain in the long term. However, there is some OECD and other empirical evidence to indicate the general magnitudes of possible impacts of these policy actions:

- Infrastructure investment is an area where the long-run impacts of expenditure on GDP per capita may be relatively high. Estimates of the size of multipliers for this type of investment have a wide range, and they can be as high as one meaning that a permanent increase in investment by 1% of GDP may be able to yield a sustainable additional increase of up to 1% in GDP per capita. However, the range of outcomes is highly variable, and may be as low as zero according to some studies, since projects may not always be chosen carefully and some countries have more developed infrastructure, which could mean then that fewer positive externalities would be found. Using a multiplier value of about 0.5 would imply that the 0.4% of GDP infrastructure investment response to the crisis could, if sustained, yield a long-term additional increase of about 0.2 percentage points in GDP per capita levels (see *e.g.* Shanks and Barnes, 2008).
- Tax cuts financed in the future by reductions in less productive public spending may also have relatively high long-run effects, similar in overall size to infrastructure investment, and possibly larger in the case of direct taxes. For instance, recent OECD analysis finds that a permanent cut in the overall tax burden ratio by one percentage point might raise GDP per capita levels by 0.2% in the long run, although there is wide uncertainty around this estimate (see Johansson *et al.*, 2008). This is the same order of magnitude as the average decline in (cyclically-adjusted) tax ratios across OECD countries in the aftermath of the crisis (OECD, 2009b). However, most crisis-related tax cuts are likely to be of temporary nature, as they have been implemented to restart the economy and will probably be removed as countries accelerate the pace of fiscal consolidation in the coming years (see the next sub-section). Cuts that are left in place will have to be accompanied by spending decreases in order to be sustainable.
- Innovation incentives such as R&D tax credits and subsidies are likely to boost research and development in the business sector and thereby long-run GDP per capita levels (Jaumotte and Pain, 2005). Although there is broad uncertainty in this area, OECD estimates suggest that a one-percentage point increase in the share of business R&D expenditures in GDP may increase GDP per capita by around 0.1 per cent in the long run (OECD, 2003). Much higher estimates have been found using models that allow for endogenous growth effects of R&D policies (*e.g.* Roeger *et al.*, 2008).
- Labour market reforms can have substantial effects on GDP per capita levels in the long run. This may hold for instance for reforms of unemployment benefit systems: a 10 percentage point increase in replacement rates could depress employment rates by about 2.5 percentage points, amounting to a roughly similar loss in GDP per capita levels, *ceteris paribus* (Bassanini and Duval, 2006). However, labour market policies based on activation principles may provide an offset, with a 10 percentage point increase in ALMP spending per unemployed as a share of GDP per capita typically associated with a decline in unemployment of at least ½ of a percentage point.¹⁰ Countries that have increased the level and/or duration of unemployment benefits without taking such counter-balancing measures may therefore wish to do so or, alternatively, reconsider the benefit measures as the economic situation allows.

Countries could also take advantage of this crisis to amplify long-run growth-enhancing measures that have remained modest so far:

- Reductions in anti-competitive product market regulation (PMR) can accelerate productivity convergence. Only modest steps to reduce PMR have been taken so far in this crisis, but aligning anti-competitive PMR to OECD best practice might raise GDP per capita levels by as much as 2.5% in the typical OECD country, based on estimates in Boulhol *et al.* (2008) that do not factor in possible gains arising further from higher private R&D spending and increased employment levels. By contrast, continued support to various industries could distort entry and exit incentives, and thereby *de facto* worsen PMR with negative effects on productivity and GDP per capita levels.
- In addition to tax cuts, there is some room within OECD countries to achieve permanent shifts in the overall tax composition that may have further permanent beneficial effects. As already mentioned, there is some evidence that a higher reliance on consumption and property taxes compared with income taxes may be positively related to GDP per capita. For instance, according to previous OECD work (Arnold, 2008), raising the share of consumption and property taxes in total tax revenues by one percentage point could raise long-term GDP per capita by $\frac{1}{4}$ per cent. Long-run GDP may be further increased if taxes on corporate revenues were decreased in relative terms compared with those on other tax bases.

At the same time, a number of downside risks exist. Many of the growth-enhancing measures have been costly and may be gradually removed as governments consolidate their public finances. For instance, any interruption of policies to support innovation and R&D would be of particular concern (Aghion and Marinescu, 2007) if credit constraints were to persist (Aghion *et al.*, 2008). While non-co-operative protectionist policies (*e.g.* non-tariff barriers, barriers to FDI, anti-competitive product market regulations¹¹) have been limited thus far, history suggests they could get worse especially if the recovery remains subdued and employment rates fail to recover. Moreover, governments may be more inclined to implement detrimental policies, such as those that encourage labour market exit, in a context where unemployment is likely to remain elevated even as the recovery proceeds.

2.2. Scenarios for returning to sustainable public finances

A major policy challenge faced by virtually all OECD countries in the next several years will be to restore sustainable fiscal positions. In addition, because the current worsening of fiscal positions is also due to structural factors (*e.g.* the disappearance of exceptionally high tax revenues, higher interest payments, lower potential growth, depending on countries), consolidation will have to go well beyond a mere removal of recent fiscal stimulus. Given its scale, this removal will have to occur gradually as economies recover. As countries have been hit by the crisis and will recover in different ways and also entered the crisis with different underlying fiscal positions, their fiscal consolidation paths may well differ. This is unlikely to raise major co-ordination issues, as coordinated fiscal tightening would in fact have mostly negative international externalities.

Structural policy reforms can raise potential output, and they thereby facilitate consolidation. In particular, measures raising potential output through higher structural employment levels will usually have a larger impact on fiscal balances than those raising potential GDP through higher labour productivity. On the expenditure side, higher employment reduces public spending on welfare benefits, while such benefits typically

adjust quickly to productivity gains. The positive impact of higher productivity on fiscal balances may also be reduced in case of a quick upward adjustment of public sector wages. On the tax receipts side, higher productivity is expected to increase the return on both capital and labour, and insofar as the marginal tax rate on capital income is lower than the one on labour income, the fiscal gain is lower than under a rise in structural employment that yields primarily income tax receipts.

Generally speaking, fiscal consolidation may have negative feedback on long-run GDP per capita levels if achieved through tax increases rather than spending cuts, although this varies depending on categories of taxes and expenditures (Cournède and Gonand, 2006). Given the magnitude of fiscal consolidations required in most countries, both spending cuts and tax measures are likely to be required. In the current context, priority should be given to measures on both fronts that are known to be the least harmful to growth. For example, although the link between public expenditures and potential output is prone to empirical uncertainty, cutting the most productive public spending, such as in education, R&D, transport and communication infrastructure or health could damage long-run living standards, unless such cuts are accompanied by sizeable productivity gains in efficiency. Improving public spending efficiency in these areas is thus clearly a priority as it would limit the extent of spending cuts and/or tax increases. Recent OECD estimates point to sizable potential efficiency gains from adopting best-practice policy settings in education and health.¹² Likewise, on the taxation side, as already mentioned, previous OECD work suggests that income taxes (and particularly those on corporate income) may be more harmful than consumption and property taxes.

As an illustration of the potential effects of fiscal consolidation on long-run GDP per capita, the consolidation scenarios identified in OECD (2009b) to bring government budgets back into or near balance might entail a permanent loss in GDP per capita of about one per cent on average across OECD countries if carried out exclusively through tax hikes (based on estimates derived from OECD growth analysis in Bassanini *et al.*, 2001, and Arnold, 2008). Nevertheless, these detrimental effects of fiscal consolidation could be mitigated if governments seized the opportunity to move towards a more growth-friendly tax structure. Consolidation will also represent a good opportunity to increase the share of environment-related fiscal revenue.

2.3. Addressing global current account imbalances

Another major policy challenge going forward will be to address current account imbalances so as to further improve global financial and economic stability. While fiscal consolidation will help reduce the United States' current account deficit, it will not contribute to restore external balance in surplus areas such as Japan and some European countries. In the latter areas, implementing structural reforms could indirectly reduce external surplus. Indeed, although the primary goal of structural reforms is not to address global imbalances, and their long-run impact on current accounts would be expected to be small since they boost both supply and demand, some of them can still have transitory side-effects by lowering the household saving rate and boosting investment (through an increase in permanent income and in the return to capital, respectively). In some non-OECD countries, especially China, structural reforms could also contribute to reduce surpluses.

The current account effects of structural reforms are likely to vary across countries and types of reforms, however, with financial and product market reforms likely to have more positive effects than labour market reforms. Financial market size has a significant

positive impact on investment, while more competitive and complete financial markets lower saving by lifting household credit constraints. Reforms that increase competition in financial markets – in parallel with strong prudential regulation – are therefore expected to weaken current accounts. Greater product market competition stimulates firm entry and investment, and also increases permanent income and thereby may induce households to consume more and save less. This latter effect is likely to be especially strong when financial markets are sufficiently developed and competitive to allow households to borrow against future income. This further highlights the role of financial market reforms for magnifying the current account impact of product market reforms in Japan as well as some non-OECD countries with surpluses. Labour market reforms may not necessarily reduce the household saving rate and improve current accounts. As suggested for instance by the German experience with the Hartz reforms, measures such as unemployment benefit cuts or relaxation of job protection can increase uncertainty and thereby precautionary saving for a while. Consistent with these theoretical considerations, there is some tentative empirical evidence (Kennedy and Sløk, 2005) that financial and – to a lesser extent – product market reforms have a negative impact on current accounts in the short to medium term, while the effect of labour market reforms is insignificant. Other types of reforms that directly affect saving may have much bigger effects, such as pension but also possibly health reforms.

Notes

1. The links between financial market regulation and competition are addressed in Chapter 6.
2. Although some of the measures reviewed in this chapter were planned or implemented before the crisis with other objectives in mind, the timing of their impact is such that they are considered here as part of the policy response to the crisis.
3. Iceland also imposed temporary capital controls.
4. There is some cross-country evidence that more stringent prudential financial regulation in some areas, including stronger capital requirements, has been associated with a lower net expected cost of financial sector rescue packages during the recent crisis (see Ahrend *et al.*, 2009). Also, provided supervisors are strong enough, higher capital requirements do not seem to undermine competition – rather they appear to actually strengthen it (see Chapter 6).
5. Table 1.2 shows the increase (or decrease) in government investment that has been made or is expected in OECD countries during 2008-11 relative to the 2000-07 average.
6. These estimates are differences from the 2000-07 average in cyclically-adjusted tax and output measures (Girouard and André, 2005), and should only be considered indicative of the actual size of fiscal impulse from tax cuts implemented as a response to the recession.
7. Moreover, lower marginal tax rates can induce second earners – usually women – to increase their hourly participation in the workforce. Recent OECD analysis suggests that a one-percentage point decrease in the marginal tax rate would typically raise the hours worked by women by around 0.7% (OECD, 2009c).
8. Whether the returns from training are larger in crisis times is nevertheless uncertain, given the difficulty in expanding such programmes rapidly (OECD, 2009f). Based on German data, Lechner and Wunsch (2009) find for example that the negative impact of undergoing training on job search intensity is smaller, and the positive long-run employment effects are larger when unemployment is higher. Conversely, McVicar and Podivinsky (2007) find in the context of the UK New Deal for Young People that ALMPs are less effective when the local unemployment rate is higher.
9. For instance, the European Union re-introduced export refunds for several agricultural goods in January 2009. This measure goes against the efforts of the Doha Round to reduce such farm subsidies. Reforms of producer support in agriculture could increase per capita GDP significantly (OECD, 2009h).
10. This estimate is also based on Bassanini and Duval (2006).

11. For instance, a reversion of PMR in seven non-manufacturing industries to the level of five years ago could lower GDP per capita levels by about 0.7% in the long run (based on estimates of Boulhol et al., 2008).
12. For example, if a typical school (at the primary and secondary levels) moved to OECD best practice, efficiency could increase by between 20% and 40% (Sutherland et al., 2007), with a budgetary saving for the average country amounting to close to ¼ per cent of GDP. In health care, a convergence of the average OECD country to international best performance could raise efficiency by up to one-third, with a budgetary saving of up to 2% of GDP.

Bibliography

- Aghion, P., P. Askenazy, N. Berman, G. Clette and L. Eymard (2008), "Credit Constraints and the Cyclicity of R&D Investment: Evidence from France", *Note d'étude et de recherche* 198, Banque de France.
- Aghion, P. and I. Marinescu (2007), "Cyclical Budgetary Policy and Growth: What Do we Learn from OECD Panel Data?", *NBER Macroeconomics Annual* 2007, Vol. 22, p. 251-278.
- Ahrend, R., J. Arnold and F. Murtin (2009), "Prudential Regulation and Competition in Financial Markets", *OECD Economics Department Working Papers*, No. 735.
- Arnold, J. (2008), "Do Tax Structures Affect Aggregate Economic Growth? Empirical Evidence from a Panel of OECD Countries", *OECD Economics Department Working Papers*, No. 643.
- Bassanini, A. and R. Duval (2006), "Employment Patterns in OECD Countries: Reassessing the Role of Policies and Institutions", *OECD Economics Department Working Papers*, No. 486.
- Bassanini, A., S. Scarpetta and P. Hemmings (2001), "Economic Growth: The Role of Policies and Institutions", *OECD Economics Department Working Papers*, No. 283.
- Boulhol, H., A. de Serres and M. Molnar (2008), "The Contribution of Economic Geography to GDP Per Capita", *OECD Economics Department Working Papers*, No. 602.
- Bown, C.P. (2009), "Antidumping, Safeguards, and other Trade Remedies", in S. J. Evenett, B.M. Hoekman, O. Cattaneo (eds.), *The Fateful Allure of Protectionism: Taking Stock for the G8*, CEPR-The World Bank.
- Cacciatore, M. and G. Fiori (2009), "Macroeconomic Effects of Product and Labor Market (De)Regulation: The Long and Short of Reforming Europe", Boston College, *Working Papers*, forthcoming.
- Catte, P., N. Girouard, R. Price and C. André (2004), "Housing Markets, Wealth and the Business Cycle", *OECD Economics Department Working Papers*, No. 394.
- Conway, P., D. de Rosa, G. Nicoletti and F. Steiner (2006), "Regulation, Competition and Productivity Convergence", *OECD Economics Department Working Papers*, No. 509.
- Cournède, B. and F. Gonand (2006), "Restoring Fiscal Sustainability in the Euro Area: Raise Taxes or Curb Spending?", *OECD Economics Department Working Papers*, No. 520.
- Duval, R. (2003), "The Retirement Effects of Old-Age Pension and Early Retirement Schemes in OECD Countries", *OECD Economics Department Working Papers*, No. 370.
- Duval, R., J. Elmeskov and L. Vogel (2007), "Structural Policies and Economic Resilience to Shocks", *OECD Economics Department Working Papers*, No. 567.
- Duval, R. and L. Vogel (2007), "How do Nominal and Real Rigidities Interact? A Tale of the Second Best", *OECD Economics Department*, Manuscript.
- Duval, R. and L. Vogel (2008), "Oil Price Shocks, Rigidities and the Conduct of Monetary Policy: Some Lessons from a New Keynesian Perspective", *OECD Economics Department Working Papers*, No. 603.
- EC (2009a), "The EU's Response to Support the Real Economy During the Economic Crisis: An Overview of Member States' Recovery Measures", *European Economy Occasional Papers*, No. 51, July.
- EC (2009b), "Fifth Report on Potentially Trade Restrictive Measures in the Context of the Global Economic Crisis", Directorate-General for Trade, Brussels, November.
- Evenett, S. J. (2009), "Stimulus Packages and Government Procurement", in S. J. Evenett, B. M. Hoekman, O. Cattaneo (eds.), *The Fateful Allure of Protectionism: Taking Stock for the G8*, CEPR-The World Bank.
- Foletti, L., M. Fugazza, A. Nicita and M. Olarreaga (2009), "Tariff Changes", in S. J. Evenett, B.M. Hoekman and O. Cattaneo (eds.), *The Fateful Allure of Protectionism: Taking Stock for the G8*, CEPR-The World Bank.

- FSB (2009), "Improving Financial Regulation: Draft Report of the FSB to G20 Leaders (Draft version)", Financial Stability Board, Basel, September.
- Gamberoni, E. and R. Newfarmer (2009), "Trade Protection: Incipient but Worrisome Trends", *Trade Notes*, No. 37, The World Bank.
- Girouard, N. and C. André (2005), "Measuring Cyclically-adjusted Budget Balances for OECD Countries", *OECD Economics Department Working Papers*, No. 434.
- Jacks, D.S., C.M. Meissner and D. Novy (2009), "Trade Booms, Trade Busts, and Trade Costs", *NBER Working Papers*, No. 15267.
- Jaumotte, F. and N. Pain (2005), "From Ideas to Development", *OECD Economics Department Working Papers*, No. 457.
- Johansson, Å., C. Heady, J. Arnold, B. Brys and L. Vartia (2008), "Taxation and Economic Growth", *OECD Economics Department Working Papers*, No. 620.
- Kennedy M. and T. Sløk (2005), "Structural Policy Reforms and External Imbalances", *OECD Economics Department Working Papers*, No. 415.
- Lechner, M. and C. Wunsch (2009), "Are Training Programs More Effective When Unemployment is High?", *Journal of Labour Economics*, Vol. 27.
- Llaudes, R. (2005), "The Phillips Curve and Long-term Unemployment", *European Central Bank Working Papers*, No. 441.
- Machin, S. and A. Manning (1999), "The Causes and Consequences of Long-Term Unemployment in Europe", in Ashenfelter, O. and D. Card (eds.), *Handbook of Labor Economics*, Vol. 3.
- McVicar, D. and J.M. Podivinsky (2007), "Does the Impact of Active Labour Market Programs Depend on the State of the Labour Market? The Case of the UK New Deal for Young People", *Discussion paper* No. 0704, University of Southampton.
- Nicoletti, G., S. Golub, D. Hajkova, D. Mirza and K.-Y. Yoo (2003), "Policies and International Integration: Influences on Trade and Foreign Direct Investment", *OECD Economics Department Working Papers*, No. 359.
- OECD (2001), *OECD Employment Outlook 2006 – Boosting Jobs and Incomes: Policy Lessons from Reassessing the OECD Job Strategy*, Paris.
- OECD (2003), *The Sources of Economic Growth in OECD Countries*, Paris.
- OECD (2006), *OECD Employment Outlook 2006 – Boosting Jobs and Incomes: Policy Lessons from Reassessing the OECD Job Strategy*, Paris.
- OECD (2009a), *OECD Economic Outlook: Interim Report (March)*, Paris.
- OECD (2009b), *OECD Economic Outlook 85 (June)*, Paris.
- OECD (2009c), "Policy Responses to the Economic Crisis – Investing in Innovation for Long-Term Growth", www.oecd.org/dataoecd/59/45/42983414.pdf, June.
- OECD (2009d), *OECD, Green Growth: Overcoming the Crisis and Beyond*, Paris, June.
- OECD (2009e), *The Economics of Climate Change Mitigation: Policies and Options for Global Action Beyond 2012*, Paris.
- OECD (2009f), *OECD Employment Outlook 2009 – Tackling the Jobs Crisis*, Paris, September.
- OECD (2009g), *Competition and Financial Markets – Key findings*, Paris.
- OECD (2009h), *Agricultural Policies in OECD Countries: Monitoring and Evaluation*, Paris.
- OECD (2009i), *The Financial Crisis: Reform and Exit Strategies*, Paris, October.
- OECD (2009j), "Moving Beyond the Crisis: Ensuring Sustainable Revenue", Centre for Tax Policy and Administration, Committee on Fiscal Affairs.
- OECD (2009k), "Addressing the Labour Market Challenges of the Economic Downturn: A Summary of Country Responses to the OECD-EC Questionnaire", Paris.
- OECD (2009l), *OECD Economic Outlook 86 (November)*, Paris.
- OECD (2009m), "The Role of Institutions in Explaining Long-Term Unemployment Responses to Unemployment Shocks", in *OECD Economic Outlook 86*.
- OECD (2009n), *Policy Framework for Effective and Efficient Financial Regulation*, Paris, October.

- OECD-UNCTAD-WTO (2009), "Report on G20 Trade and Investment Measures", September.
- Roeger W., J. Varga and J. Veld (2008), "Structural Reforms in the EU: A Simulation-Based Analysis Using QUEST Model with Endogenous Growth", *European Economy Economic Papers*, No. 351.
- Shanks, S. and P. Barnes (2008), "Econometric Modelling of Infrastructure and Australia's Productivity", *Research Memorandum, Australia Productivity Commission*, No. 08-01.
- Sutherland, D., R. Price, I. Joumard and C. Nicq (2007), "Performance Indicators for Public Spending Efficiency in Primary and Secondary Education", *OECD Economics Department Working Papers*, No. 546.
- WTO (2009), "Report to the TPRB from the Director-General on the Financial and Economic Crisis and Trade-Related Developments", *JOB(09)/30 and JOB(09)/62*.

