



OECD Economics Department Working Papers No. 937

**Fiscal Consolidation: Part 6.
What Are the Best Policy
Instruments for Fiscal
Consolidation?**

Robert P. Hagemann

<https://dx.doi.org/10.1787/5k9h28kd17xn-en>

Unclassified

ECO/WKP(2012)14

Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development

10-Jan-2012

English - Or. English

ECONOMICS DEPARTMENT

**FISCAL CONSOLIDATION
PART 6. WHAT ARE THE BEST POLICY INSTRUMENTS FOR FISCAL CONSOLIDATION?**

ECONOMICS DEPARTMENT WORKING PAPER No. 937

by Robert P. Hagemann

All Economics Department Working Papers are available through OECD's internet website at
www.oecd.org/eco/workingpapers

JT03314148

Document complet disponible sur OLIS dans son format d'origine
Complete document available on OLIS in its original format



ECO/WKP(2012)14
Unclassified

English - Or. English

ABSTRACT/RESUMÉ

Fiscal consolidation

Part 6. What are the best policy instruments for fiscal consolidation?

OECD countries face daunting fiscal challenges following the substantial surge in debt-GDP ratios during the past four years, from already high levels in many cases. Fiscal consolidation is now the order of the day, and it takes on greater urgency against the backdrop of imminent budgetary pressures from population ageing. While strong growth would help, the bulk of consolidation will require specific structural reforms to spending and revenue programmes to stabilise and then reduce debt-GDP ratios. On the spending side, many reform options offer budgetary savings through improved efficiency, without loss of desired outcomes or adverse equity impacts. Areas examined in this paper include health care, education, infrastructure, general public services, and transfer programmes. On the revenue side, countries' tax systems are perforated by tax expenditures that cause inefficiencies, reduce revenue, and undermine fairness. Reducing the scope and scale of tax expenditures remains one of the most promising means of boosting revenues while improving economic performance. Shifting taxation toward less inefficient tax bases also holds much promise, including raising the importance of both property taxation and environmental levies. Even without quantifying all possible measures, the cumulative cuts in spending and increases in taxation could yield 6% of GDP on average across countries in consolidation, with somewhat more on the spending side.

JEL Classification: H61

Keywords: Fiscal policy; fiscal consolidation; public finance

+++++

Consolidation budgétaire

Partie 6. Quels sont les meilleurs instruments de la consolidation budgétaire ?

Les pays de l'OCDE sont confrontés à de considérables difficultés budgétaires par suite du brusque gonflement, depuis des niveaux dans bien des cas déjà élevés, de la dette publique par rapport au PIB ces quatre dernières années. L'assainissement budgétaire est désormais la priorité du moment et devient de plus en plus pressant du fait de l'imminence des tensions budgétaires dues au vieillissement de la population. Si une croissance vigoureuse constituerait une aide incontestable, on ne pourra faire l'économie, pour assainir les finances publiques, de réformes structurelles spécifiques des programmes de dépenses et de recettes afin de stabiliser, puis de faire baisser les ratios dette/PIB. Du côté des dépenses, de nombreuses voies de réforme permettent de réaliser des économies budgétaires en améliorant l'efficacité, sans annihiler les résultats attendus ou avoir d'impacts défavorables du point de vue de l'équité. Au nombre des domaines étudiés dans ce document figurent la santé, l'éducation, les infrastructures, les services publics généraux et les programmes de transfert. Du côté des recettes, les régimes fiscaux des différents pays sont grevés par les dépenses fiscales qui sont sources d'inefficiences, amputent les recettes et sapent l'équité. Réduire la portée et l'ampleur des dépenses fiscales reste l'un des moyens les plus prometteurs de gonfler les recettes tout en améliorant la performance économique. La réorientation de l'imposition vers des assiettes fiscales moins inefficaces, notamment en donnant plus d'importance à l'imposition foncière et aux prélèvements environnementaux, est également très prometteuse. Même sans quantifier toutes les mesures possibles, les réductions de dépenses cumulées et le relèvement de l'imposition pourraient rapporter 6 % du PIB en moyenne dans les pays procédant à un assainissement de leurs finances publiques, la part de ce pourcentage attribuable aux réductions de dépenses étant un peu plus importante.

Classification JEL : H61

Mots-clés : Politique budgétaire ; consolidation budgétaire ; finances publiques

© OECD (2012)

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for commercial use and translation rights should be submitted to rights@oecd.org

TABLE OF CONTENTS

FISCAL CONSOLIDATION

PART 6. WHAT ARE THE BEST POLICY INSTRUMENTS FOR FISCAL CONSOLIDATION?	5
1. Introduction and key findings	5
2. Background and cross-cutting aspects	7
The overall challenge of consolidation	7
Strategic considerations	8
Practical considerations.....	10
3. Spending instruments	11
Improving efficiency	11
Reforming transfers and income support	22
4. Revenue instruments	32
General considerations	32
Tax expenditures	35
Tilting revenue toward less distortionary and corrective taxes.....	41
5. A policy matrix for growth-promoting fiscal consolidation.....	47
6. Conclusion.....	53
Bibliography	54

Boxes

1. Measuring the efficiency of public administration	18
2. The importance of incidence	34

Tables

1. Growth and composition of social spending	22
2. Tax structures	33
3. Trade-offs and complementarities between fiscal consolidation instruments and growth	48
4. Quantifying the contribution of various policy instruments to fiscal consolidation.....	51

Figures

1. Required improvement in the underlying primary balance	7
2. General government expenditure on individual and collective goods.....	9
3. Public and private health care spending in OECD countries.....	12
4. Budgetary savings from improved efficiency of health care systems	13
5. Total public spending on education	14
6. Estimated public service efficiency frontier in OECD countries.....	19
7. Government wages in OECD countries.....	20

8.	General government employment for selected OECD countries.....	21
9.	Non-health social transfers in OECD countries.....	22
10.	Share of transfers received by the top half of the population	24
11.	Implicit taxes on continued work at older ages versus pension up-take.....	26
12.	Disability benefits in OECD countries	28
13.	Disability benefit rolls rise markedly with age in some countries.....	28
14.	Government spending on income support	30
15.	Average of net replacement rates for unemployment.....	31
16.	Value added tax performance: the VAT revenue ratio	40
17.	Recurrent taxes on immovable property.....	42
18.	Environmental tax revenues in OECD countries.....	43
19.	User charges in OECD countries.....	45

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

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

FISCAL CONSOLIDATION

PART 6. WHAT ARE THE BEST POLICY INSTRUMENTS FOR FISCAL CONSOLIDATION?

by Robert P. Hagemann¹

1. Introduction and key findings

OECD governments are grappling with sizeable fiscal consolidation challenges, which are in some cases of unprecedented magnitude. In recent decades, a number of countries have succeeded in keeping a sound fiscal position, but the overall record has been lacklustre. Sustained high deficits and a widespread tendency to pursue a pro-cyclical fiscal policy had left countries with high levels of public debt by the mid-2000s. Both the direct consequences (*i.e.*, automatic stabilisers) of the economic and financial crisis and governments' discretionary fiscal responses to cushion the economic fallout resulted in a substantial increase in public indebtedness, to record post-World War II levels in some cases. The additional accumulated public debt aggravates the already large pre-crisis long-run fiscal gaps facing most countries. The current high levels of public debt are especially challenging, coming at a time when the long anticipated yet now imminent wave of retiring baby-boomers is beginning to have both direct (*e.g.*, higher pension and health care outlays, reduced social insurance contributions) and indirect (*e.g.*, demographically-induced lower potential growth) budgetary impacts.

Fiscal consolidation is fundamentally an exercise in discretionary policy making. In theory, and on the assumption that fluctuations in output are largely transitory, purely cyclically induced budgetary impacts are self-correcting. In practice, however, widespread structural imbalances and the secular rise of public debt reflect an underlying deficit bias, the main causes of which are increasingly understood as originating in the short-sightedness of politicians. While institutional reforms can be helpful in containing deficit (and pro-cyclicality) bias, including reliance on budget rules and independent fiscal agencies, credible fiscal consolidation requires the adoption of specific structural reforms to government spending programmes and revenue policies to stabilise and then reduce debt-to-GDP ratios to a prudent level. The challenge is to carefully balance several trade-offs. The pace and composition of consolidation has to consider the trade-offs between maintaining support for domestic demand on the one hand while, on the other hand, not risking larger consolidation costs later due to delaying fiscal adjustment. There may also exist trade-offs with other policy objectives, such as equity and growth. The political economy of deficit reduction obviously has to contend with the trade-off between efficiency and equity. A strategic approach to fiscal consolidation, however, enables the government to anticipate distributional impacts and adopt accompanying, or flanking, measures to protect vulnerable members of society and to tend to other policy goals.

This paper focuses on a number of specific structural spending and revenue reforms that hold promise of contributing to fiscal consolidation. Fiscal consolidation is a top-down process that entails in the first instance the determination of the size of the adjustment that is needed to secure a sustainable fiscal position, followed by establishing the balance between spending reductions and revenue increases. But it is in practice also a bottom-up process of identifying changes to specific government spending programmes

1. Robert Hagemann (Robert.Hagemann@gmail.com) is an independent consultant to the OECD Economics Department. This is one of the background papers for the OECD's project on Fiscal Consolidation (see Sutherland *et al.*, 2012 for the main paper). The author wishes to thank Jørgen Elmeskov, Peter Hoeller, Jean-Luc Schneider and Douglas Sutherland for helpful comments on earlier drafts. He also wishes to thank Susan Gascard for administrative and editorial support.

and revenue policies. These specifics constitute the “instruments” of fiscal consolidation. Given the myriad government interventions in the economy, the aim is not to be exhaustive, but instead to examine the major spending and revenue categories that hold the most promise of contributing, both directly and indirectly, to fiscal consolidation. Considerable work has been undertaken at the OECD in recent years identifying and quantifying both spending and revenue inefficiencies. This body of work offers policymakers key insights about the trade-offs and complementarities between policy goals when choosing specific instruments. On the spending side, numerous opportunities exist to improve the efficiency of government programmes and interventions in the economy in such ways as to achieve the same policy outcomes with fewer resources. On the revenue side, revenue systems can be improved considerably by pursuing growth-friendly reforms and reduce aggregate excess burdens. In many cases, due regard is needed to minimize adverse distributional effects, but in others, concerns are likely misplaced.

Section 2 of this paper considers some general and cross-cutting aspects of fiscal consolidation. Section 3 and 4 consider spending and revenue areas, respectively, that hold promise of contributing both directly, and through their impact on drivers of growth, to fiscal consolidation. Section 5 concludes. The remainder of this section summarises the key findings.

The key findings include:

- Efficiency improvements in many spending areas offer substantial opportunities for fiscal consolidation without sacrificing outcomes. The adoption of “best practices” in health care and education holds particular promise of yielding large budgetary savings while preserving, or in many cases improving, health status and educational attainment. Achieving efficiency gains in public service delivery more generally is also a promising path toward fiscal consolidation.
- Improvements in public infrastructure decisions and implementation offer opportunities for both direct budgetary savings and indirect consolidation gains by boosting growth potential. Better use of cost-benefit analysis in project selection on the one hand, and carefully designed (to minimise taxpayer exposure to contingent future costs) public-private partnerships on the other, would have favourable impacts on fiscal consolidation.
- Given the scale of ageing and other spending pressures, reforms to entitlement programmes need to be an important part of any longer-term sustainability strategy and could make a marked impact in reducing the amount of fiscal tightening to meet long-term debt objectives. Pre-funding makes sense for transitory demographic shocks but not for permanent ones such as increasing longevity. The coming demographic transition dictates that such reforms should be undertaken quickly, particularly given the long phase-in such reforms typically require. Reforms to pension systems, which delay retirement and increase labour force participation, can significantly reduce long-run budget pressures.
- Even revenue-neutral tax reforms can contribute to fiscal consolidation through efficiency gains from reducing harmful distortions. There is significant scope to broaden tax bases by eliminating tax expenditures. Particularly costly and ineffective tax expenditures include retirement savings incentives, favourable treatment of owner-occupied housing and tax-subsidised health insurance. These can be costly, with individual large items often accounting for 1% of GDP and total tax expenditures worth several percentage points of GDP.
- When tax revenues need to rise, adverse effects on growth need to be avoided. Environmental taxes, user fees for government services, taxes on immovable property and well designed financial sector levies offer the potential to support fiscal consolidation while minimising distortions.

- The distributional consequences of fiscal consolidation are best addressed by considering the tax and benefit system as a whole, judging whether the overall impact on income distribution can be considered fair. There may be scope to target transfers better to meet distributional aims, though this creates a trade-off between lower spending and adverse incentive effects due to higher effective marginal tax rates during the benefit withdrawal phase. Flanking measures may be required to mitigate the distributional consequences of some reforms.
- Even without quantifying all possible measures, the cumulative cuts in spending and increases in revenue (based on estimates of potential efficiency savings or reducing spending or of raising revenue to the OECD average, for various instruments) could yield around 7% of GDP in consolidation on average across countries, with somewhat more on the spending side.

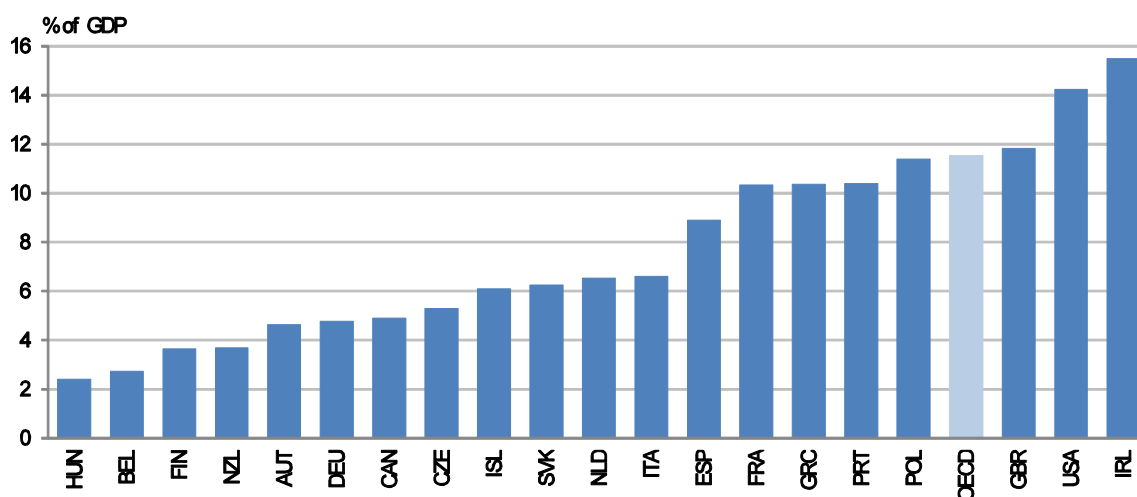
2. Background and cross-cutting aspects

The overall challenge of consolidation

The fiscal challenge facing OECD governments is daunting, and will require sustained, and in some cases quite large, discretionary efforts to restore viable long-run fiscal positions. For the OECD as a whole, the overall general government budget deficit reached an estimated 10% of GDP in 2010 – three quarters of which is judged to be structural – and the debt-to-GDP ratio is expected to exceed 100% of GDP in 2011 (OECD, 2010a). In many countries, the combination of current policies and prospective interest rates and potential growth rates will lead to continued increases in public debt. Measured against the primary budget balances required to reduce the debt-to-GDP ratio to, for instance, 60% by 2025, many countries will need to achieve extremely large fiscal adjustments (Figure 1).

Figure 1. Required improvement in the underlying primary balance

From 2010 onwards to achieve a debt-to-GDP ratio of 60% by 2025¹



1. The chart shows the total consolidation effort required to achieve a gross general government debt-to-GDP ratio equal to 60% of GDP by 2025. It assumes a constant improvement in the underlying primary balance each year between 2013 and 2025, calculated so as to achieve the debt target in 2025 and based on the improvement projected in each country between 2010-12. The required consolidation effort for Japan to achieve a debt ratio of 60% of GDP is not shown because it would call for a very large degree of tightening if this were to be achieved by 2025.

Source: OECD (2011a), *Going for Growth*.

OECD countries have by and large begun the process of consolidation, but with some timidity in many, given the substantial long-run challenges (OECD, 2011b). By the end of 2010, most countries had

spelled out detailed spending and revenue plans to achieve a near-term fiscal adjustment. However, only half had announced detailed plans for 2012, and only eight for the subsequent years to 2014. Given the continued unsustainability in the absence of durable measures, the outlook warrants that many governments devise more far-reaching plans. There have been many examples during the past several decades of sweeping structural fiscal reforms designed to restore sustainability (an essentially long-term concept), including among others Australia, Ireland and the Netherlands in the 1980s, Sweden and Belgium in the 1990s, and Germany in the 2000s.²

Strategic considerations

Restoring sustainability requires a coherent fiscal consolidation strategy. The coherence of a consolidation strategy depends on the extent to which the time profile envisaged for restoring sustainability and the chosen measures (spending cuts and revenue increases) are mutually reinforcing. Given the fragility of the recovery in most countries, fiscal consolidation needs to be conducted in such a manner as to avoid excessively contractionary effects on economic growth in the near term. The time profile will depend on, *inter alia*, the size of the output gap, the strength of short-run fiscal multipliers, the scope for offsetting monetary stimulus, and the potential costs of delayed action (OECD, 2010a). Some countries that need to regain market access rapidly may have few alternatives to front-loaded consolidation, with attendant risks to near-term growth.³ Other countries will have more time to phase in both fiscal changes and accompanying structural reforms, allowing individuals and businesses greater opportunity to adjust and adapt to the more far-reaching reforms that are needed for long-term fiscal sustainability. However, even front-loaders may succeed in avoiding the otherwise negative growth effects of consolidation if the reforms are perceived as having a sustainable impact on the fiscal balance. Indeed, several studies report evidence that fiscal contractions can be expansionary even in the short run, the positive effects occurring through a number of channels, including lower risk premia due to restored sovereign credibility and a reduced likelihood of needing even more drastic fiscal measures in the future (Giavazzi and Pagano, 1990, 1996; Alesina and Perotti, 1995, 1997 and Alesina and Ardagna, 1998, 2009).

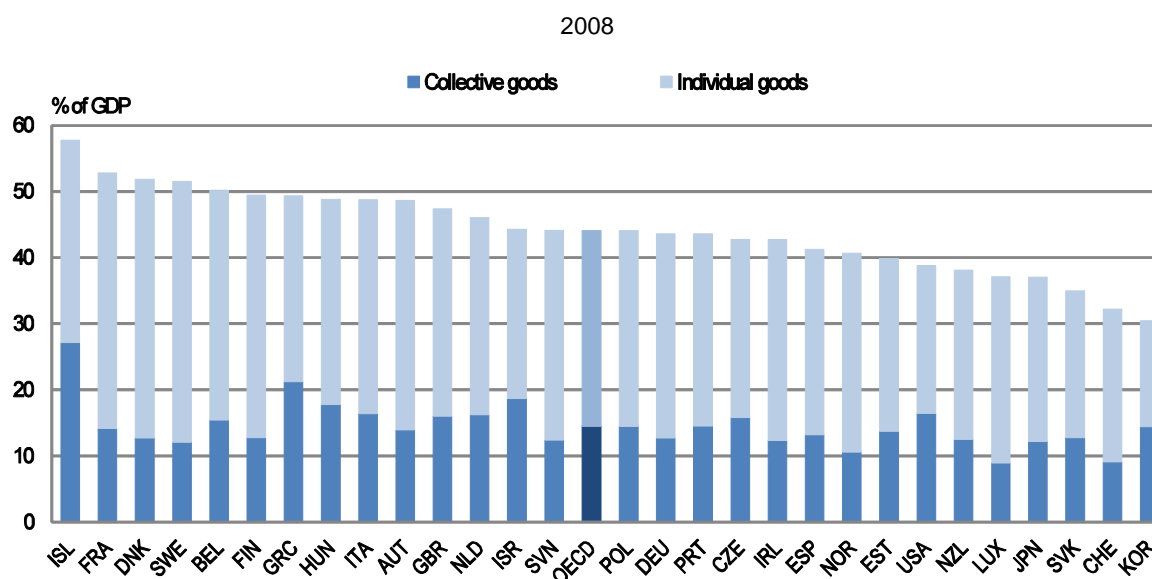
Large fiscal consolidations will likely require both reductions in public spending and revenue increases. The mix, however, should be based on a careful consideration of the efficiency and growth effects, together with a careful consideration of the distributional consequences of policy choices. There is solid and mounting evidence that a fiscal consolidation that favours reductions in current primary spending (both government consumption and transfers) holds greater promise of durable deficit reduction than one that favours tax increases (Guichard *et al.*, 2007). One reason for this is that tax increases can lead to increased costs and prices (Ahrend *et al.*, 2006). Another reason is that if the marginal social cost (inclusive of the *excess* burden) of an additional unit of taxation exceeds the marginal social benefit of existing spending, positive effects can be expected from taming excessive spending.

Given the current high levels of public spending and the future spending pressures expected from population ageing in most countries, an overarching policy question for fiscal consolidators is: what is the appropriate role of government? Raising roughly 35% of GDP on average across the OECD, many current tax regimes inevitably blunt incentives to save, work, invest, and innovate, reducing GDP (OECD 2010b). Since spending must at some point be financed by taxation, the underlying level of required taxation is largely determined by the “permanent” level of government spending; taxes have to be collected either explicitly today or tomorrow, or debt can be eroded via unexpected inflation. While there is no analytical

-
2. See Guichard *et al.* (2007), Blöchliger *et al.* (2012) and Molnar (2012) for an investigation of past consolidations.
 3. Of course, to the extent that lack of market access – in the absence of strong, front-loaded adjustment – might lead to higher interest rates, the counterfactual (to slower growth due to the front-loading) could plausibly lead to a worse growth outcome.

solution for determining the “optimal” size of government, an accepted tenet of public finance is that the marginal net social costs – inclusive of the excess burden of taxation – of additional units of public expenditure increase more than proportionately with the additional taxation needed to finance spending (abstracting from taxes designed to correct externalities). At some level of taxation, the marginal net social costs of government spending exceed their marginal social benefits. In view of governments’ sizeable deficits and high levels of public debt, the question arises whether cost-benefit analyses continue to justify all the responsibilities that have been assigned to government over time, or on the same scale.

Figure 2. **General government expenditure on individual and collective goods**



Note: Individual goods and services are those that primarily benefit individual citizens directly, such as social services, health care and education. Data for New Zealand concern 2005.

Source: OECD (2011), *OECD Government at a Glance 2011*.

If the first step of a consolidation strategy ought to be assessing the desired size and scope of government, including redistribution, the second is to ensure that the goals of government are being achieved efficiently. Governments deliver to varying degrees both collective goods (*i.e.*, public goods, such as national defense and law enforcement) and benefits to individuals (both in cash and in kind), which include such things as social services, health, education, and social transfers. For a sample of 13 countries for which such classifications can be made, the share of government spending allocated to individuals is far greater than for collective goods (Figure 2). There is broad consensus that government should provide pure public goods since these are, by definition, both non-rival and non-excludable. Moreover, since the marginal cost of providing an additional unit of a public good to another recipient is zero, market mechanisms (*i.e.*, direct price signals) play no role in rationing the supply of the good. This in turn justifies the use of general taxation to finance collective goods, although the efficient level of such goods would still be governed in part by concerns about the deadweight losses incurred through distorting taxes. Focusing on productive efficiency – that is, minimizing inputs in achieving the desired outcomes – is also important. In the case of “goods to individuals,” it is useful to distinguish between social transfers on the one hand and goods and services on the other. For redistributive transfers, the goal should be to minimize deadweight losses through good programme design and effective targeting, and limiting errors of inclusion and exclusion. For goods and services to individuals that admit to price rationing (*e.g.*, roads, education, health care, garbage collection, etc.), the government has several options: to either produce the service itself, contract with the private sector, or resort to regulation of the private sector. How best to achieve the

various goals and objectives that are retained for the public sector – that is, achieving the best outcome at the lowest cost, including deadweight losses – should lie at the heart of fiscal consolidation planning.

Tax policy reforms are also an essential element of fiscal consolidation. An effective revenue effort to help achieve fiscal consolidation is one that is guided by both efficiency and fairness concerns, including the role that taxation can play in addressing both positive and negative externalities. Indeed, revenue-raising tax reforms should minimize efficiency costs. Much is known and generally agreed, both in theory and practice, about the efficiency effects of various taxes, even if there is often some uncertainty surrounding the ultimate incidence of many taxes. A minimum goal of fiscal consolidation should be to carefully redesign existing taxes to exploit efficiency gains that in turn can boost growth, contributing to deficit reduction both directly and indirectly through greater potential output.

Practical considerations

While the previous considerations offer conceptual guidance in formulating an overall consolidation strategy, the choice of consolidation instruments will depend on a number of practical factors. For instance, the choice will be affected by the urgency of deficit reduction on the one hand and the speed and magnitude of the direct budgetary impact of an instrument on the other. Indeed, some measures that may hold great promise of boosting long-run growth and restoring sound public finances in the future may have limited immediate impact. Alternatively, some measures may have a large direct and immediate impact but, if easily reversible, will contribute little to restoring sustainability. Another consideration is the extent to which a chosen long-term deficit-reducing instrument might need to be accompanied by near-term deficit-increasing flanking measures to help achieve the ultimate objective. For instance, if an ultimate policy goal is to shorten the duration of joblessness, reduced generosity of unemployment benefits would need to be accompanied by additional (and better) spending on training and other active labour market programmes (ALMP). Furthermore, the impact on aggregate demand in the short and medium-term will influence the pace of fiscal consolidation. The choice of instrument will also be affected by distributional and political economy considerations, which may prevent policy makers from pursuing first-best policy choices. These are all legitimate considerations that need to be addressed in the formulation of a fiscal consolidation package that is designed to minimise trade-offs. In this regard, a major theme of the recent *Mirrlees Review* (2010) is that reforms should consider the tax-benefit system as a whole, choosing the best instruments to meet the different objectives.⁴

On the spending side, improving efficiency, tailoring instruments to ease trade-offs, introducing benchmarking and in some cases reforming unsustainable spending programmes present opportunities for savings. Improving efficiency in major spending areas could yield important savings, although probably only gradually. For example, in areas such as health and education, many countries have room to restrain spending without jeopardising policy outcomes. Improving decision-making on government investment could also contribute to greater efficiency in government spending. Minimising costly trade-offs is an important consideration for some social transfers. For example, generous unemployment benefits may hinder the return to work after the crisis, although reform needs to consider possible spillovers if claimants can switch to other benefits. For government wages there is usually no benchmark available to assess whether they are set too high or too low, but given the large size of the wage bill in government budgets, developing benchmarking would be important. Finally, in some cases (for instance, pensions), spending may in some countries be clearly unsustainable in the long term, requiring deep reforms that need to be phased in over a sufficient period to allow households to adapt their saving behaviour.

4. This approach underpinned the ongoing tax and transfer reform options and initiatives in Australia (Commonwealth of Australia, 2010).

On the revenue side, OECD countries' systems offer numerous opportunities to improve both the efficiency and the fairness of taxes. Recent work by the OECD's Economics Department on taxation and economic growth (Johansson *et al.*, 2008) demonstrates how tax systems could be reshaped to be less harmful to growth or to address externalities. These include environmental taxes that correct for negative externalities and taxes on property and consumption (*e.g.*, value-added taxes). But even in the absence of a substantial restructuring in favour of less inefficient sources of revenue, improving the design of existing schemes offers considerable opportunity to improve not just overall efficiency, but horizontal and vertical equity as well, and to make compliance easier. For instance, broadening the tax base by phasing out unjustified tax expenditures would increase efficiency, and make the tax systems more transparent while also achieving substantial revenue gains. Where tax reforms risk having adverse impacts on low-income households, the government can anticipate and design remedial protective measures.

3. Spending instruments

This section reviews a number of key spending instruments. While some governments may choose to consider the elimination of specific spending programmes altogether, many can find potential savings through substantive reforms. These can include improving the efficiency of service delivery in a number of programmes, from health care to education and public services in general. Further savings can be achieved through improved social transfers, on which governments spend a considerable amount, especially in continental Europe. Spending reforms that reduce outlays without sacrificing outcomes are doubly attractive insofar as many initiatives also hold promise of boosting allocative efficiency, with positive feed-through impacts on growth.

Improving efficiency

Health care

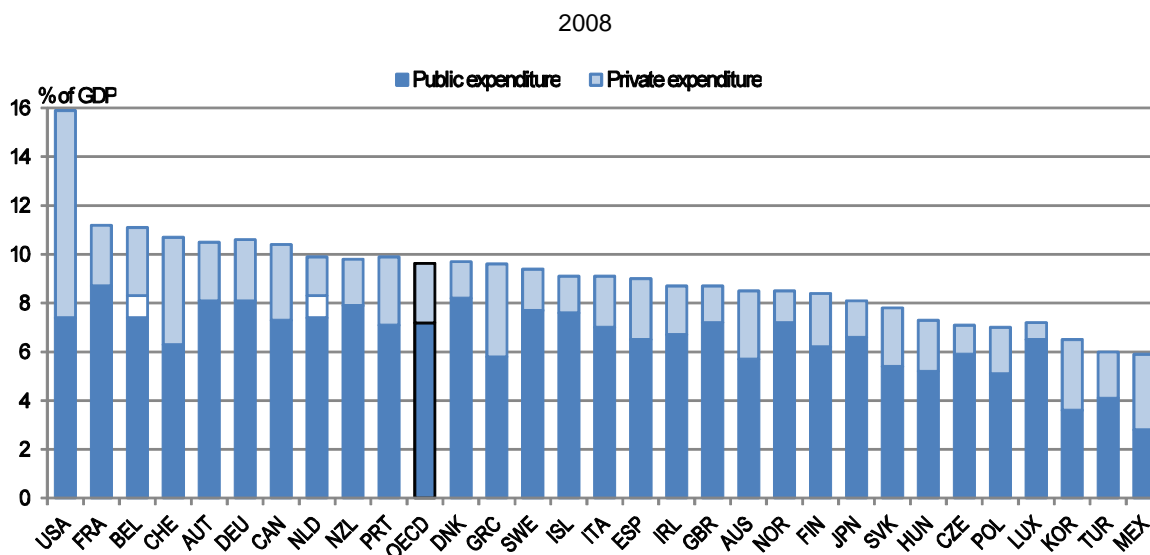
Government interventions in countries' health care systems are pervasive throughout the OECD and reflect a number of well-received reasons. Broadly recognised motivations for public involvement in health care include the existence of market failures arising from asymmetric information and adverse selection, as well as the desire to ensure that access to an adequate level of health care services is determined by need rather than solely by ability to pay. At the same time, health care, like any non-rival and non-excludable good or service, has to be rationed, whether or not it is perceived as an entitlement. Fiscal pressures have increasingly forced governments to intensify efforts to improve the efficiency of health care spending in particular, and the effectiveness of the health care system as a whole in improving health outcomes.

Health care spending poses serious challenges for all OECD countries. Aggregate real per capita health care spending has grown by over 70% on average in OECD countries since the early 1990s. Given the prominent role of governments in financing and delivering health care services (Figure 3), this growth has been accompanied by substantial increases in public spending on health care. By 2007, health care spending alone accounted for about 15% of general government spending in the OECD area, up from 12% in 1995 (OECD, 2010c). A significant portion of the growth of health care spending can be attributed to so-called excess cost growth (ECG), which refers to growth in excess of what is due to rising incomes and demographic factors. Both demand-side factors (rising real incomes and population ageing) and ECG (largely supply-side factors) will, on unchanged policies, contribute to sizeable increases in total (private plus public) health care spending over the coming decades.⁵ On unchanged policies, public health care

5. Empirical evidence suggests that demographics account for only about a quarter of the overall growth of health care spending; the remaining $\frac{3}{4}$ are due to real income growth, lower productivity growth in the medical services sector relative to other sectors (*i.e.*, the so-called Baumol effect) (Pomp and Vujic, 2008), health policies and institutions and, in large part, the increasing use of effective but costly advances in medical technology (IMF, 2010a).

spending could increase by 3 to 6 percentage points of GDP by 2050 (OECD, 2010c). By one estimate, the net present value of the projected increase in public health care spending over the period 2011-30 could reach 26% of today's GDP for advanced and emerging market economies as a whole (IMF, 2010a).

Figure 3. Public and private health care spending in OECD countries



Source: OECD (2010), OECD Health Data 2010, October.

A variety of institutional arrangements exists throughout the OECD for health care financing and delivery. While most countries (except Mexico, Turkey and the United States prior to enactment of the 2010 health care reform) provide basic insurance coverage, measured by population covered, services included and degree of cost sharing. Some countries rely heavily on centralised command-and-control systems to steer supply of and demand for services, while others allow competition to play, driven by user preference and a regulated private insurance market. As well, there is an increasing mix of the two. A key conclusion of recent analysis undertaken at the OECD (Joumard *et al.*, 2010a and 2010b) of the efficiency of health care systems is that there does not appear to be a single, superior system. A second and related lesson is that “big-bang” reforms are not warranted; incremental reforms based on tested and demonstrated approaches, can often be introduced within an existing scheme to deliver increased efficiency, measured in terms of health outcomes.⁶ A third conclusion is that there is no trade-off between achieving more equal health outcomes on the one hand and raising the average health status of a population on the other. Indeed, some of the countries with the lowest degree of inequalities in health status also enjoy the highest average health status (Iceland, Sweden and Italy, for example).

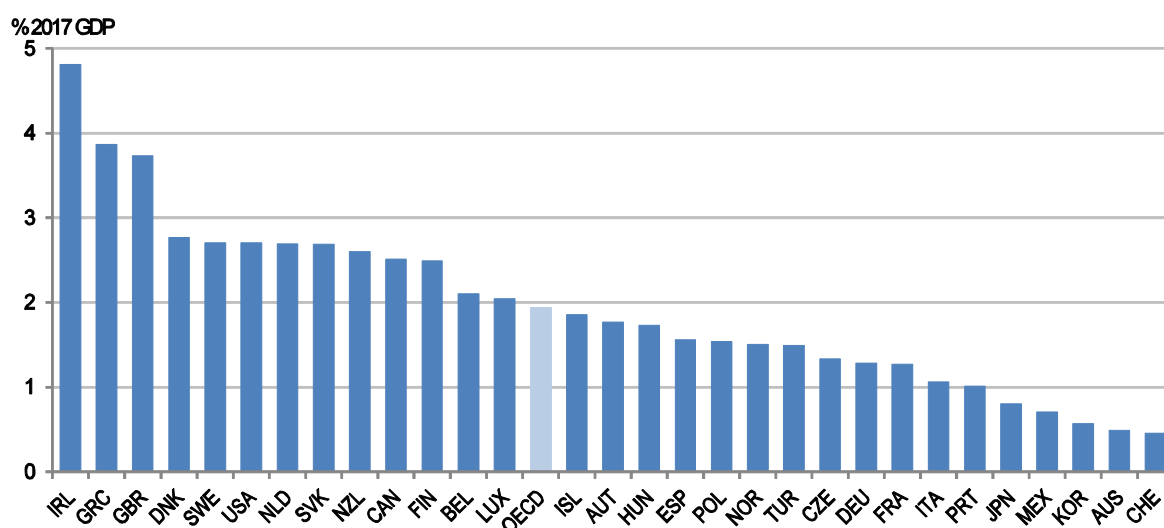
While a “one-size fits all” arrangement is not required, a number of recommendations can improve health care efficiency and outcomes. Strengthening the role of incentives in conditioning the demand for health care services should be a key element of reforms to health care. For countries relying heavily on public sector systems, this would entail introducing or increasing the role of cost-sharing to enhance patient cost-consciousness. As a general rule, the greater the role of third-party payments in the system, the

6. Measuring efficiency in the health care sector is complicated. As typical “outputs” of health delivery systems are poor proxies for the impact of medical treatments on health, a potentially superior way of measuring efficiency (which compares inputs to output) is on the basis of health *outcomes*. These include a range of measures, including life expectancy, potential years of life lost, infant mortality, health – adjusted life expectancy, and amenable mortality, among others (Joumard *et al.*, 2010a).

lower the sensitivity of consumers of medical services to prices, although excessively high co-payment rates can lead to reduced health outcomes (Gruber, 2006). Alternatively, increasing the role of private insurance has been found to be associated with lower ECG (IMF, 2010a), although such expansions need to be accompanied by appropriate regulations to ensure fairness, access, and efficiency. For instance, greater reliance on private health insurance requires that legal and regulatory means be in place to prevent “cherry-picking” or pricing based on existing health status rather than demographic factors.

Countries adopting “best practices” can achieve substantial efficiency gains, which in turn offer two highly desirable options. A reformer can either continue to realise the same health outcomes at a reduced resource cost or, alternatively, use the efficiency gains to improve the population’s overall health status at unchanged real spending levels. The potential gains to health outcomes from efficiency-raising reforms (defined as achieving the same level of efficiency as the “best” performers in the OECD) could be substantial. Holding health care spending unchanged, life expectancy at birth could be raised potentially by more than two years on average across the OECD (Joumard *et al.* 2010a and 2010b).⁷ By contrast, in the absence of greater efficiency, an estimated 30% increase in health spending would be required to achieve the same improvement in life expectancy. Thus, improved efficiency of most countries’ health care system could generate substantial budgetary savings (Figure 4), on the order of 2% of 2017 GDP on average, relative to a no-policy scenario OECD (2010c).

Figure 4. **Budgetary savings from improved efficiency of health care systems**



Note: Potential savings represent the difference between a no-reform scenario and a scenario where countries would exploit efficiency gains. The no-reform scenario assumes that between 2007 and 2017 life expectancy and spending increase at the same pace as over the previous 10 years and that the mix between public and private spending remains constant over time.

Source: OECD (2010c), “Health Care Systems: Getting More Value for Money”, *OECD Economics Department Policy Notes*, No. 2.

Improved efficiency in health care promises far-reaching economic benefits. First, to the extent that reforms contribute to fiscal consolidation, the reduced levels of public dissaving and debt help lower interest rates, with knock-on effects on growth and employment. Second, to the extent that reforms improve the average health status of the population, they would also hold the potential of increasing the

7. Life expectancy is not the only dimension of health status, but it is highly correlated with other indicators of health status. At the same time, it’s important to note that the methodology used by Joumard *et al.* (2010b) would assess as “inefficient” health system improvements that improve the quality of life while leaving unchanged estimated life expectancy (IMF, 2010a).

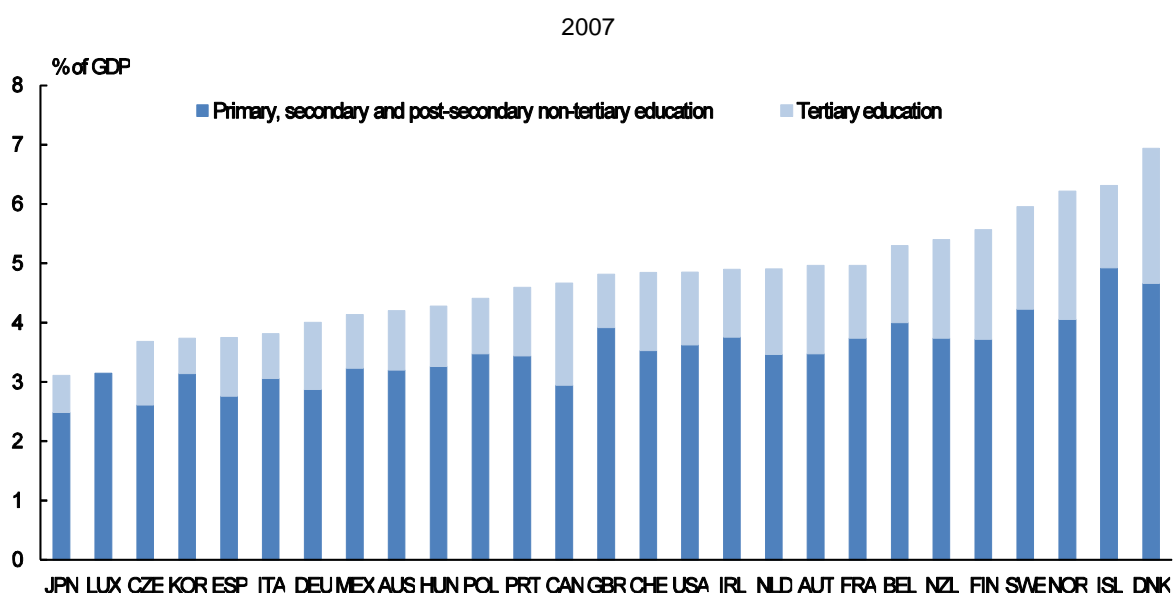
productivity of the workforce, in turn feeding through to higher real wages. Effective reform of the health care system is a clear win-win proposition.

Education

Public provision of and support for education is widely agreed to be a fundamental responsibility of government. While education is neither non-rival nor non-excludable and, therefore, does not satisfy the key criteria for public goods, there is near universal agreement that positive externalities justify a role for government. Primary and secondary education is widely recognised as benefitting society as a whole, and helps to create a more cohesive society by ensuring more equal opportunities. Similar justifications have been extended to higher education, and virtually all OECD governments, to varying degrees, provide financial support to post-secondary institutions. In 2007, OECD governments spent on average 5.7% of GDP (13.3% of total government spending) on all levels of public education (Figure 5). While the bulk of spending is for primary and secondary schooling, on average a quarter is spent on tertiary education, and a substantial portion of the latter is for direct subsidies to households and other private entities (OECD, 2010*d*).

Influenced by the link between educational attainment and economic growth, many governments have undertaken reforms that have been accompanied by spending increases. Indeed, from 1995 to 2007 (and notably before 2000), public expenditure on education rose faster than total government spending, the share of education spending in total spending rising by 1.2 percentage points (OECD, 2010*d*). The bulk of the increase in many countries has been due to higher spending per student (reflected, for instance, in higher teacher-pupil ratios or increases in the relative pay of teachers). However, there is at best only a weak correlation between educational outcomes (as measured by student performance on standardised tests) on the one hand and spending or teachers-per-student on the other. In turn, a more promising direction for reform is to improve the effectiveness of the use of inputs, particularly at the primary and secondary school level. Attaining efficiency gains at all levels is seen as a means of either improving educational outcomes at unchanged levels of spending, or of reaching the same levels of educational attainment at lower resource cost.

Figure 5. Total public spending on education



Source: OECD, *Education at a Glance Database*.

Recent empirical work confirms both the presence of inefficiencies in the education systems of many OECD countries and that sizeable gains (either budgetary savings or improved outcomes) can be achieved through more effective use of inputs. Both non-parametric (*e.g.*, data envelopment analysis) and stochastic (*e.g.*, stochastic frontier analysis) quantitative techniques point to large differences in the efficiency of the best OECD performer in achieving high student performance in primary and secondary education (Sutherland *et al.*, 2007).⁸ In turn, the scope for savings is substantial, reaching as much as a third for the median school if it raised its level of efficiency to that of the best performer. Broadly similar results are obtained at the national level, controlling for the effects of socio-economic background and educational attainment. Finally, even greater efficiency gains can be achieved by reducing inputs while holding outputs constant, whereby estimated resource savings range from 19% on average to 40% for the least efficient performer. In terms of potential budgetary savings, this amounts to roughly 1% of GDP on average.

While the optimal configuration of efficiency-enhancing reforms will vary from one country to another, the literature has identified a number of institutional determinants of the effectiveness of primary and secondary education (Gonand *et al.*, 2007), which in turn suggest areas for reform. First, the budget process can be made more responsive to educational needs (which may vary geographically) through, for instance, increased decentralisation of responsibilities to allow budgetary allocations to match local needs.⁹ Second, efficiency in budget management can be improved by ensuring that policies are focused on improving outcomes (*e.g.*, better PISA scores) and that managerial autonomy is granted at the school level (with due regard to accountability).¹⁰ Third, productive efficiency can be improved by injecting more competition in service provision through sharpened price signals, and allowing these to impact educational supply and demand choices. Benchmarking (*i.e.*, tracking best practices) and augmenting user choice among alternative providers of educational services may be one of the most effective means of boosting efficiency in primary and secondary education.

In addition, both direct budgetary savings and overall welfare gains could be achieved in many OECD countries by also pursuing reforms of tertiary education. Higher education poses a number of specific concerns (Oliveira Martins *et al.*, 2007), several of which can be addressed directly by reforms to public sector policies affecting the sector. Concerns include: *i*) incentives are not always in place to achieve excellence and responsiveness to labour market needs (*i.e.*, allowing students to seek, and institutions able to deliver, knowledge that satisfies changing labour market requirements); *ii*) a large share of total returns to education accrue to individuals rather than to society more generally, weakening the case for generous untargeted subsidies; *iii*) public funding is on balance regressive; *iv*) many countries lack adequate financing schemes to enable less well-off young people to pursue university training; and *v*) the international mobility of highly-skilled workers can raise private returns while simultaneously lowering fiscal returns from providing university education.

Several studies have shown that the private returns to tertiary education are relatively high (Blöndal *et al.*, 2002 and Oliveira Martins *et al.*, 2007). While the more recent estimates are slightly lower than previously found, they are still substantially higher than current market real interest rates. Internal rates of return (IRR) for 21 OECD countries for which estimates have been made range from 4% to over 14%

-
8. Data envelopment analysis (DEA) constructs an efficiency frontier based on the input and output data from all countries and schools of a sample. The frontier, by assumption, determines “best practice.” Possible efficiency gains for specific schools or countries are measured by their position relative to the estimated frontier. Results obtained from the stochastic frontier analysis are used to provide a check on the robustness of the results from the DEA (Sutherland *et al.*, 2007).
 9. Excessive decentralisation can result in allocative inefficiencies, however, when it leads to overlapping responsibilities between levels of government.
 10. PISA refers to Programme for International Student Assessment.

(Oliveira *et al.*, 2007).¹¹ High IRRs of course reflect to a substantial degree the lifetime wage premium that post-compulsory studies command, which in turn is one of the key incentives to pursue advanced studies. One of the main determinants of the IRR on the cost side is the direct cost of tertiary schooling, of which tuition fees account for a large share.¹² However, in most OECD countries, tertiary education is either provided directly by public universities, or is heavily subsidised (OECD, 2010*d*). While some countries have reduced subsidies to tertiary education in recent years, wider and bolder progress would both contribute to fiscal consolidation and improve educational outcomes. Several countries (Australia, Austria, the United Kingdom and Poland) have introduced or re-introduced tuition fees (or reduced subsidies), while others (*e.g.*, Portugal and the Netherlands) have raised fees. But in most countries students' expenses remain well below the overall cost per student.

Introducing or raising fees can help address a number of shortcomings of higher education systems. First, they encourage competition among universities and induce greater responsiveness to students' preferences. Fees also provide added incentives for students to complete tertiary schooling, and to tighten the link between choice of discipline and occupational career aspirations. Third, the introduction or increase of fees also reduces the regressive nature of tuition subsidies financed by general government revenues.¹³ This is especially the case in countries where indirect taxes prevail, given the greater burden of such taxes on lower income households. At the same time, reduced subsidies can, at the margin, weaken the incentives to undertake advanced schooling by lowering private internal rates of return, particularly for lower income students with limited alternative family support options. In turn, policy reforms that raise the cost to individuals need to be accompanied by enhanced and expanded financing options for students facing more binding liquidity constraints (*e.g.*, expanded loan and grants programmes and enhanced part-time work opportunities for students).

While reforms will yield greater value-for-money and budgetary savings, they also hold promise of boosting the country's rate of potential growth and, thus, future income levels. The growth promoting effect of more and improved educational outcomes arises through the resulting increase in effective labour supply and labour productivity. Barnes *et al.* (2011) estimate that reforms that simultaneously increase the average number of years of schooling and raise the quality of educational achievement (*e.g.*, as measured by PISA scores) could raise GDP per capita between 2 and 5% over the long term. As noted earlier, efficiency gains can be used either to reduce inputs (for unchanged output) or to raise output through better use of available resources. There is some evidence that larger GDP gains are to be achieved through increased educational outputs rather than through reductions in inputs. Gonand *et al.* (2007) find that a 10% increase in educational output (roughly equivalent to increasing the average number of years of schooling by one year at unchanged inputs) could raise GDP by 3 to 6% over the long run on average for OECD countries. By contrast, a reduction of inputs (*i.e.*, reduced spending) raises GDP by only 1% over time, although the relative size of the gains could be inverted in the short run because input-reducing efficiency gains bear fruit more quickly. The upper range of the GDP impact of increased educational

-
11. The internal rate of return is the discount rate that equates the present value of the costs of education and the present value of the lifetime benefits to the student. The private benefits to tertiary education are largely the lifetime wage premium that a higher level of attainment commands in the market, while the private costs include the student's out-of-pocket expenses and the opportunity costs of school attendance (*i.e.*, foregone earnings). The social benefits of education include increased economy-wide productivity and a host of non-economic factors (*e.g.*, lower crime, better health, etc.) while the social costs include the lost output of the student (during school attendance) and the financial costs not borne by the student.
 12. The foregone earnings during schooling are potentially the greater cost component. This, however, is influenced by less direct – although not insignificant – government policies. For instance, increases in the minimum wage, other things equal, increase the opportunity cost of post-secondary education.
 13. This argument is less valid, of course, for countries with a less unequal distribution of income.

output could be higher if allowance is made for the possible positive impact on technical progress of longer education (De la Fuente and Ciccone, 2003).

Infrastructure investment

Public infrastructure investment – the spending on energy, water, transport and telecommunication networks – has been declining as a share of GDP. In 2009, it amounted to around 2% of GDP in the OECD on average. The question is whether this decline affects future economic growth and how a more efficient use of resources dedicated to infrastructure investment can help consolidate government finances. While empirical research points to a positive impact of infrastructure investment on output, the effect varies across countries, across sectors and over time, with investment in telecommunications and electricity having a stronger impact than investment in road and rail infrastructure (Egert, Kozluk and Sutherland, 2009). Also, the long-term growth effect is stronger if the capital stock is low, suggesting diminishing marginal returns of investment. Overall, there appear to be episodes of both under-provision and over-provision and of both efficient and inefficient use of investment, reflecting in part the “lumpiness” of such spending. As a result, there is little support for the view that a general increase in infrastructure investment would enhance growth *per se*. Instead, growth effects depend on where, when, how and on which projects financial resources are invested.

While the optimal level of infrastructure capital stock is hard to determine, the policy framework can help ensure that infrastructure needs are satisfied without over-burdening taxpayers too much and distorting the allocation of resources (Sutherland *et al.*, 2009). Policies in the areas of investment selection, infrastructure ownership and provision, market structure, and regulation all help to increase the efficiency of infrastructure projects. One particular instrument that may both increase efficiency and reduce the budgetary burden is the private financing of infrastructure projects, such as via public-private partnerships (PPPs), private finance initiatives and the like (Sutherland and Araujo, 2010). PPPs have risen in prominence, promising innovative solutions and a better use of inputs than traditional procurement. They have become popular since they not only tend to increase efficiency, but they allow governments – often sub-central governments with limited access to borrowing – to defer spending, and to spread it more evenly over an investment’s life span.¹⁴ However, PPPs are not without risks, with the outcome depending on the identification of the best bidder, the risk sharing between the public and private sector and the design of contractual relationships. Moreover, PPPs may be used to bypass central or sub-central fiscal rules, with the risk of creating large contingent liabilities.

An improved framework for assessing the quality of infrastructure investments and selecting investment projects may also help improve efficiency (Persson and Song, 2010). In this respect, the role of tools such as cost-benefit-analysis (CBA) is important. CBAs help distinguish valuable from less valuable projects and establish a ranking order of which projects should be realised first. The use of CBAs can be further strengthened if selected projects are subject to a “second opinion” and to ex-post evaluations. Results should be made public by showing *e.g.* the share of projects considered in the decision-making process that had been subject to a CBA, the relative share of CBAs with negative net benefits in the total number of projects implemented, or alternatively the average benefit-cost ratios for implemented projects with negative net returns. A stronger reliance on CBAs would increase the transparency of how projects affect the wider economy and increase pressure to invest only if returns are positive.

14. Most Public-Private Partnerships (PPPs) are contracted at the sub-central level. In Germany, around 80% of PPP investment is spent at the *Länder* and municipal level, making up 2 to 3% of sub-central investment, while in France, more than 50% of PPPs are arranged at the sub-central level. With the “Private Finance Initiative” the United Kingdom has the most advanced PPPs representing 10 to 15% of total public investment, mostly administered by local governments.

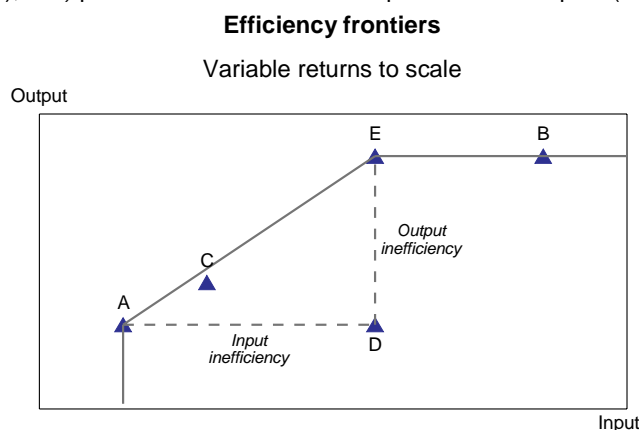
Finally, a greater reliance on user charges, especially in the transport sector, may help increase the effectiveness of investment and provide more guidance on where to invest (Persson and Song, 2010). User charges reflecting long-term capacity expansion cost may help align demand with the supply of new infrastructure investment. Congestion pricing can help manage infrastructure demand contingent on time and place of use, and it can also provide signals as to where new investment is needed most. And charges reflecting environmental damage caused by the transport sector may help reduce environmental impacts. User charges could – at least partially – replace the current arrangements where funding is ensured through general taxes, fuel taxes and vehicle taxes (see also the section on user charges below).

Other public services

In all OECD countries, the public sector provides a wide range of services, and improving the overall efficiency of public administration is an obvious option for fiscal consolidation. As in the health and education sectors, improved efficiency in other areas would make possible achieving the same objectives with a lower level of spending. A relative scale of potential budgetary gains from improved efficiency in the provision of public services can be gauged from estimates of each country's deviation from an estimated efficiency frontier using the share of general public service outlays (net of interest payments) in GDP as an input, and various performance indicators as proxies for outputs (Box 1).¹⁵ As suggested by the pattern shown in Figure 6, many countries could reduce outlays while simultaneously increasing performance.

Box 1. Measuring the efficiency of public administration

Data Envelopment Analysis (DEA) provides a means of measuring “efficient” outcomes of the public administration using monetary inputs. The method uses linear programming techniques to construct a frontier from the most efficient observations, which “envelop” the less efficient ones (see figure below). Points on the frontier represent the technically most efficient use of inputs in generating each level of output, under an assumption of variable returns to scale. Thus, a government operating at a point such as D could either: *i*) raise output considerably without any additional inputs (*i.e.* move from D to E); or *ii*) provide the same level of output with fewer inputs (*i.e.* a move from D to A).



The method distinguishes between input and output efficiency, and technical and allocative efficiency. The purpose of an input-oriented example is to study how much input quantities can be reduced without changing the output quantities produced. With an output-oriented example, the aim is to assess how much output could be increased without changing the input quantities used. The two methods provide the same results under constant returns to scale but give different values under variable returns to scale (Afonso *et al.*, 2006). While the DEA analysis provides a neat summary measure of efficiency of spending, it has a number of drawbacks that have to be addressed in its practical implementation (Sutherland *et al.* 2007).

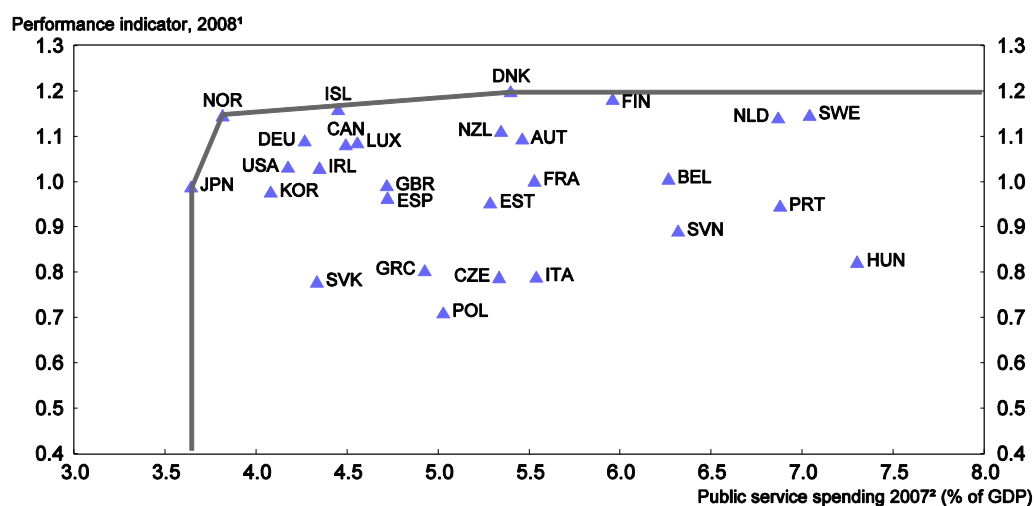
15. Measuring outcome or output in the public sector is difficult, and estimating an efficiency frontier requires the use of proxy variables or indicators. The results of the DEA analysis shown in Figure 6 are based on an indicator of public administration outcomes constructed from international surveys on the quality of the justice system and the level of corruption in OECD countries as well as the level of bureaucracy as measured by the OECD's Product Market Regulation indicator (OECD, 2010*d*).

- *Sensitivity to outliers and small samples.* A country that has an atypical combination of inputs and outputs is likely to be classified as efficient because there are no appropriate comparator countries in the sample. If the sample is small, the efficiency level is likely to be overestimated because the most efficient country is likely to be excluded from the sample. This sample did not give reason to exclude countries due to atypical combinations of inputs and outputs or particularly high efficiency scores.
- *Composite indicators.* Composite indicators can be used to summarise complex and multidimensional issues. Aggregation methods may have a non-negligible impact on results. An undesirable feature of additive aggregation is the implied compensability – poor performance in some indicators can be compensated by sufficiently high values for other indicators. A consensus has gradually emerged that equal weights have key advantages over other weighting schemes when building composite indicators. For example, equal weights are more transparent and provide a weighting scheme that is insensitive to change in period and country coverage. Thus, equal weights are applied in the composite indicator for public administration.

Measuring outcome or output in the public sector is difficult, however. In turn, estimating an efficiency frontier requires the use of proxy variables or indicators. Partly following an approach used by Afonso *et al.* (2006), an indicator of public administration outcome is constructed from international surveys on the quality of justice and the level of corruption in OECD countries, both taken from the *Competitiveness Report* of the World Economic Forum (WEF, 2008), and the level of bureaucracy in the economy as measured by the OECD's Product Market Regulation (PMR) Indicator. An alternative proxy for outcome is the World Bank's Government Effectiveness Indicator (Kaufmann *et al.*, 2009), which is restricted to measuring the competence of bureaucracy (*i.e.* bureaucratic delays, administrative and technical skills of civil servants, etc.) but incorporates neither corruption nor quality of justice. These variables can serve as proxies or indicators of outcome because both affect the well functioning of the economy and, therefore, the efficiency of public administration. *First*, corruption in the public sector distorts allocation of public funds by diverting public investment projects influenced by bribes rather than cost-benefit analysis. Corruption may also lower compliance with construction, environmental or other regulations, and affects the private sector through increased costs of doing business in several ways. *Second*, several empirical studies have shown a negative relationship between the level of regulations or bureaucracy and economic growth (OECD, 2009*b*). *Third*, public administration plays an important role in ensuring the quality of the justice system, and therefore also the protection of property rights and enforcement of the rule of law.

Source: OECD (2010e), *OECD Economic Surveys: Hungary*.

Figure 6. Estimated public service efficiency frontier in OECD countries



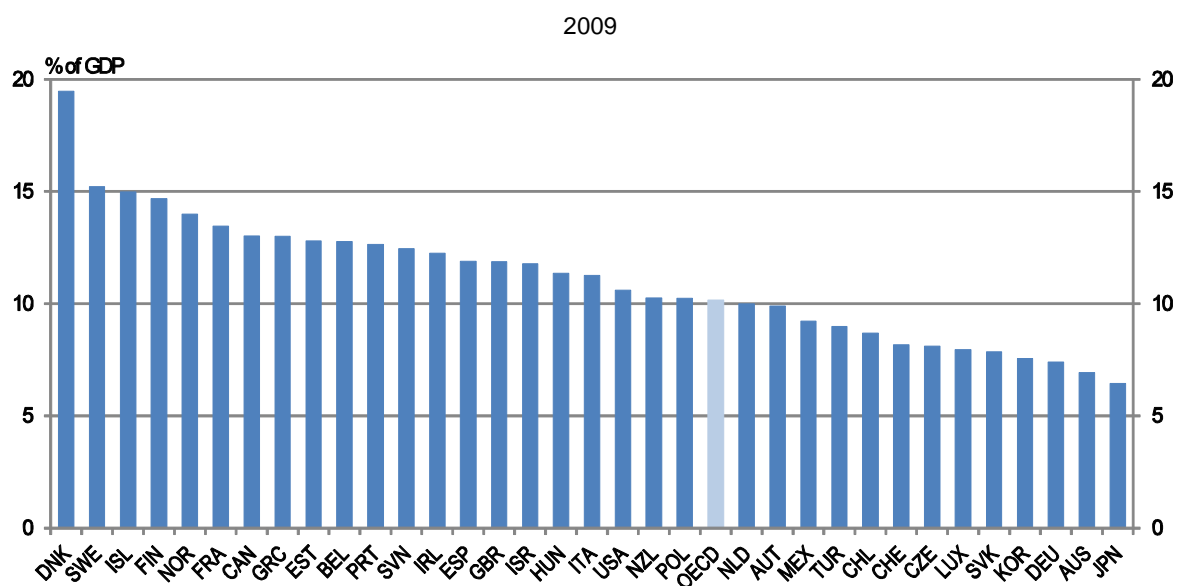
1. Pearson correlation performance indicator; a composite indicator for public administration outcomes based on international surveys on the quality of justice and the level of corruption, both taken from the Global Competitiveness Report, and the level of bureaucracy as measured by OECD's Product Market Regulation indicator.

2. 2006 for Canada and 2005 for New Zealand public service spending. Spending on general public services (excluding interest payments) and public order and safety.

Source: OECD calculations based on OECD (2009), *General Government Accounts and Annual National Accounts* (Databases), October; WEO (2008), *The Global Competitiveness Report 2008-2009*, World Economic Forum; OECD (2009), *International Regulation* (Database), July.

While important gains can be achieved through a host of management, governance and pay reforms, as well as through the innovative use of modern technologies, reducing the weight of public sector wages is a key candidate for fiscal consolidation in many countries. OECD governments spend large amounts on public sector wages. On average, the general government wage bill is slightly over 10% of GDP and accounts for roughly one quarter of overall spending (Figure 7). There is wide variation across the OECD, however, with the wage bill ranging from 7% of GDP in Japan to almost 20% in Denmark, and from about a sixth of total spending in Japan to just under half in Mexico. Not surprisingly, given the scale of government spending on compensation, the wage bill often figures prominently in consolidation programmes, whether warranted to restore balance between public and private sector pay levels, the urgency of restoring macro-stability, or for political economy reasons. Substantial wage concessions have already been imposed in countries facing a crisis, as in Ireland since 2009 and Greece in 2010. The recent decision of the U.S. Administration to freeze federal government pay for three years is also noteworthy.

Figure 7. Government wages in OECD countries



Source: OECD Economic Outlook 89 Database.

Having a skilled and adequately staffed workforce is a *sine qua non* of effective government. The wide ranging services provided by government at local, state or regional and central levels perform requires an equally wide ranging mix of talents and occupational specialties. To this effect, public administrations need the resources and managerial flexibility to compete with the private sector in recruiting and retaining skilled employees. Traditionally, holding a civil service position was seen as a fiduciary rather than a contractual relationship (Rexed *et al.*, 2007). Thus, pay was calibrated to ensure a proper standard of living. Today, however, public administrations compete with private enterprises for skilled labour. This competition occurs not only at recruitment, but also on a continuing basis as civil servants gain experience and marketability for outside employment. In turn, compensation levels, together with performance reward schemes, and the non-pecuniary value of lifetime employment protection generally provided to civil servants, need to maintain appropriate relativities with respect to private sector compensation. Comparing public and private sector compensation levels poses considerable empirical challenges, however, and requires valuation of working conditions and non-wage remuneration, such as defined-benefit pension schemes. The ultimate test of adequacy is likely to be the difficulty or ease of recruitment into and retention in the civil service. From this perspective, budgetary savings achievable through reductions in government wage bills should be the outcome of thorough review (including

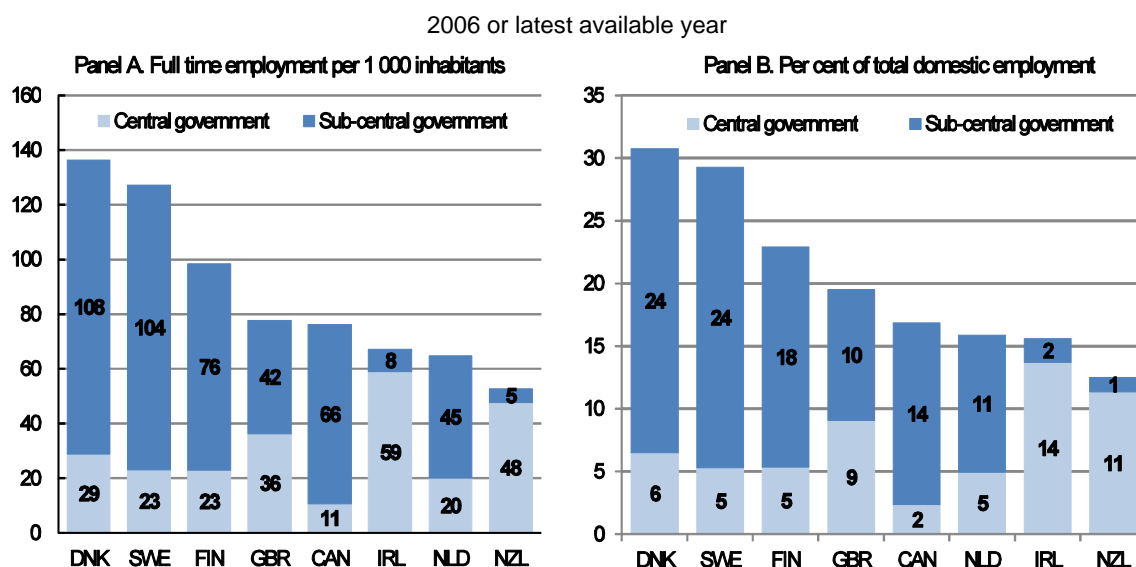
functional reviews) and reform of public pay policy rather than through arbitrary or across-the-board cuts in either the size of the workforce or average pay.

Nevertheless, budgetary savings through either wage freezes or cuts, or reductions in the size of the workforce through attrition, may be justified. First, against a backdrop of weak or negative real pay growth in the private sector during the recent downturn, taxpayers may see public sector pay restraint as justifiable shared sacrifice. Second, some adjustments (*e.g.*, via nominal pay freezes) may be warranted to restore an appropriate balance between public and private pay levels.

Achieving wage bill savings can either be done by reducing the size of the public workforce or by wage restraint. There are no easily available benchmarks on either, however. Simply looking at the share of public employment in the population or total employment (Figure 8), or the wage bill alone, would be misleading, as governments often deliver very different services. For example, both the size and composition of the workforce can vary depending on the extent to which health and education are provided by the public or private sector. Almost half of public employment in Denmark is in health and education, whereas only a relatively small share of employment is in these sectors in the Czech Republic. Even after correcting for health and education, substantial differences across countries remain. However, further corrections are probably needed to account for outsourcing (intermediate services purchased by the government) and spending priorities. Finally, some countries may more easily capture possible scale economies in the delivery of services than others due to factors such as population density.

The scope for achieving savings on remuneration is difficult to determine, although international comparisons can be indicative. Some evidence suggests that the public sector wage bill is relatively high given the level of public employment in Greece, Portugal, Italy and Ireland (Barbier-Gauchard *et al.*, 2010). And, indeed, Ireland, Hungary and Spain have demonstrated recently that substantial cuts in public sector wages can be implemented if there is an urgent need for consolidation and a strong case arising from unjustified public-private pay relativities.

Figure 8. General government employment for selected OECD countries

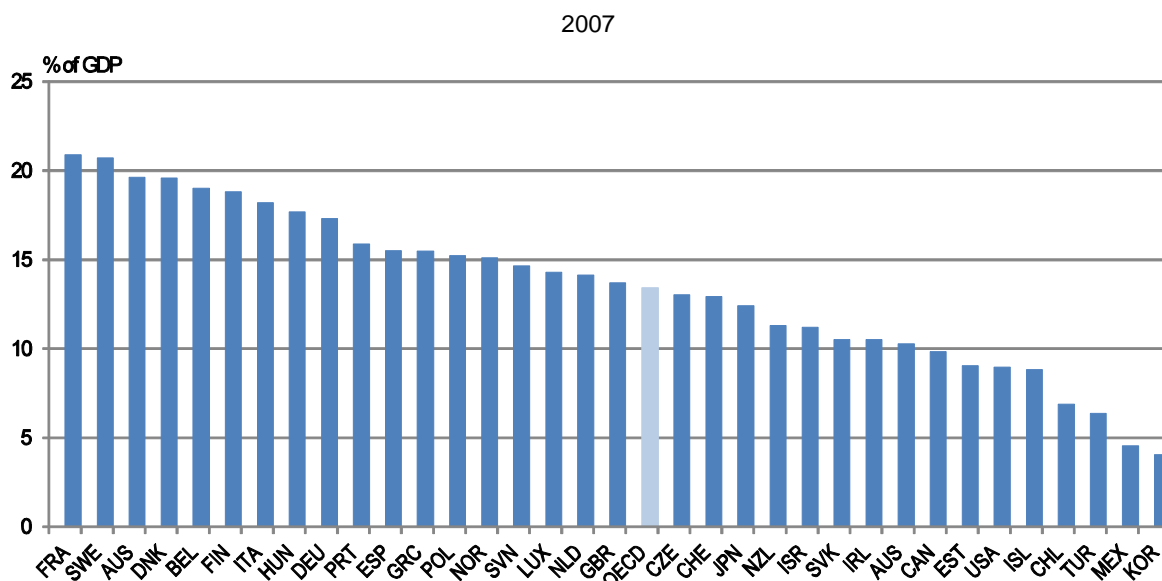


Source: OECD (2010), Value for Money in Government Public Administration after "New Public Management".

Reforming transfers and income support

Social transfers include contributory benefits (*e.g.*, social insurance) and non-contributory payments such as family benefits. Gross public spending on transfers in cash and in-kind was on average just under 14% of GDP in 2007, ranging from below 5% in Korea and Mexico to over 21% in France (Figure 9). The bulk of spending is for old age and survivor pensions, but outlays on sickness and disability payments and on family benefits are also significant (Table 1).

Figure 9. **Non-health social transfers in OECD countries**



Source: OECD SOCX Database.

Table 1. **Growth and composition of social spending**

In per cent of GDP

	1980	1990	2000	2007
Old age	5.2	6.1	6.8	6.7
Survivors	1.0	0.9	0.9	1.0
Incapacity	2.4	2.6	2.5	2.4
Family	1.6	1.6	1.9	2.0
Other	1.2	2.2	2.2	1.9

Source: OECD SOCX Database.

By their sheer volume, social transfers need to be considered for fiscal consolidation. In addition, however, reforms to many transfer programmes hold the promise of achieving overall efficiency gains by improving incentives to join the labour market. A major aim of many reforms of social transfers is to reduce the disincentives to work that are embedded in generous benefits (*e.g.*, lengthy and unconditional provision of unemployment benefits) and high implicit marginal tax rates from benefit withdrawals upon employment (*i.e.*, so-called “poverty traps”). Some social transfers were originally designed for people temporarily or permanently unable to work, and not for persons able to work. When transfers are sufficiently generous that they reduce attachment to the labour market, they lower labour supply. To the extent that such income support during working age reduces earned income, recipients are likely to have

fewer resources available in retirement. This in turn placed life-long burdens on the budget, as governments are likely to be called upon to provide minimum support in old age.

The fiscal gains from reforms to social programmes are likely to be achieved mostly in the medium term. First, unless reforms are holistic and concerted across the spectrum of transfers, some beneficiaries may switch between benefit types, reducing initial budgetary savings and weakening the labour supply response. The US experience with welfare reforms in the 1990s, however, illustrates the great potential of a comprehensive approach. The reforms brought about under the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 were all focused on removing disincentives to work (*i.e.*, high implicit marginal tax rates) inherent in the benefit losses welfare recipients suffered upon taking up employment. Indeed, reforms centered on attaching a work requirement to sustained benefit receipt. By all accounts, the reforms were highly successful (Blank, 2002). For instance, labour force participation rates of U.S. single mothers soared during 1994-2000, rising by 10 percentage points, and the share of income from earnings even rose among women who remained on welfare.¹⁶ A second reason why net budgetary gains may be smaller at first is that reforms need to be accompanied by active labour market policies to help integrate the previously inactive into the labour market.

The long-run gains from reforming social transfers can be substantial, however. The positive impacts on labour supply of reforms to social transfers hold promise of boosting potential growth. A buoyant macroeconomic environment would undoubtedly be catalytic for gaining the maximum labour supply response from reforms. In this regard, the US experience of the 1990s is instructive, given the strong growth prevailing at the time of reforms. The labour supply impact would also depend on the duration of recipients' detachment from the labour market, and on how effectively labour market institutions could facilitate the transition back to work. In turn, a holistic approach would accompany social transfer reforms with reforms to labour markets to introduce greater flexibility. To the extent that recipients are motivated and enabled by a buoyant macroeconomic environment to re-enter the labour market, this would result not only in increases in earnings and add to immediate family income. It would also build experience and increase future earning power and financial resources available in retirement.

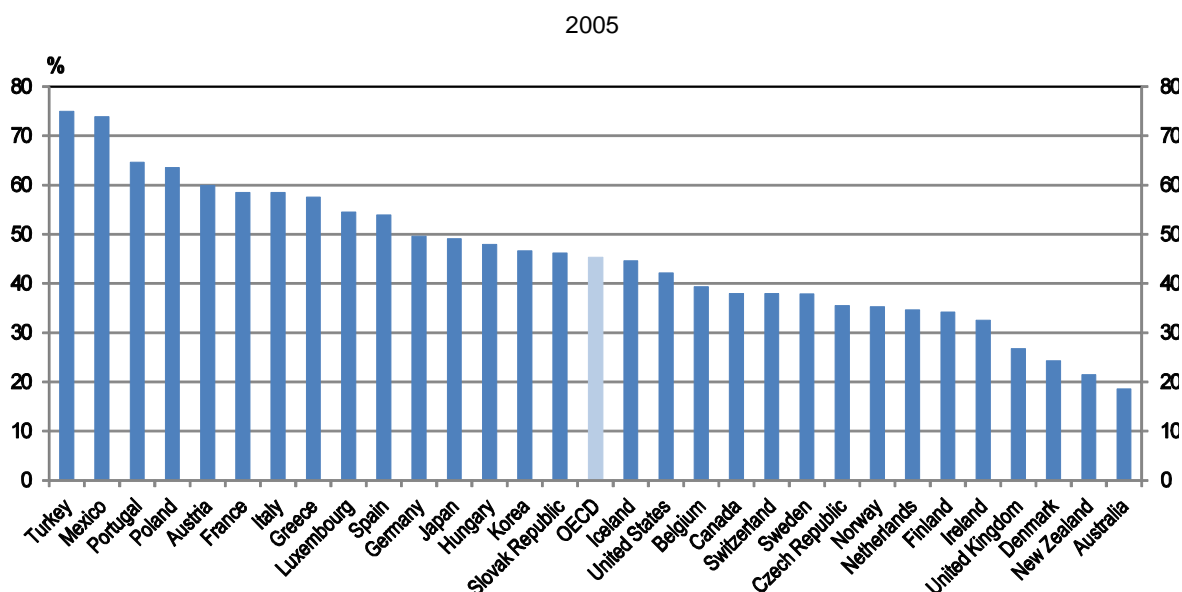
Reforms to transfers aimed at reducing total outlays require measures to protect the more vulnerable population groups. Social programmes are a mix (to varying degrees across countries) of social insurance against various risks such as unemployment, disability, illness, and poverty in old age on the one hand and, on the other, income redistribution (through targeting of benefits and reliance on a progressive tax system). In a fiscal environment requiring benefit cuts to help restore overall budgetary sustainability, raising the progressivity of the transfer system by concentrating on protecting the most vulnerable is important, both for fairness and to help secure political support. For many OECD countries, there would appear to be considerable scope for improving the progressivity of transfers; on average, over 45% of transfers go to households in the top 50% of the income distribution (Figure 10). This of course includes social insurance programmes that for the most part perform limited intra-generational redistribution. Nevertheless, the overall lack of redistribution in many countries suggests there is scope for better targeting. Obvious ways of achieving this include introducing or improving the targeting of benefits to reach the poorest households, and by reducing the impact of direct taxes in the lower segments of the income distribution.¹⁷

16. Regarding the success of the reforms, Blank (2002) notes: "At the same time as major changes in program structure occurred during the 1990s, there were also stunning changes in behavior. Strong adjectives are appropriate to describe these behavioral changes. Nobody – of any political persuasion – predicted or would have believed possible the magnitude of change that occurred in the behavior of low-income single-parent families over this decade."

17. Whiteford (2009), albeit with a particular focus on Australia's tax-transfer system, provides a number of measures by which to gauge the degree of redistribution embedded in OECD countries' social transfer schemes.

While targeting on the basis of income or wealth can potentially help to reduce overall outlays and achieve more redistribution, it also poses challenges and is not without possible serious adverse effects. Targeting through means-testing is administratively more cumbersome than universal benefits paid on the basis of easily observed demographic and family status factors. The administrative complexity increases considerably when, absent a central or consolidated implementation, different levels of government administer different benefits. Implementation costs (of means-testing) can in some cases exceed the savings from reduced pay-outs. Of particular concern is the adverse impact on incentives to take up labour market activity when benefit withdrawals result in very high implicit marginal tax rates, leading to poverty traps.

Figure 10. Share of transfers received by the top half of the population



Source: Whiteford (2009), "Transfer Issues and Directions for Reform: Australian Transfer Policy in Comparative Perspective," Paper presented for *Australia's Future Tax and Transfer Policy Conference*, Department of the Treasury and Melbourne Institute of Applied Economic and Social Research, Melbourne, 18-19 June.

Pensions

Governments throughout the OECD play a central role in providing pensions. A role for government in helping citizens secure a minimum income in old age is widely accepted, for both economic and social reasons. First, the tendency for many people to be myopic and to overly discount the future justifies some paternalistic government intervention to help smooth consumption over the life cycle. Second, given the vicissitudes of life in today's modern societies, the government is in many instances a last resort for providing an income floor in old age. Indeed, the severe adverse impacts of the recent financial crisis on private net wealth, and in particular on the value of private pension funds (OECD 2009a, 2010f) are a stark reminder of the uncertainties faced by savers. In turn, the basis for a continued key government role in supporting elderly persons remains well grounded. At the same time, in the context of the scale of the decades-long demographic shift of the baby-boom to the baby-bust, government budgets have been and remain seriously threatened due to the generally prevailing use of pay-as-you-go (PAYG) to finance public pensions. The threat arises from the simple fact that, with rising numbers of beneficiaries relative to contributors, unchanged real defined-benefits can be financed only through increases in real per worker contributions, or through the issuance of additional public debt. Governments have long recognised the

threat, and many have undertaken politically challenging, if in most cases still insufficiently ambitious, reforms.¹⁸

Overall, despite reforms in many countries during recent decades, further measures are needed to reduce structural imbalances in public pension systems in OECD countries. Even taking into account the bulk of reforms either already adopted or expected to be implemented, public pensions are projected to add significantly to general government spending during the next four decades. Many EU members face especially intense further pressure. From an OECD average of 8.4% of GDP in 2010, public expenditures on old age pensions are projected to grow to 11.4% of GDP by 2050, with changes ranging from a projected decline of 2.1 percentage points of GDP in Poland to an increase of over 15 percentage points of GDP in Luxembourg (European Commission, 2009). For the majority of countries in which PAYG defined-benefit (DB) schemes are the predominant public intervention in the pension area, further increases in already high social contributions are not a first-best policy option in view of the adverse consequences of high marginal effective tax rates for labour demand and supply.¹⁹ Governments have therefore increasingly focused reforms on rebalancing lifetime contributions and benefits through parametric reforms or, in some countries, more structural changes (*viz.* paradigm changes) to public pension schemes (Martin and Whitehouse, 2008).

While often perceived by fearful constituents as a breach of the social contract implicit in such schemes, well-designed reforms in fact aim at restoring balance that might otherwise have been ensured by steady-state population growth.²⁰ Reforms have included: changes to the number of years of required contributions or an increase in the minimum age for full pension; increases in the number of years of earnings used for calculating the pension base; larger penalties and premiums, respectively, for early and delayed pension receipt; and changes to the methods of indexing either pre-retirement earnings (in calculating the pension base) or benefits. More profound paradigmatic reforms can include introducing a defined-contribution (DC) scheme, or increasing the importance of an existing DC scheme. Paradigm changes have also entailed changes to the existing PAYG DB schemes to make them more adaptable to shifting demographics, improvements in life expectancy, changes in work-life patterns (*e.g.*, to allow for earlier or later start of careers), and shifting demographics.

Reform of public pension programmes is central to fiscal consolidation for several reasons. First, most countries do not have the fiscal space to maintain benefits at prospective levels. Second, reforms that delay pension receipt in an actuarially fair manner can boost labour force participation of elderly workers. Such reforms may in many instances need to be accompanied by policy efforts to sustain or raise employment prospects for older workers. The potential growth benefits of successful reforms are significant. Bouis and Duval (2011) find that pension reforms that improve incentives to remain employed and delay retirement by two years could raise significantly the employment rates of older workers, in turn boosting the overall employment rates by over 1.5% after 10 years under a rapid reform scenario.

Several measures hold the greatest potential of improving the sustainability of PAYG public pension schemes. One of the most effective is a lengthening of the duration of working lives. As many as half of

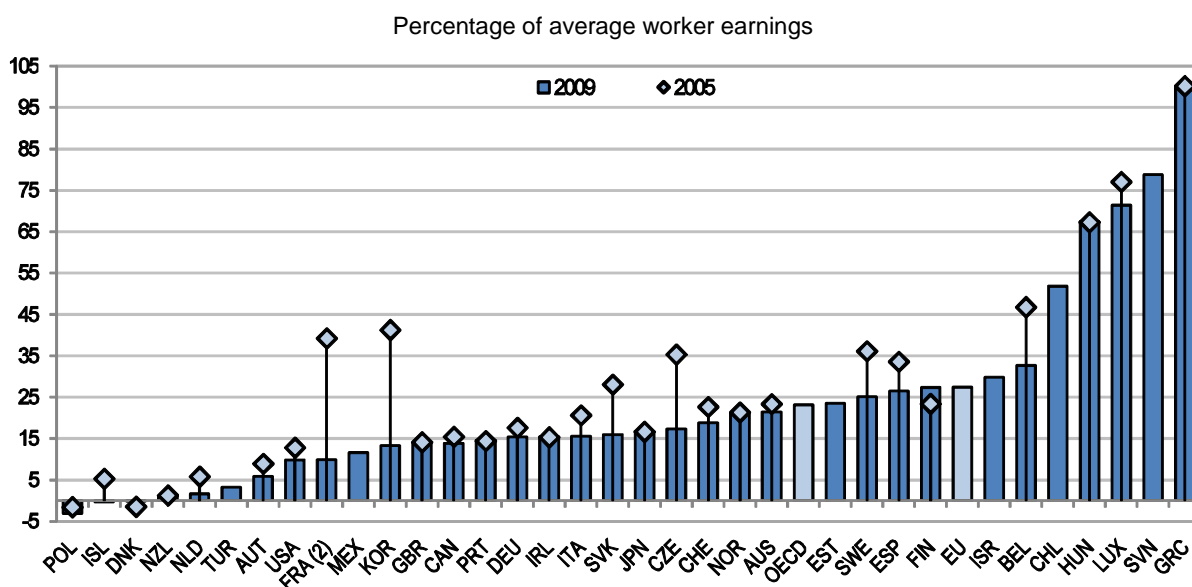
18. There is considerable literature on the public finance implications of ageing populations. See, for instance, Heller (2003).

19. Strictly speaking, actuarially fair social insurance contributions that are uniformly proportional to future pension benefits are not taxes *per se*, and should in turn not necessarily have the same impacts as, say, pure payroll taxes. However, several aspects of PAYG defined-benefit systems weaken the link between contributions and benefits, imparting a tax element to social contributions.

20. See Martin and Whitehouse (2008) for a review of major OECD reforms through 2008. More recent important major reforms have been adopted in a number of OECD countries, including France, Greece, Hungary, Ireland and Spain.

the OECD countries have raised or plan to raise their statutory pension age, which currently averages 63 for men and 62 for women (OECD, 2011c). On current plans, most OECD countries expect to increase the statutory retirement age to 65 for both men and women. Raising the effective age of retirement, however, is far more challenging than simply increasing the statutory age for pensions. Indeed, in most OECD countries, the effective age of retirement is much lower than the statutory age. Critical to raising the effective age of retirement is reducing or eliminating implicit taxes on continued work in the years immediately preceding retirement, where the implicit tax reflects the impacts of various aspects of retirement incentives (*e.g.*, the pension accrual rate) that provide incentives to retire early or to not postpone retirement. A number of countries have moved in this direction, reducing the implicit taxes on continued work at ages surrounding the statutory retirement age (Figure 11).

Figure 11. Implicit taxes on continued work at older ages versus pension up-take¹



1. Implicit tax on continued work in regular old-age pension systems, for 60-year-olds.
2. For France, year 2010.

Source: OECD (2011a), *Going for Growth*.

Securing the sustainability of public PAYG DB schemes should also consider linking the duration of retirement to changes in life expectancy. Obviously, the length of time during which a pensioner collects a public pension is a key determinant of his or her pension wealth. In 2005-10, on average, men and women aged 65 could expect to live an additional 16.4 and 19.9 years, respectively. Their life expectancies are projected to lengthen to 19.5 years and 23.5 years, respectively, by 2045-50 (OECD, 2011c). A solid case therefore exists for linking the statutory retirement age to improvements in life expectancy. Automatically linking the statutory duration of pension receipt to changes in life expectancy formalises the relationship and ensures durable improvement in the pension system's finances. To-date, only seven OECD countries have introduced such an automatic link.

Several aspects of pension reform are key to eventual success. First, given the long-range nature of retirement planning by individuals, governments need to act early to avoid more drastic and potentially *ad hoc* measures when options are fewer. Second, as retirement decisions are influenced by a multitude of factors that are also affected by other policies (*e.g.*, tax policies, the availability of other age-dependent benefits such as disability payments, the employability of older workers, including through ALMPs), reforms to public pension systems hold more promise of success if flanked by coordinated reforms in other areas of public policy. Third, a comprehensive rather than piecemeal approach to pension reform is needed,

since changes in one component can be undone by other features of the pension system. Finally, successful reforms to public pensions require buy-in from the public, which in turn requires skilful marketing and explanation, not to mention political will to sustain momentum. One fruitful way of gaining public buy-in is through the introduction of notional defined contribution schemes (Whitehouse, 2010), as in Italy, Latvia, Poland and Sweden.

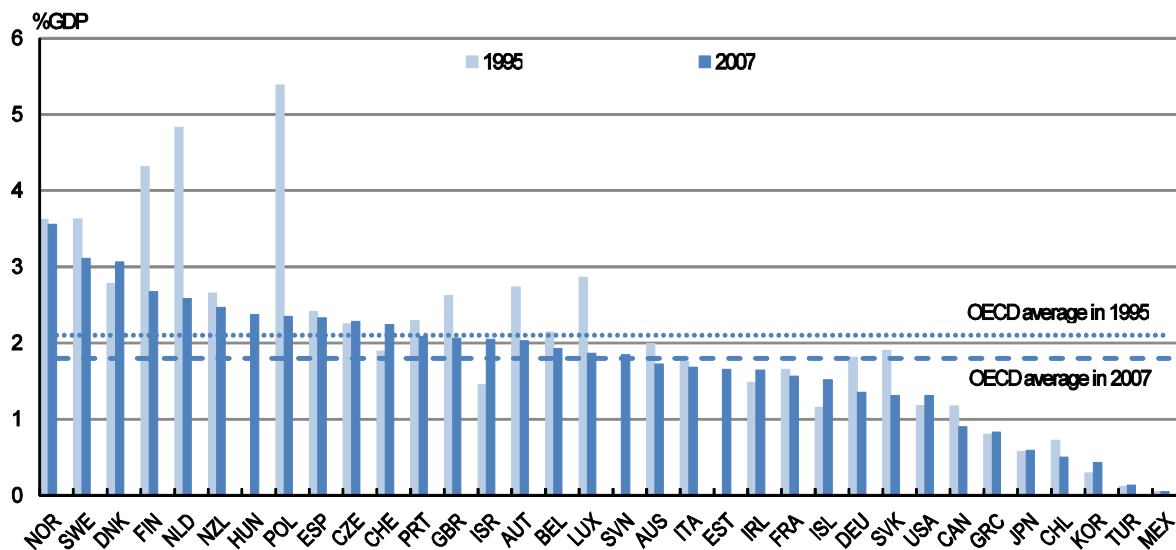
Protecting the more vulnerable members of society needs to be given high priority in shaping public pension reforms. The frequently perceived trade-off between reforming public pension schemes on the one hand and protecting the future elderly against poverty on the other is generally a false choice. The key determinant of income in old-age, whether pensions are DB or DC, is the income earned during working life. Therefore, the single most important (but certainly not the only) contribution government can make to reducing poverty among the future elderly is to ensure high, stable, non-inflationary and broadly shared economic growth, and to boost overall educational outcomes to raise income earning capacity across all segments of the population. More directly, however, governments can shield low-income beneficiaries of public pensions from poverty by providing targeted means-tested minimum pensions that are fully indexed to inflation.

Disability benefits

Governments provide disability insurance to protect working-age persons against loss of income-earning capacity. Providing income support for temporary work incapacity due to workplace accidents or permanent disability is broadly seen as a natural component of social insurance in the absence of private workman's compensation insurance. At the same time, disability payment schemes have increasingly become a benefit of last resort in many countries due to a variety of factors, including a shortening of the period for receipt of unemployment insurance, a tightening of eligibility for early retirement in public pension schemes, and a general deterioration of employment opportunities for low-skilled workers. In turn, disability benefits often amount to a substantial share of government spending, but can be poorly targeted (OECD, 2003). On average, OECD countries spend about 1¾ per cent of GDP on disability benefits (Figure 12). Several countries reduced outlays during 1995-2007, some from extremely high levels (notably Poland, Finland and the Netherlands), helping to lower the OECD average slightly. But spending levels have either remained the same or have risen in most countries. Spending is above the OECD average in 17 countries, especially in the Nordic countries. As an illustration of savings, a reduction of total disability benefit outlays (as a percent of GDP) to the OECD average could yield savings of around 0.6% of GDP among reforming countries. The favourable impacts on labour supply and the knock-on revenue effects would, over time, provide additional consolidation.

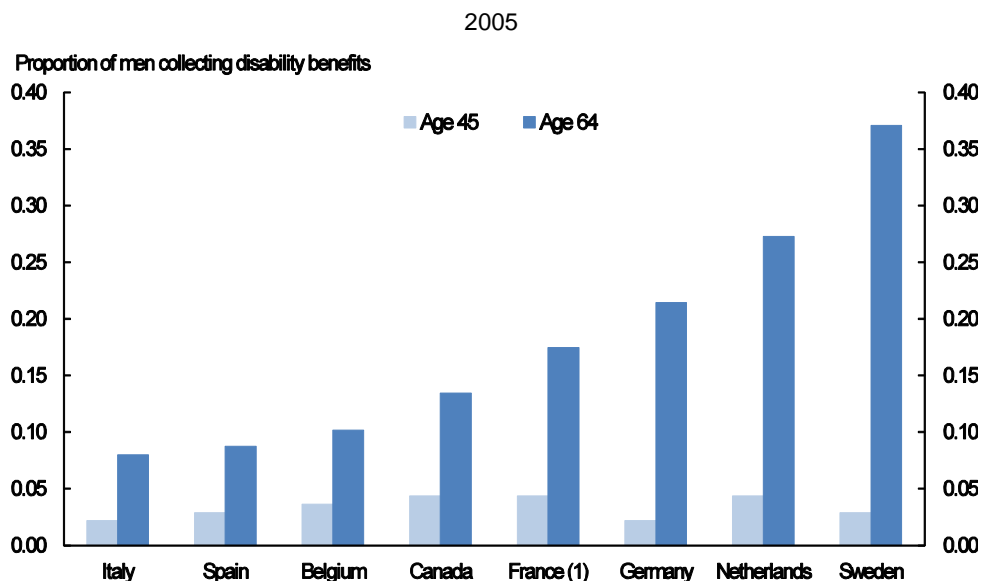
That disability payments are poorly targeted is suggested by a number of indicators. The marked rise in the number of the disabled at an age close to retirement suggests that disability benefits are used as a pathway to early retirement (Figure 13). Also, take-up rates tend to be negatively correlated with general economic conditions, rising when employment conditions deteriorate. This is particularly noticeable in Norway, Sweden, Switzerland and the United Kingdom (OECD, 2010g). Finally, in some countries, such as the United Kingdom, the proportion of people receiving disability benefits is uneven geographically, which is at least partly linked to local labour market conditions (McVicar, 2008).

Figure 12. Disability benefits in OECD countries



Source: OECD SOCX Database.

Figure 13. Disability benefit rolls rise markedly with age in some countries



1. France data are for age 50 and 59.

Source: Milligan, K., and D. Wise (2011), "Social Security and Retirement around the World: Mortality and Health, Employment, and Disability Insurance Participation and Reforms: Introduction and Summary", *NBER Working Paper*, No. 16719.

Another source of inefficiency arises when disability benefits are unrelated to needs, which is the case in many countries. An important step towards reforming disability spending would be to link such spending to needs. In some countries (*e.g.* Australia), benefit types are targeted to address different needs. For example, the mobility allowance compensates for the extra costs the disabled faces and the caretaker allowance covers the costs for those requiring regular care. Finland's experience shows that savings can also be realised if the caretaker allowance is paid to family members, as it is less costly to take care of the

disabled in their homes. To achieve long-lasting results, a complete overhaul of disability systems may be needed. For instance, it is arguably easier to link benefits to extra needs if a single agency oversees the payment of benefits and the delivery of services. By the same token, it may be easier to monitor work capacities and therefore encourage recipients to remain in or return to work if it is done in a coordinated way.

When disability benefits are used as alternatives to early retirement, unemployment benefits and income support, a reform of disability schemes should focus on measures to keep people at work, while helping those already receiving the benefit to return to work (OECD, 2010g). This involves an effective management of inflows into and outflows from the pool of beneficiaries.

Tightening criteria for qualifying for benefits can help stem the rate of inflows. Several countries have carried out reforms to better meet the needs of the disabled by integrating agencies, thus creating a one-stop shop responsible for benefit payments and the delivery of services (*e.g.* Australia, the Netherlands, Norway, the United Kingdom and the United States). Hungary has implemented a comprehensive harmonisation of criteria by designating a single institution to handle disability claims. Inflows can also be reduced by rigorously monitoring long-term sickness benefit recipients, who often then claim disability benefits. A limit on the duration of sickness benefits as implemented recently in Ireland and Sweden can help reduce long-term absence and detachment from the labour market. Inflows may also be limited by subsidising employment. Denmark has had some success in discouraging the up-take of disability (and sickness) benefits with a generous central government reimbursement of work-related disability outlays (OECD, 2010g). While this comes at an offsetting cost, subsidising the employment of the disabled could contribute to budgetary savings through higher contributions and possibly smaller benefits.

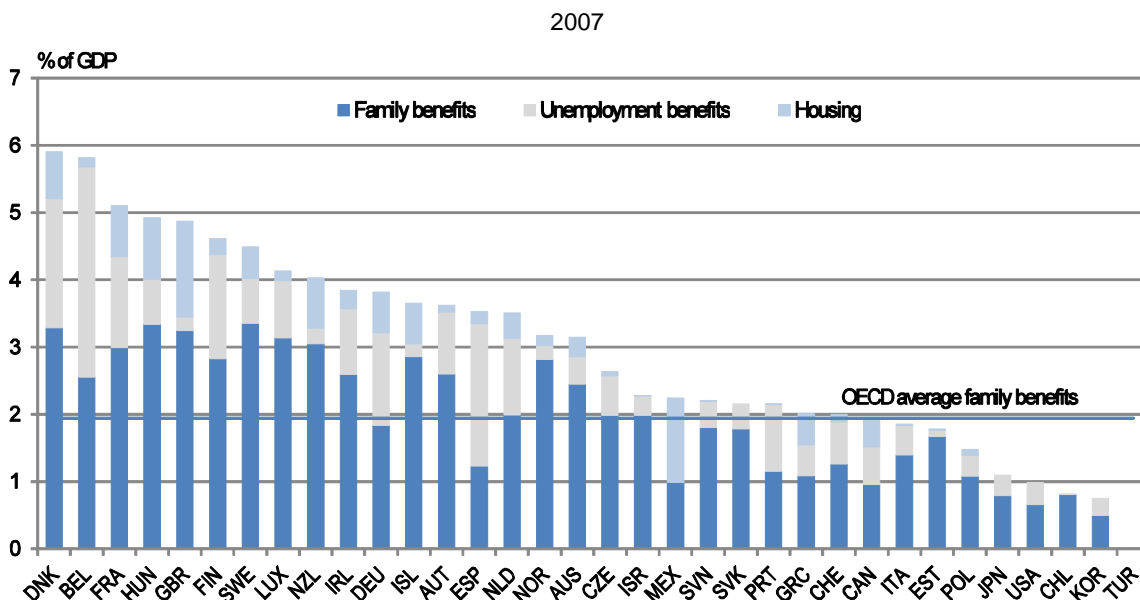
Outflows from disability benefits are typically very low, and raising them will likely need additional flanking measures, which may limit the short-run budgetary gains. In countries with a large pool of inactive disabled people, the upfront costs of active labour market programmes would reduce budgetary savings related to the revision of criteria for disability benefits. In the United Kingdom, the Work Capability Assessment that focuses on the claimant's capability to participate in the workforce has been extended to existing claimants from 2010. In countries with rigid labour markets and insider-outsider segmentation, boosting the rate of outflow from disability to gainful employment would hinge not only on strengthened efforts to match work capacity with potential employment opportunities, but also on strong efforts to reform labour markets.

Income support and social transfers

Income support is provided in a variety of forms, and the composition varies across OECD countries. Three broad categories can be distinguished: unemployment benefits, family benefits, and housing assistance (Figure 14). Unemployment-related benefits replace lost income during spells of joblessness, and are typically of a contributory nature (*i.e.*, social insurance). In most countries, recipients are required to undertake job search for continuing to receive benefits. A common feature of two other categories of transfers is that they are normally related neither to temporary or permanent work incapacity nor to the number of years worked, and often do not require job search. Such transfers usually provide support to persons who are or become ineligible for other transfers such as unemployment benefits. The groups of people receiving income support vary across countries depending on the relative generosity of competing social transfer schemes. The recipients include early retirees, lone parents, as well as the unemployed. Family benefits are the largest part of overall income maintenance payments, averaging close to 2% of GDP in 2007 (Figure 14), with spending reaching comparatively high levels in a number of countries. The extent to which family benefits are targeted to the most needy members of society varies across countries. While family benefits are only a portion of overall social support (*e.g.*, pensions, health care, etc. are also

important), the share of social transfers that is provided on an income-tested basis tends to be on average low in OECD countries, around 17% (Whiteford, 2009). Exceptions include English-speaking countries (other than the United States) and Finland, with Australia a clear exception in applying an income test to over 80% of cash benefits paid there.

Figure 14. Government spending on income support



Source: OECD SOCX Database.

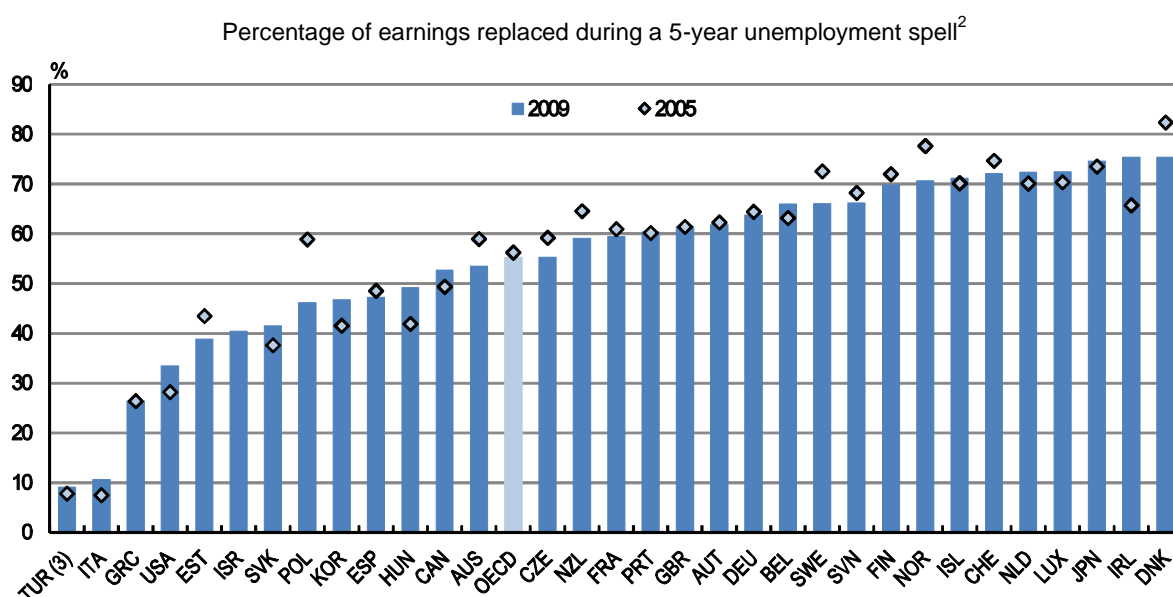
Unemployment compensation

As a principal means of providing income support during spells of unemployment, unemployment benefits play a potentially crucial role. They are an important source of automatic macroeconomic stabilisation, helping to sustain the consumption of unemployed persons. As well, they promote social solidarity by placing a floor under displaced workers' incomes during economic downturns. At the same time, there is considerable evidence that certain features of unemployment insurance schemes in OECD countries undermine a return to work. Many countries continue to provide generous benefits that are sustained for many years (Figure 15), despite mounting evidence that overly generous unemployment benefits (*i.e.*, high replacement rates) and, in particular, long periods of benefit receipt, reduce the probability of recipients to return to paid employment (Bassanini and Duval, 2006; Blanchard and Wolfers, 2000). For instance, prior to the recent and unusually severe recession, fewer than 20% of job seekers in the United States and Korea (which have among the lowest net replacement rates) were continuously unemployed for six months or longer, compared to 2/3 of the unemployed in Belgium or Germany remaining unemployed a half-year or longer (OECD, 2009c). A large majority of OECD countries reinforced income support during the recent recession through changes in unemployment benefits by extending eligibility to otherwise uncovered workers (Finland, France, Japan and the United States), while others increased benefit generosity (Belgium, Greece and Turkey), lengthened maximum benefit durations (Canada, Japan and Portugal), or did both (Finland and United States).

While lower levels of spending on income maintenance could contribute directly to fiscal consolidation, several considerations should condition governments' policy decisions. First, given the anaemic rate of job creation in many countries during the current recovery, governments should ensure that there is an adequate overall safety net to protect those most in need. In some countries, relatively few

resources are available after expiration of unemployment benefits, whereas in some countries housing and social assistance can be significant. To ensure fiscal affordability, however, governments should rely increasingly on means-testing. Some countries provide means-tested (and usually lower) unemployment benefits once insurance benefits expire (Austria, Finland, France, Germany, Greece, Portugal, Spain). Still others (Australia, Ireland, New Zealand, the United Kingdom) offer unlimited means-tested unemployment assistance benefits. Second, governments need to consider novel and creative means of encouraging the unemployed to find and take up employment. One option would be to offer a bonus to an unemployed worker when a job is found and retained for a minimum number of months, which have been shown to shorten the duration of unemployment, with savings more than offsetting the cost of bonuses (Woodbury and Spiegelman, 1987). Third, strong emphasis needs to be placed on activation programmes to help facilitate an increase in the outflow from unemployment.²¹ In this regard, ALMPs are critical to helping the unemployed remain engaged in the labour market. Indeed, the long-term economic and social costs of relying excessively on passive instruments such as unemployment and other social benefits are quite large. While boosting activation programmes aggravates the budget balance in the short run, when effective, they hold promise of significant consolidation gains over the medium and longer run through their positive impacts on labour supply and potential growth, with feedback effects on the budget through an expanded revenue base.

Figure 15. **Average of net replacement rates for unemployment**¹



1. Overall average of net replacement rates for four family types and two earnings levels (67% and 100% of average worker earnings).
2. After tax and including unemployment benefits, social assistance, family and housing benefits in the 60th month of benefit receipt.
3. For Turkey, the average worker earnings (AW) value is not available and calculations are based on the average production worker earnings (APW).

Source: OECD (2010), *Benefits and Wages: OECD Indicators*.

Simulations of policy reforms offer clues regarding the scope for reducing overall structural unemployment through reduced passive benefits and/or increased activation efforts. Bouis and Duval (2011) simulate the impact of reforms on employment in countries by benchmarking them to two sets of high performing countries in terms of their employment performance. One group of benchmarking

21. Such strategies provide that the unemployed can continue to receive benefits on condition that they remain engaged in active job search and take steps to improve their employability (*e.g.*, through training).

countries comprises those high employment countries with low benefit replacement rates and/or duration of benefits and low ALMP spending (Australia, Canada, Japan, New Zealand, United Kingdom and United States), while the other group has generous benefits and high expenditure on ALMPs (Austria, Denmark, Netherlands, Norway, Sweden and Switzerland). In one scenario, OECD countries that fall in neither benchmark group are assumed to reduce the generosity of benefits to the average level of the first group and, in the other scenario, to raise ALMP spending to the average of the second group. Excluding the benchmark countries from the simulations, the results focus essentially on continental European countries, whose systems are most in need of reform. The simulations suggest that these countries could shave between 0.5% to 1.5% of GDP off the structural rate of unemployment depending on the pace of reform and the balance between the more effective policy of reduced benefit generosity and greater spending on ALMP.

Family benefits

Many OECD countries spend large sums in support of families with dependent children. Public spending on family benefits averages just under 2% of GDP across the OECD. Considerable differences across countries are rooted in their histories, which shape their attitude towards the role of government in reconciling work and various family responsibilities. The configuration of benefits also varies across countries, but can often include paid maternity and paternity leave, child and child-care benefits and allowances (including via tax preferences), and housing support. Assessing the effectiveness of family benefits in balancing family responsibilities versus work is challenging. On the one hand, the Nordic countries, which provide generous and universal public support in various ways up through a child's early adulthood, have above average birth rates, and parenthood and career are perceived as simultaneously achievable. On the other hand, in English-speaking countries, where means-testing of benefits plays a greater role, birth rates and female employment rates are also above average. In other countries, however, benefit levels and unconditional (beyond family status) provision tend to reduce labour market participation and thereby unintentionally reduce lifetime income (OECD, 2011*d*).

In a context of hardening budget constraints, prioritisation may justify a tightening of eligibility for benefits. One option that would reduce outlays and impart a greater degree of vertical equity is to introduce some means testing, although, as previously noted, such selectivity carries implementation costs and can have adverse incentive effects (because of benefit withdrawal). A second option is to introduce or strengthen the linkages between continued receipt of benefits and job search and employment take-up. This would also have positive indirect feedback effects through increased labour supply. Alternatively, governments could shift spending away from child allowances toward child-care support to encourage labour force participation. Potential budgetary savings from reduced benefits are difficult to measure. However, if countries with relatively high spending (*i.e.*, above the median) on cash benefits reduced such outlays (through, for instance, better targeting), gross savings of over 0.85% of GDP would be feasible.

4. Revenue instruments

General considerations

This section examines selected revenue instruments. The extent to which, and the manner in which, revenue increases can and should contribute to fiscal consolidation depends on several considerations. First, barring front-loaded major cuts in spending (perhaps necessitated by market pressures), most reform-based reductions in government outlays take time to materialise, requiring in turn tax increases to help meet a near-term deficit target. Second, even taking into account the permanent gains in fiscal space that may be expected over time from spending reductions, the projected level of structural spending may leave a funding gap requiring a structural increase in revenue yield. A well-designed fiscal consolidation strategy should anticipate such a gap and include a strategy for closing it. Such a strategy will entail the timing of

revenue reforms, the composition of changes, and their rationale. This would allow individuals and businesses to anticipate the future and make long-term plans accordingly. Third, the composition of changes and their rationale need to reflect a proper balance of efficiency considerations on the one hand and equity and other policy objectives on the other. While much is known about both the efficiency (and growth) effects and distributional impacts of different taxes, a balancing of the trade-off between efficiency and fairness is crucial, and requires challenging consensus building. In this regard, fairness – whereby tax burdens reflect ability to pay – may best be addressed by considering reforms to the full gamut of taxes and benefits (both cash and in-kind, including government services) together, as part of a holistic approach (OECD, 2010i).²² Moreover, what should ultimately matter to the taxpaying community is the incidence of a tax, that is, who bears the burden, as opposed to who remits the tax *de jure* (Box 2). Fourth, improved taxation is important for raising future potential growth. Some taxes are more harmful to growth than others. In view of the importance of growth for improving living standards generally, governments may in some cases have little choice but to tilt the balance in favour of future growth. Fifth, governments' options will in part be conditioned by the existing tax structure. Overall, countries continue to rely heavily on distortive taxes on personal and corporate income despite a slight general shift in recent decades toward value added taxes or general services taxes that have been found to be more growth friendly (Table 2). While a full scale restructuring of taxes is beyond what is needed in most countries, there are in all countries substantial gains to be achieved by improving the design of existing taxes.

Table 2. **Tax structures**

Percentage share of each category in total tax revenue

	1990	2000	2008
Personal income tax	29.6	25.5	25.0
Corporate income tax	7.9	9.8	10.1
Social security and payroll taxes	23.1	25.4	26.4
VAT/GST	33.0	32.8	31.7
Other consumption taxes			
Property taxes	5.7	5.6	5.4
Other taxes	0.7	0.9	1.4
Total	100.0	100.0	100.0
<i>Memorandum item:</i>			
Share of total revenue in GDP	33.1	35.5	34.6

Source: OECD Revenue Statistics.

Raising revenue for purposes of fiscal consolidation should be done coherently, taking the opportunity to improve the revenue system's efficiency and fairness, and to reduce the burden of compliance. In addition to raising revenue to fund government programmes, most tax systems are replete with selective measures designed to achieve specific objectives. These include such features as exempting some goods and services from the VAT (or taxing them at a reduced rate), often for equity purposes. There may be, however, more effective means of achieving the same objective. They also include a panoply of tax expenditures in the form of income exclusions, deductions from gross income, and tax credits granted for specific purposes such as to promote energy conservation, home ownership or charitable giving. While the objectives may in many instances retain some merit, in the context of fiscal consolidation, prioritisation of government interventions warrants careful review of the continued economic and social justification of the measures.

22. As noted in OECD (2010i), an increase in indirect taxes may be regressive, but this could be offset by a wider package that includes accompanying direct measures that are targeted at poor households.

Fiscal consolidation is an opportunity for governments to consider making greater use of taxes aimed at correcting externalities. When market prices do not reflect the full marginal social cost of consumption or usage (*e.g.*, pollution from carbon emissions from automobile driving, or the health consequences of tobacco consumption), a strong case can be made for enhancing the role of corrective taxes.

Box 2. The importance of incidence

An important issue in tax policy debates is the question of the ultimate burden of a tax. All real world taxes alter relative prices, in turn causing changes in the economic choices of consumers and investors. A tax must of course be remitted by someone, be it a consumer, the owner of an immobile asset, or an employer. But whether or not the remitting agent actually bears the burden of the tax depends on the extent to which all or some of the tax can be shifted to others through higher up- or downstream transactions. Incidence is not only a matter of who ultimately “pays” the tax, however, but who “bears” it; a tax on a firm’s wage bill that results in a reduced workforce is “borne” by laid-off workers. The incidence of the burden of a tax is thus potentially quite different from its point of imposition. Knowing with any precision the incidence of a tax is far from straightforward, given the complexities of a market economy. The political debate sometimes obfuscates the ultimate incidence of proposed tax measures. Notwithstanding, and despite remaining ambiguities in many instances, ample theoretical analysis and empirical research during the past half century have informed economists and policy makers about the most likely impacts and, therefore, incidence of various taxes. Some of these are especially important in choosing revenue measures for fiscal consolidation, given their implications for long-term growth on the one hand and equity on the other.

Various factors are at play in determining the ultimate incidence of different taxes. The analytical dimension that is common to incidence analysis for all taxes, however, is the extent to which the taxed base (*e.g.*, consumption of a specific item or service, or owners of a specific form of capital) can and will respond as a result of the tax-altered relative prices. The greater the responsiveness – that is, the greater the price elasticities of demand and supply – the more likely it is that someone else will bear the tax burden. In the case of commodity taxation, the lower the price elasticity of demand, and the higher the price elasticity of supply, the greater the share of the tax borne by consumers via higher prices. Conversely, if supply is relatively inelastic and demand is relatively elastic, the producer will bear a greater burden via lower revenues and profits. This well-known “inverse elasticity rule” (Ramsey, 1927) has broader applicability than just to consumer goods and services, offering general guidance in thinking through tax policy choices in terms of their efficiency and growth implications. In simple terms, the greater the impact of a tax on a key growth factor (*e.g.*, labour utilisation, the supply of capital or the rate of innovation), the less desirable the tax is from an efficiency point of view.

Globalisation and the sustained growth in the openness of economies have steadily reduced governments’ capacity to tax internationally mobile capital. The increased international mobility of capital, the expanded role of multinational corporations and the growth of cross-border services have made the location of investment more sensitive to relative rates of corporate taxation. In turn, the incidence of an increase in the corporate income tax rate may be far different than suggested by statute if firms relocate in response to the effective rate change, or otherwise pass-through (forward to consumers in higher prices or backwards to workers in lower capital intensity, productivity and wages).

Incidence also has a bearing on the distribution of the tax burden. Most countries impart some degree of progressivity to taxation, whereby the effective rate of tax rises with income, a proxy for the ability to pay. In turn, tax systems are replete with means of securing a politically acceptable degree of progressivity, including rising marginal income tax rates, taxes on capital, property taxes, inheritance taxes, etc.¹ Progressivity, however, has limits, eventually having adverse consequences for growth, with adverse feedback effects on the population at large, including lower income households. For instance, empirical analysis by Arnold (2008) suggests that there may be sizeable adverse effects of progressive income tax schedules on GDP per capita growth. Moreover, the distribution of the tax burden should not be assessed on the basis of one or another tax, but on the distributional impacts of an overall set of tax and transfer policies. For example, a flat rate income tax with a high exemption threshold combined with targeted transfers and other social benefits can achieve redistribution without the adverse consequences attendant to high marginal tax rates.

1. A lesson of optimal tax theory is that, where consumption taxation is implemented via uniform taxation of all final products, leisure is untaxed. In turn, this should be complemented by a non-linear income tax schedule (Atkinson and Stiglitz, 1976).

The remainder of this section focuses on some of the more important options available to governments for raising revenue. The first part examines the scope for reducing so-called tax expenditures. Insofar as these erode the tax base, their reduction or elimination offers scope for both revenue mobilisation and improving the efficiency and fairness of tax systems, with positive growth effects in the longer run. The section then turns to potential benefits from changes to indirect taxes, followed by a discussion of potential revenue from currently under-tapped revenue sources.

Tax expenditures

Their scope

The scope of tax expenditures varies greatly across OECD countries, but they account for very substantial revenue leakages in some cases. For instance, in the United States, there were 247 tax expenditures affecting personal and corporate taxes in 2008, with an estimated value roughly equal to total personal income taxes collected in that year (Congressional Research Service, 2008). In its 2010 consolidation package, the French government reduced tax expenditure yielding revenue gains of close to 1%. Not all tax expenditures are undesirable, though, as some improve efficiency. Many, however, are distorting, poorly targeted and contribute to a lack of transparency. A scaling back of many tax preferences would raise revenue, be conducive to growth by permitting rates to remain low or be reduced, and improve fairness. Typically, the most costly tax expenditures are those aimed at boosting retirement savings, promoting homeownership, health insurance and charitable giving (OECD, 2010*d*).

Tax expenditures can admittedly offer advantages over alternative approaches to addressing a range of policy goals. These include potential administrative savings (since they are “self-administered” by taxpayers), relative ease of limiting abuse via tax audits, and offering the taxpayer greater choice in achieving the targeted objective (*e.g.*, allowing a range of investment vehicles for tax-favoured retirement savings plans). At the same time, tax expenditures result in a narrowing of the effective tax base and, for a given level of required revenue mobilisation, they inevitably require higher statutory tax rates than otherwise. Moreover, they intentionally re-direct taxpayer spending, and affect the nature and form of income in ways that may not maximize efficiency or fairness. Some can be particularly influential in affecting the allocation of capital. For instance, tax preferences for owner-occupied housing contribute to over-investment in residential housing in many countries. While tax expenditures can be expected to remain a vehicle to pursue various policy goals, reducing their scope and cost would seem an important option in the search for effective fiscal consolidation instruments. Some of the more important tax expenditures are examined in turn below.

Incentives for private retirement savings

Several OECD governments provide incentives to boost private savings for retirement through tax deductions. Tax incentives for retirement savings are sizeable in many countries. For example, in the United States, the combined incentives for employer-provided and individual pension plans amounted to around 1% of GDP in 2008.²³ Based on data for 2000, budgetary savings related to phasing out these incentives could amount to over 1.7% of GDP (Australia, Ireland and the United Kingdom), but even in countries with small schemes it could reach 0.2% of GDP (Japan and the Slovak Republic) (Antolin *et al.*, 2004).

Providing tax incentives on private retirement saving plans raises several issues. These include concern about *i*) the revenue losses, *ii*) which income groups benefit most, *iii*) who can provide retirement saving plans and, most importantly, *iv*) whether such incentives are effective in terms of boosting

23. This includes 401(k) plans, IRAs, the savers’ credit, and Keogh plans.

retirement savings. Tax incentives are found to boost retirement savings *per se*, but they are unlikely to generate much additional aggregate savings. Instead, they tend to result in a reallocation of savings away from instruments that are not tax-favoured. Attanasio *et al.* (2004) found only modest new savings generated by the tax incentives for Individual Retirement Accounts (IRAs) in the United States and from TESSAs and ISAs in the United Kingdom. The introduction of retirement saving tax incentives in Spain (Ayuso *et al.*, 2007) and in Germany (Corneo *et al.*, 2008) are thought to have created very limited net additional savings.

Most of these incentives allow taxpayers to exclude employer or individual retirement contributions from gross income, and to defer taxes on the investment income earned on these savings until the funds are withdrawn. Such deductions may apply to the *i*) contributions to the private savings plan, *ii*) accrued interest to, and capital gains on, the accumulated savings, and *iii*) the withdrawal of savings.²⁴ These incentives are tied to restrictions on the duration and withdrawal of these savings.

Reform to retirement saving systems is complicated, as an adequate income during retirement needs to be assured. If the reduction or elimination of retirement saving tax preferences were to reduce incentives to save, the upfront consolidation gains from the additional revenue could be more than offset by future spending pressures to ensure adequate retirement income. In this light, with reduced public incentives to save for retirement, the design of a reform package is important. One way to promote greater saving for retirement is to favour private retirement savings schemes with an opt-out rather than an opt-in option. The opt-out option appears to encourage more persons to save. The schemes in New Zealand, the United Kingdom and the United States include such an option. A particular problem arises in countries that means-test retirement income, however, to the extent that this reduces incentives to save. In these cases, when distributional concerns are important, matching contributions or tax credits could be provided to low-income earners and those who do not pay income taxes.²⁵ Ultimately, however, if income adequacy remains a concern, compulsion may be unavoidable.

A key concern, however, is the extent to which a phasing out of incentives for retirement savings might impact long-run growth potential. The channel through which the lost incentives adversely impact future GDP is through the revenue-raising measure's possible impact on investment and the capital stock. Reduced saving would either lead to higher domestic interest rates and lower investment, or to a fall in net foreign assets and a rise in the current account deficit. In view of the limited extent of new savings that are generated by such incentives, however, the effect is likely to be modest.

Housing

Many OECD countries provide tax incentives to spur individuals to invest in residential housing. In most cases, the stated objective is to increase owner occupancy. The principal means by which the income tax system favours housing in most countries is via the exclusion of the implicit rental income that accrues to the owner-occupier from taxation. With few exceptions (Netherlands, Norway, Sweden and

24. Most OECD countries adopted the EET system (exempt-exempt-taxed, that is contributions to the scheme are exempt from tax when earned, investment returns are exempt from tax, but the final payments are taxed), which is considered a consumption-based approach exempting returns on capital from taxation. The other major approach is the comprehensive income-based approach, which taxes not only labour income or/and withdrawals, but also investment returns. The consumption-based approach, by treating investment returns more favourably, encourages saving.

25. The design of the retirement saving incentives needs to pay attention to possible adverse consequences. For example, if retirement plans that are subject to income tax deductibility can only be provided by a limited number of institutions (*i.e.* there is no free entry to the market), then these institutions can capture part of the incentives.

Switzerland), most countries do not include in taxable income any imputed rental income that accrues to the owner-occupant on grounds that it is impractical to measure such income. In addition, most countries allow a deduction of mortgage interest expense against gross income, and provide a tax preference (e.g., deduction) for residential property taxes paid at the sub-national.²⁶ Finally, many countries provide highly favourable treatment by excluding from taxation capital gains on the sales of principal residences. In several countries, including Denmark, Finland, the Netherlands and Norway, the mortgage interest deduction is unlimited, whereas others apply a ceiling (Austria, Czech Republic, Luxembourg, Sweden, Switzerland and the United States) or impose a ceiling together with a time limit (Belgium and Ireland). The \$1 million cap on mortgage interest in the United States is, however, essentially non-binding. The Netherlands and the Czech Republic offer particularly generous tax relief (Johansson *et al.*, 2011). Many countries, however, did not introduce an unconditional mortgage interest deduction in the first place (Australia, Canada, France, Germany, Hungary, Japan, Korea, Mexico, New Zealand, the Slovak Republic and Turkey) or have phased it out (United Kingdom). Finally, most countries exempt from taxation some or all capital gains from owner-occupied homes, making housing a particularly tax-favoured form of saving.

The favourable tax treatment of housing creates a number of problems. First, the introduction of mortgage interest deductibility is likely to have contributed to excess demand for owner-occupied housing, driving up house prices. In turn, the value of the interest deductibility is likely to have been capitalised in the value of homes.²⁷ While the deduction encourages larger mortgages, it does not guarantee wider home ownership. To the extent the transaction costs of moving are higher for owner-occupied housing than for rental housing, mortgage subsidies hinder labour market mobility. Second, by over-stimulating investment in housing, the tax subsidies distort relative rates of return, leading to a less productive allocation of capital. Given these potential negative impacts, policies that increase ownership can only be justified if home ownership creates positive externalities. Such positive externalities can include better maintenance of properties by owners relative to tenants, which increases the value of their neighbours' properties, or stronger support of local schools and other facilities.

In the absence of a wholesale reform that would tax the implicit rental income accruing to owner occupiers (while retaining the mortgage interest deduction), significant gains could be achieved by eliminating the deductibility of mortgage interest. In light of the precarious state of the housing market in most OECD countries, the elimination of mortgage interest should be phased in over time to avoid aggravating housing market problems. The potential revenue gains are difficult to measure, especially in view of the desirability of a phased elimination or reduction. But the potential gains could be large. For instance, the U.S. Congressional Budget Office (CBO, 2011) estimates that the cumulative 2010-14 cost of the mortgage interest deduction could be as high as around 2/3 of a per cent of cumulative GDP. Under a simulated elimination of the deductibility beginning in 2014, annual savings could reach around \$75 billion by 2021.

26. Where proceeds from property taxes accrue primarily to sub-central governments, the deductibility of such taxes represents a cross-subsidy from low-spending/low-tax jurisdictions to higher spending ones.

27. Johansson *et al.* (2011) have argued that the deductibility of mortgage interest may have underpinned the development of asset price bubbles in several countries prior to the recent economic and financial crisis. In countries with more generous housing tax relief on debt financing costs (equivalent to 0.3 percentage points above the sample median), a positive demand shock translates into an increase in house prices that is around 50% larger than in the typical OECD country. At the same time, it is worth recalling that, where mortgage interest deductibility has been prevalent for many decades, the most important reason for the recent real estate asset price bubble is more likely to have been the abnormally low real interest rates and looser lending standards prevailing at the time of the build-up.

The effect on output from phasing out mortgage interest deductibility is ambiguous. On the one hand, the one-off reduction of wealth as a result of reduced home values may increase precautionary savings, with adverse knock-on short-run effects on growth. Over time, however, the reform would be beneficial to growth via its positive impact on the diversification of savings and a better allocation of capital thanks to the reduction of the tax-related distortion of the rate of return to owner-occupancy. However, some distortion would remain to the extent that the preferential treatment would be to tax implicit rental income while allowing a deduction for costs incurred, such as the finance costs of ownership.

The elimination of the mortgage interest deduction could pose particular hardship for some low-income homeowners, all the more so in the context of the recent housing crisis. While rising marginal income tax rates result in a greater subsidy for higher income taxpayers, the fact that low-income households spend a relatively larger share of income on housing makes them especially vulnerable to the phase-out of mortgage interest deductibility.

Other tax expenditures

In some countries, the purchase of private health insurance is provided tax preferences that can be costly in terms of foregone revenue and have undesirable effects on the demand for health care. Health-related tax expenditures range from around a ¼ per cent of GDP in Canada and Korea to over 1% of GDP in the United States. Like other tax expenditures, the deductibility of private health insurance premiums against otherwise taxable income represents a public subsidy. In some countries such as Canada and, especially, the United States, employer-provided health insurance as part of overall compensation is particularly attractive to health care consumers since it permits the purchase of insurance with pre-tax income, whereas out-of-pocket expenses are paid with after-tax income. In the range of \$600-700 billion, the projected cumulative foregone revenue during 2010-14 from the exemption of employer-provided health insurance premiums amounts to over 10% of the cumulative deficit (CBO, 2011).

Like others, these subsidies have potentially undesirable effects. First, they provide an incentive to purchase more insurance than otherwise, in turn boosting health care consumption. Against the backdrop of rapidly rising health care spending throughout the OECD, elimination of such favourable health insurance treatment could help contain such growth. Second, such subsidies tend to be regressive since they are of greater value to higher income employees due to their higher marginal tax rates. Third, in the case of employer-paid insurance, their elimination would provide greater horizontal fairness *vis-à-vis* employees without such compensation.²⁸

A number of other tax preferences can be an important source of revenue leakage without assurance of achieving their objectives. Expenses, scholarships and earnings related to planning or acquiring post-secondary (mostly tertiary) education are provided tax-favoured treatment in many countries, in principle to provide incentives to acquire post-secondary education. The efficiency arguments favouring such tax-expenditures are weak in light of the empirical evidence that the private returns to tertiary education exceed significantly the social returns (see above). Moreover, these tend to be regressive, benefitting mostly high-earning families facing higher marginal tax rates (Blöndal *et al.*, 2002). Charitable giving is also provided favourable treatment in most countries by allowing donations to be deducted from gross income. Charitable donations tend to be fairly price inelastic at low levels of giving, where it is motivated by other factors. Large donations, by contrast, are thought to be more sensitive to their tax treatment, and if the marginal social benefits to large donations to sanctioned charitable causes are

28. While the recent health reform legislation in the United States partly reduces the importance of this exclusion by introducing in 2018 an excise tax on so-called “Cadillac” plans, the exclusion has been left largely intact.

sizeable, setting a floor on deductible donations could contribute to raising revenues with limited decreases in aggregate donations.

Capping tax expenditures

Reducing or eliminating individual tax expenditures poses considerable political challenges. Constituencies for each tax-favoured income exclusion and deductible (or creditable) expenditure can be strong, vocal and visible political forces of opposition to changes to the *status quo*. The political economy of tax expenditures makes selective removal immensely divisive, however poorly grounded in economic theory and evidently inequitable (often both vertically and horizontally) some tax preferences may be. Lowering marginal tax rates can help set the stage for broader popular acceptance of elimination of tax preferences, since lower rates reduce the value of tax deductions. But this poses a chicken and egg problem: lowering rates requires base broadening, but base-broadening is easier if marginal tax rates are low. An alternative to selective dismantling is to set a ceiling on the total value of itemized preferences from which each taxpayer can benefit. For example, Feldstein *et al.* (2011) propose capping each U.S. taxpayer's non-saving related total tax expenditures at 2% of adjusted gross income.²⁹ The proposal is estimated to yield additional revenue of around 1.8% of GDP initially, and would grow over time. The proposal would have at least two additional beneficial effects. First, the reduction in the value of itemized tax expenditures would cause many taxpayers to opt for using the standard deduction, thereby providing widespread simplification. Second, the proposal would reduce the deadweight losses by reducing taxpayers' propensity to try to take advantage of tax preferences. This would be especially the case for taxpayers shifting to the standard deduction, but also for those for whom the cap is binding.

VAT tax expenditures and exemptions

The value added tax (VAT) is known as a prodigious producer of revenues. Presently, all OECD countries except the United States have a VAT or GST (Goods and Services Tax) that accounted on average for just under a 20% of general government revenue in 2008 (Table 2). As a tax paid by final consumers, the VAT as generally implemented is essentially a tax on consumption. A principal argument favouring consumption taxation is its neutrality with respect to saving. Assuming a constant tax rate over time, the consumption tax does not affect the rate of return to saving and, hence, the incentive to save.³⁰ However, a consumption tax can be regressive given the higher average propensity to consume of lower income households. Under an expenditure tax approach, whereby saving is deducted from gross income in deriving the tax base, progressivity would be engineered by either setting a high threshold before the tax is applied, or by allowing progressively higher marginal tax rates to apply.

Under a VAT, governments often grant "tax expenditures" by providing favourable treatment for broad swaths of the consumption basket, either by exemption or applying a lower tax rate. Lower VAT rates are prevalent in Turkey, Mexico and Greece, while Luxembourg and New Zealand tax goods and services more uniformly. In Spain, 48 tax expenditures under the VAT account for almost 2.2% of GDP (OECD, 2010j). Sweden, relatively close to the middle of the distribution, reports 48 tax expenditures under its VAT. Although the "inverse elasticity rule" might argue in favour of some differentiated tax rates to minimize deadweight losses, multiple rates contribute to considerably greater administrative and enforcement difficulties, and increase political pressures for additional low rates. Where lower rates on such items as food and clothing are provided to reduce the perceived regressive impact of consumption

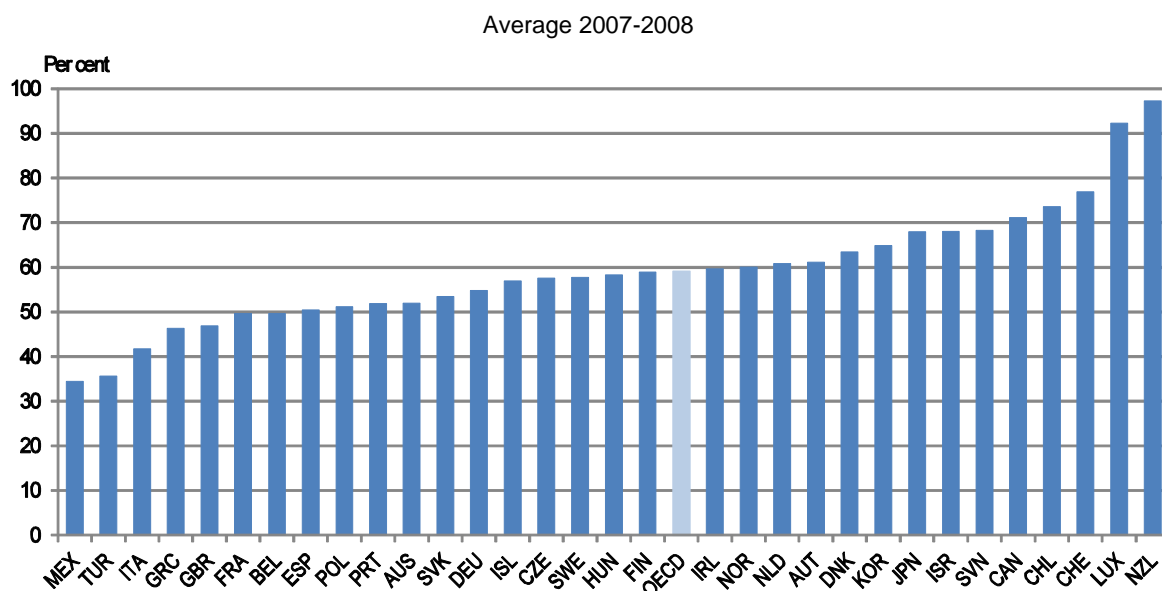
29. Feldstein *et al.* (2011) exclude saving-related tax expenditures in order to help tilt the US tax system more toward a consumption tax.

30. The empirical evidence on the sensitivity of saving to the rate of return is mixed, however (Hall, 1988 and Summers, 1982).

taxation, such lower rates also benefit higher income consumers. Thus, a preferred practical means of implementing VAT is to apply a flat rate on a broad base, using other instruments to protect the poor.

The scope for base expansion can be gleaned from the so-called c-efficiency indicator for VAT (Figure 16). The c-efficiency indicator measures the revenue collected from the VAT relative to the revenue that could be raised if the standard rate were applied to all consumption. A low ratio thus reflects a combination of a narrow base, low rates applied to a broad swath of consumption, and weak compliance. The lower the ratio, the greater the potential for additional revenue through base broadening. In most countries, there is evidently ample room to expand the base, whether by policy or tightened compliance. In several countries, there is scope for broadening the VAT tax base by eliminating exemptions and harmonising rates by increasing lower rates. A recent estimate for the United Kingdom suggests that a unified rate could boost VAT revenues by £ 24 billion, and even after compensating households, revenues could still be raised by £ 3 billion, or 0.2% of GDP (Mirrlees Review, 2010).

Figure 16. Value added tax performance: the VAT revenue ratio



Note: The VRR measures the difference between the VAT revenue actually collected and what would theoretically be raised if VAT was applied at the standard rate to the entire potential tax base in a "pure" VAT regime and all revenue was collected: $VRR = \frac{VAT\ Revenue}{Consumption * Standard\ VAT\ rate} * 100$.

Source: OECD (2011), *Consumption Tax Trends 2010: VAT/GST and Excise Rates, Trends and Administration Issues*.

Financial services are typically exempted from VAT, resulting in potentially sizeable revenue losses. The exemption has largely been due to technical difficulties in determining the precise tax base for margin-based services (*i.e.*, intermediation). Since much of VAT paid by financial service providers on inputs is non-recoverable, the sector's VAT exemption causes a number of economic distortions. These include more consumption of financial services by consumers than otherwise, and less use and greater self-provision of financial services by businesses. There is widening belief, however, that the evolution of accounting methods and information systems have reduced considerably the technical obstacles to imposing VAT on financial services (OECD, 2010f). Moreover, following the recent financial crisis, there is increased interest among governments in both raising revenue from financial institutions and reducing moral hazard in the financial services sector by throwing "sand in the gears" via a new tax on financial services. To this effect, several proposals have been put forward by the IMF (2010b) that offer a potential alternative to a VAT on financial services (OECD, 2011e).

The IMF has proposed two alternatives. The first, a “Financial Stability Contribution”, would be a flat levy imposed on all financial institutions, the rate varying by type of institution and, eventually, by the assessed degree of riskiness of an institution. The second, a “Financial Activities Tax” (FAT), would be a levy on the sum of profits and remuneration of financial institutions. The revenue yield would vary across countries, depending on factors affecting the size of the tax base (*i.e.*, the relative size, profitability and wage structure of financial sectors). A number of alternative forms of the FAT could be contemplated. As an illustration, under the form with the broadest base, a FAT at 5% could yield about 0.14% of GDP in Norway, and 0.31% of GDP in the United Kingdom (IMF, 2010*b*, Appendix 6). The ability of countries to successfully implement unilaterally such financial sector taxes is constrained, however, by the risk of tax and regulatory arbitrage, pointing to the need to international coordination and cooperation.

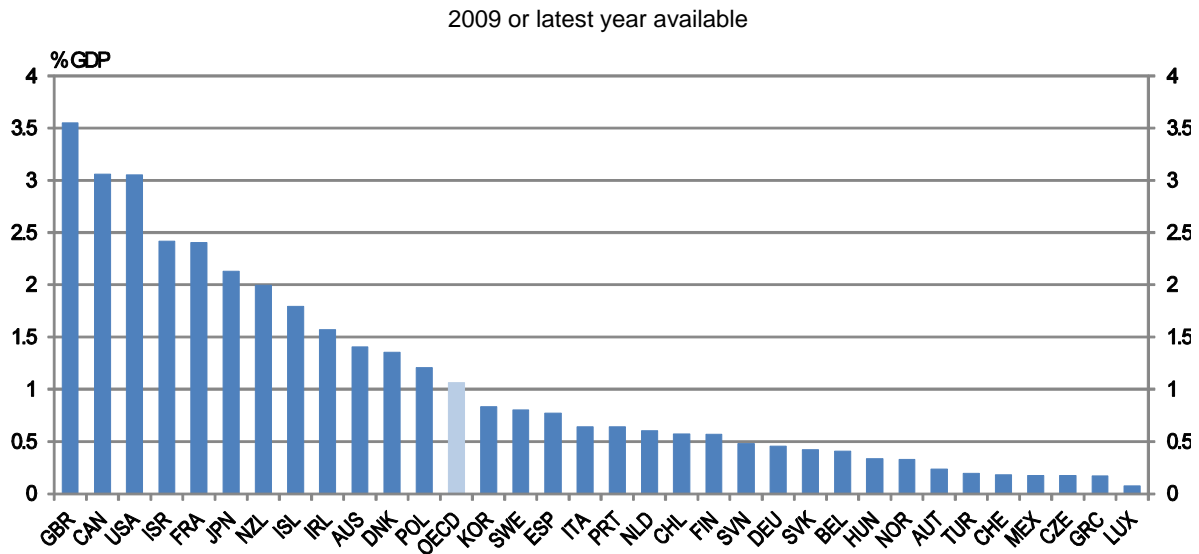
Tilting revenue toward less distortionary and corrective taxes

Property taxation

All OECD countries levy a variety of taxes on property, including on the transactions when the property is sold or transferred (including via bequest). Overall, property taxes have remained under 2% of GDP, accounting for between 5 and 6% of total tax revenue on average. Moreover, the composition of property taxes has remained broadly unchanged for the past several decades.

The taxation of immovable property (*i.e.*, real estate), paid by individuals and businesses, holds promise of yielding additional revenue at lower deadweight costs than many other taxes. Given the “immobility” of real estate, its taxation tends to result in smaller excess burdens than more mobile and responsive tax bases in the short to medium term. Shifts in taxation toward property taxes and away from more distortionary taxes can, other things equal, raise overall efficiency. And yet, by and large, the share of immovable property taxes in overall general government revenue is small, although the share is higher in several countries, notably the United Kingdom, the United States, Canada and France (Figure 17). In many countries, however, real estate property tax revenues accrue to subnational treasuries. Increasing reliance on real estate taxation for fiscal consolidation thus poses difficult fiscal federalism challenges. Moreover, for a variety of reasons, introduction of, or an increase in, property taxation tends to generate very strong political opposition. However, where such difficulties could be overcome, a significant increase in proceeds from property taxes could be obtained. For instance, among countries with relatively low yields from taxes on immobile property, additional revenue of slightly over ½ per cent of GDP could be gained by targeting the OECD average, with gains of as high as 0.9% of GDP in Luxembourg and Switzerland.

Figure 17. Recurrent taxes on immovable property



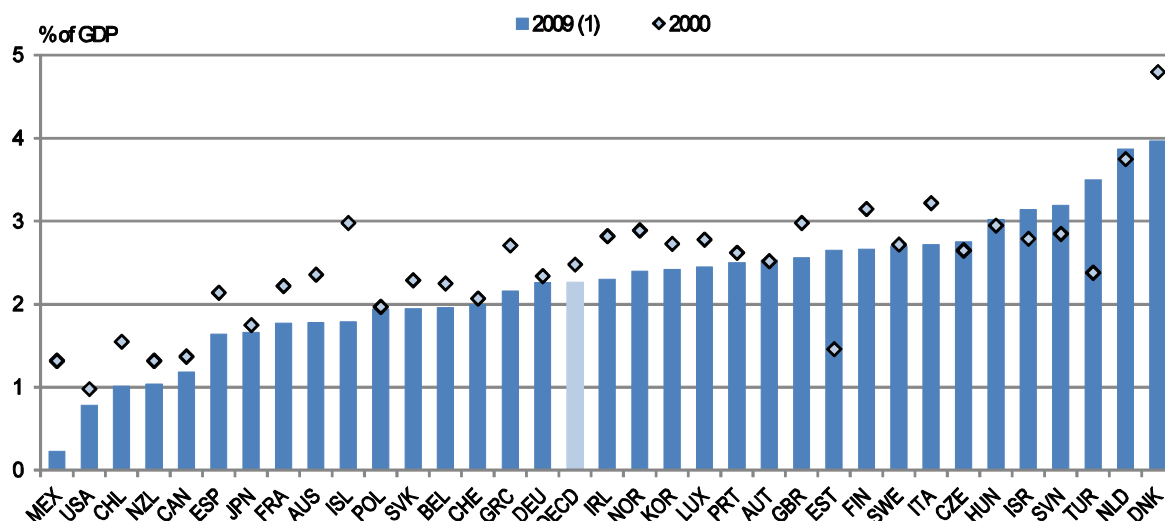
Source: OECD Revenue Tax Database.

An increase in property taxes could have potentially adverse impacts on low-income households, however. For elderly homeowners on fixed incomes with a large portion of wealth locked in the capital value of the home, property taxation can pose serious liquidity problems. Means-testing the tax provides one option for targeting low-income exemptions, but this is administratively burdensome. Low-income renters may also be exposed to some or all of the tax burden to the extent that property taxes can be shifted into rents. Opportunities for shifting the burden are fewer when property tax hikes vary by jurisdiction, since households have the option of relocating. A national property tax would, however, be more easily shifted to renters.

Environmental taxes

Environmental taxes offer the promise of simultaneously boosting revenue and helping to achieve environmental objectives by discouraging harmful behaviour. However, such taxes have not grown in recent years, but there is considerable international variation in their importance (Figure 18). Denmark and the Netherlands raised revenues of around 4% of GDP in 2009 from such sources, followed by many countries with revenues above 2.5% of GDP. In contrast, the United States, New Zealand and Canada raised only around 1% of GDP or less. The most important taxes in terms of revenue-raising capacity are energy-related, followed by taxes on vehicles. The share of other environmental taxes, such as those on waste, nitrous oxides and volatile organic compounds, is much smaller. Several countries introduced carbon taxes in the early 1990s, currently generating sizeable revenues: 0.3% of GDP in Denmark and Finland and 0.8% of GDP in Sweden (in 2007 in all three cases). France, Germany, Ireland, the Netherlands and the United Kingdom also have carbon taxes in place.

Figure 18. Environmental tax revenues in OECD countries



1. 2008 for Belgium, Greece and Poland.

Source: OECD/EEA Database on instruments used for environmental policy and natural resources management.

Several arguments underpin the growing support for increasing environmental fees and taxes. First, against the backdrop of international commitments to reduce greenhouse gases, countries face daunting challenges to discourage polluting activities while at the same time containing the heavy hand of regulation.³¹ This argues for setting a price on the use of the environment, both to reduce pollution and to provide incentives to innovate to reduce fossil fuel consumption. The international community has increasingly embraced the notion of either imposing a tax on carbon emissions or auctioning tradable emission rights (often referred to as cap and trade). Second, environmental taxes, in particular on carbon emissions (or tradable emission rights), are efficient in that they are designed to reduce a negative externality. Third, they hold much promise for raising future revenue, as witnessed in countries that have already introduced these. Bassi *et al.* (2009) estimate that such taxes could generate up to about 7% of GDP in additional revenue, increasing by around 5 and over 6 percentage points of GDP in Europe and North America, respectively.³² In the United States, a carbon tax could raise between \$60-100 billion (2/3 of a per cent of GDP in 2009) if set at a level to equate the stringency of the proposed cap-and-trade initiative (Gayer, 2009).

Boosting environmental taxation, however, poses a potentially difficult trade-off. On the one hand, by helping to internalize the external costs of pollution, environmental degradation would slow down or reduce environmental externalities, leading to improved aggregate welfare. On the other hand, by increasing the cost of production, higher environmental charges that are not offset by decreases in other, less efficient taxes (*e.g.*, marginal income tax rates or corporate taxes) could slow economic growth. This is especially relevant given the global nature of greenhouse gas pollution, whereby the introduction of or

31. Regulation is a far costlier means of achieving environmental targets than through market-based mechanisms. For instance, it is estimated that command-and-control mandates cost 22 times more than market-based methods (CEA, 2003).

32. Bassi *et al.* (2009) use the term “environmental taxes” to refer to environment-related taxes, charges and fees. While in general taxes are unrequited payments to the general government levied on a tax base, and charges and fees are payments for a specific service, in the case of environment-related taxes, charges and fees, this distinction is blurred because a tax based on emissions can also be viewed as a charge.

increase in pollution abating taxes or charges can be harmful to the external competitiveness of countries that unilaterally raise taxes. There is thus a crucial role for international cooperation and coordination in increasing the weight of such taxes in governments' revenue systems.

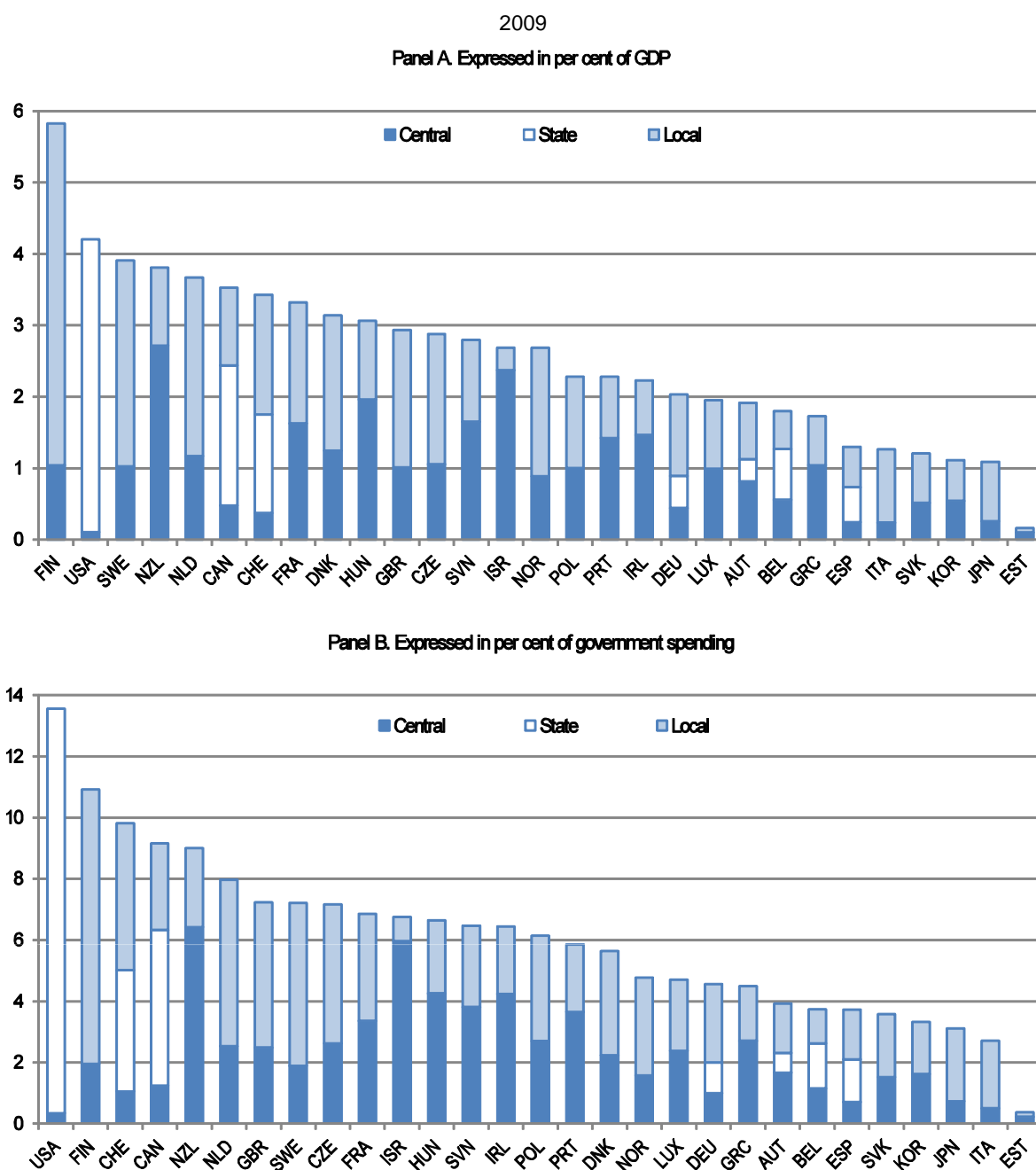
Fears that increased costs for fossil fuels could have significant adverse impacts on low-income households are likely to be exaggerated. While the share of energy and energy-intensive products is somewhat higher among low-income groups, evidence suggests that the greater impact than on higher income households is slight (O'Brien and Vourc'h, 2001). But a more comprehensive analysis would be needed to take into account the full effects on the welfare of low income households, including the beneficial effects of energy taxes on improved air quality (OECD, 2010a).

User charges

User charges (or user fees) are individual payments for services provided. User charges make up a considerable part of public sector revenue in some countries, with the OECD average hovering around 2.5% of GDP (Figure 19). User charges are a typical sub-central government revenue source; in federal countries around 75% of fees accrue to local and state governments combined, while in a majority of unitary countries, local government accounts for more than 50% of total user fee receipts. User charges are predominantly levied for infrastructure services such as transport, water and waste collection, while they are less common for social services such as childcare or education. User charges are a price signal that tends to make publicly provided services more responsive to the tastes and preferences of consumers.

User fees are beneficial for managing demand and supply of infrastructure services and can underpin fiscal consolidation in various ways. They help manage and contain excessive demand. They may also reduce budget pressure by providing the funds necessary to maintain and expand infrastructure networks. User charges may be particularly appropriate for environmentally sensitive goods and services. Here, user charges can not only reduce pressure on the budget, but can also be a useful instrument for environmental policy. Proper pricing of services potentially affecting the environment, such as waste collection, water and waste treatment, or transportation, can help reduce environmental impacts.

Figure 19. User charges in OECD countries



Source: OECD National Accounts Database. User charges are defined as "sales of goods and services" in the government accounts.

Equity considerations, market structure and the wider administrative environment may limit a stronger reliance on user charges. An increase in user charges could disproportionately affect low-income households. As the rise of user charges often concerns essential government services, an efficiency/equity trade-off could arise. Targeted support to low-income households could provide one option to deal with rising fee levels. As many services are provided by a single monopolistic provider, a regulator may need to ensure that prices do not reflect an abuse of monopoly power. Structural reforms that raise competition between several service providers could strengthen the case for a wider application of user charges. More

generally, evidence suggests that user charges are best applied in a framework in which providers compete with each other, where sub-central government budgets report service revenues and costs in a transparent way, and where citizens have some control over the level and structure of charges (Groot and Budding, 2004).

In the following, two policy areas are presented where a wider application of user fees could help reduce budget and environmental pressure, reduce excessive demand and – to some extent – help increase the supply of services.

Charging for metropolitan transport infrastructure

There is a solid case for a wider implementation of user charges for both rail and road transport networks, especially in metropolitan areas. The lack of adequate price signals leads to excessive demand on the existing transport networks, while financial constraints and the lack of appropriate funding restrict investment in capacity expansion (OECD/ECMT, 2007). Pricing to manage and fund urban road networks is rare, despite its success in the few cases (OECD, 2010a). As for rail, in most countries, user charges typically cover 50% or less of urban public transport cost, leading to funding shortages for investment in new rail infrastructure (Blöchliger, 2008). In the European Union, the cost of congestion is estimated at around 2% of GDP (Koopmans *et al.*, 2004).

A wider use of transport user charges can be an efficient instrument to address both the more immediate need for fiscal consolidation and the long-term policy to balance the demand for transport services against the supply of the necessary infrastructure. User charges could replace a part of the existing fuel and vehicle taxes, which are a poor measure to manage capacity constraints. In particular, user fees should reflect the social costs of congestion in transport networks. Congestion charges, which differentiate between time and place of infrastructure use, are the most advanced pricing mechanism for urban transport systems (OECD, 2010l). Equity considerations, such as transport needs of low-income households, may have to be addressed through means-tested income support, although better public transport systems will tend to benefit low-income households. Political economy considerations also may have to be taken into account. Often the public impression is that infrastructure charges are a tax increase in disguise. In order to avoid that charges are seen purely as a fiscal consolidation instrument, policy makers might have to make it clear that charges do not primarily fill the public tills but are used to provide more and better services.

Water pricing

The sustainable use of water has become a central economic and environmental issue, and adequate pricing one of the core instruments of water policy (OECD, 2010m). While in most OECD countries tariffs account for the lion's share of recurrent expenditure on water provision, full-cost recovery – including infrastructure and environmental cost – is rare. Differences in water price levels are considerable, with price levels lower and the gap to full-cost recovery usually larger in countries where water is scarce (OECD, 2010m). While access to water supply and sanitation is largely ensured in OECD countries, significant investments will still be required to maintain service quality over time. In some central and eastern European economies, the water and sanitation sector is seriously under-financed.

Pricing water at an adequate level has to take into account several and sometimes conflicting objectives, such as environmental sustainability, economic efficiency, financial sustainability and social concerns. For example, setting water fees equal to the environmental costs when groundwater becomes depleted may justify a price far in excess of investment cost recovery, which in turn may have severe distributional consequences. A review of tariff policies for water supply and sanitation in OECD countries reveals that price signals are being strengthened for households and industrial use, mainly in the form of continued relative price increases and an increase in the use of fixed charges plus use-dependent fees. In

agriculture, which is by far the largest water consumer and also a strong contributor to water pollution, the principle of sustainable cost recovery could be applied more stringently, with farmers not only covering the operation and maintenance costs for water supply, but also infrastructure and the cost arising from pollution. Political economy considerations may require an informed and transparent debate about the balance between potentially conflicting objectives and about the compensation measures that may be needed to give user charges a stronger role in water policy.

5. A policy matrix for growth-promoting fiscal consolidation

The post-crisis fiscal consolidation challenge is an opportunity for OECD governments to develop coherent strategies to tackle structural fiscal policy deficiencies that both undermine sustainability and weaken economic growth. The previous discussion of the various instruments, which evidently constitute but a limited part of a potential policy agenda, sheds light on the ways in which reforms can both contribute to fiscal consolidation, improved economic performance, higher levels of welfare and fairer public finances. Table 3 attempts to bring together the key issues surrounding each policy area, including important trade-offs with which governments need to grapple in designing a sustainable strategy. While comparable information on the potential contributions of spending and revenue measures to fiscal consolidation are typically not available, and particularly not in a static or dynamic scoring framework, Table 4 brings together estimates that could inform a choice of where potential to make savings or increase revenues may exist. Even without being able to quantify all the possible measures across countries, the cumulative potential cuts in spending and increases in taxation are sizeable. On average across countries, the cumulative cuts in spending and increases in revenue could yield around 7% of GDP in consolidation on average across countries, with somewhat more on the spending side. (These are based on estimates of potential efficiency savings or calculations of the mechanical budgetary impact of reducing spending on individual spending programmes or raising revenue from different taxes to the OECD average).. Given that there are measures that are difficult to quantify, this is a lower estimate. Furthermore, the potential tends to be somewhat greater in the English-speaking countries that generally face the larger consolidation needs. A large share of the savings in spending would come from reaping efficiency gains, which are likely to take some time to emerge. On the revenue side, relatively large opportunities exist for the greater use of environmental taxes and the broadening of income and indirect tax bases.

The implementation of fiscal consolidation will need to take into account social trade-offs. In some cases, potential trade-offs can be mitigated by re-designing tax and benefit systems, whereas in others involve deeper choices in system design (Joumard *et al.*, 2012). With respect to taxation opportunities exist to eliminate some tax expenditures, many of which concern income taxes, which do nothing for or harm distributional goals while introducing distortions. In other cases, such as lower VAT rates and exemptions, eliminating the distortions would reduce the intended progressivity of some of the exemptions or reduced rates. In these cases, adjustments to transfers may be required. Transfers tend to be progressive, but they can impact on labour force participation and thus design is important. For instance, high unemployment benefits, which fall over time, may have only limited adverse effects on work incentives. Besides design features, the scope of social transfers affects the trade off with the social dimension. Universal benefits are likely to require a comparatively high tax take to finance them, whereas means-tested transfers limit the total cost, but are likely to introduce adverse incentive effects. Ultimately, politicians will need to decide the balance between universality and means testing, which in turn requires balancing support for low income families with the consequences of higher marginal effective tax rates for many more families.

Table 3. Trade-offs and complementarities between fiscal consolidation instruments and growth

Policy area	Description	Impact on budget deficit		Impacted growth driver	Impact on per capita GDP	Remarks
		Short run	Structural			
A. Expenditure policy						
1. Social transfers						
A. Reduce generosity of unemployment benefits	Net replacement rate is reduced to the level in the median OECD country.	-	--	Structural unemployment rate could fall by 0.5-1.5% depending on the pace of reform and the combination of measures (Bouis and Duval, 2011).	In the case of a reform that reduces the generosity of unemployment benefits by one standard deviation, GDP per capita increases by 5.2% in 10 years, and 8.5% in steady states (Barnes <i>et al.</i> (2011).	Reducing the generosity of unemployment compensation, notably the duration of benefits, combined with increasing the amounts and improving the effectiveness of activation policies, provides greater incentives to increase job search.
B. Increase ALMP	Increase ALMP spending to average (per cent of GDP) of benchmark countries.	+		Labour utilisation is improved via higher employment due to more effective job search. Labour productivity raised via improved skills/job matching and training programs.	++	
C. Family benefits	Tighten eligibility through better targeting, and link some benefits to job search effort.	-	-	Improves labour supply by tying some benefits to work search.	+	
2. Pensions						
A. Raise retirement age	Phase in an increase in the statutory age for full pension.	-	--	Raises labour supply, but may reduce saving, depending on relative strength of income and substitution effects.	++	Raising the effective age of retirement is more effective if changes to the statutory age, and higher penalties/premiums for early/delayed retirement, are accompanied by other policy changes that affect retirement decisions, including tax policies, availability of other age-dependent benefits such as disability payments, and the employability of elderly workers through ALMPs.
B. Index statutory retirement age to changes in life expectancy		Nil	--	Labour force expands	++	Automatic adjustment to future fluctuations in demography

Table 3. Trade-offs and complementarities between fiscal consolidation instruments and growth, *continued*

Policy area	Description	Impact on budget deficit		Impacted growth driver	Impact on per capita GDP	Remarks
		Short run	Structural			
A. Expenditure policy						
2. Pensions						
C. Reduce early retirement/Increase delayed retirement	Reduce incentives for early retirement, and raise incentives for later retirement, by lowering the implicit tax on continued work. This can include increasing the penalty for early retirement, tightening eligibility for other benefits such as disability payments. (Duval, 2003; OECD, 2011 <i>d</i>).	-	--	Labour force expands	+	
3. Health care						
Reap efficiency gains	Adopt OECD "best practice" for a range of insurance and service delivery approaches (Joumard <i>et al.</i> , 2008, 2010; OECD, 2010 <i>d</i> ; IMF, 2010).	.	-2% of GDP on average in OECD during 2011-17		+	Range of possible reform measures, including budget caps, supply constraints, price controls, and increased use of market mechanisms.
4. Education						
Adopt "best practice" in primary and secondary school system	<i>i</i>) Make budget process more responsive to educational needs via decentralization of responsibilities; <i>ii</i>) budget management should be more autonomous and focused on <i>outcomes</i> ; <i>iii</i>) allow greater scope for competition (Gonand <i>et al.</i> , 2007; Sutherland <i>et al.</i> , 2007).	-	1% of GDP		+	
Introduce or raise tuition fees for tertiary education	<i>i</i>) Tuition fees could be gradually raised to levels that would close the gap between private and public rates of return on tertiary education.	-	--	Improves labour force productivity via higher skills. Tuition fees spur competition that induces greater responsiveness of educational institutions to demands of students. Tuition fees may also shorten time to complete studies.	+	
5. Government wage bill						
Restore public-private sector pay relativities	<i>i</i>) Some governments may wish to undertake functional reviews to determine warranted size and structure of civil service.					

Table 3. Trade-offs and complementarities between fiscal consolidation instruments and growth, *continued*

Policy area	Description	Impact on budget deficit		Impacted growth driver	Impact on per capita GDP	Remarks
		Short run	Structural			
B. Revenue policy						
1. Broaden income tax base	<i>i)</i> Review major exclusions of income from the tax base, both pecuniary and in-kind. Aim for improved horizontal and vertical equity. <i>ii)</i> Assess (against original aim) and reconsider tax deductions and credits. See OECD (2010e).	--	--	Impact varies depending on affected tax preference. Reduced distortions improve allocation of labour and capital resources. Elimination of preferences reduces complexity of compliance through simplification and perceptions of improved horizontal and vertical equity.	++	Broadening the tax base allows statutory tax rates to remain low or be reduced, with positive efficiency impacts and knock-on effects on growth.
2. Broaden VAT base	Review scope for eliminating exclusions from standard VAT rate with an aim to broaden the base and applicability of single rate.	--	--			A broader tax base allows the standard rate to be kept low.
3. Introduce or increase taxes on immobile property	In countries without a national property tax, the central government could introduce a low rate residential property tax or apply a surtax on subnational property taxes.	--	--			
4. Introduce or increase greenhouse gas levies.	Introduce a carbon tax or auction transferrable emissions rights.	--	--			Negative impact on growth but improves welfare.

Note: A negative (positive) sign indicates that it would reduce (increase) the budget deficit.

Table 4. Quantifying the contribution of various policy instruments to fiscal consolidation

Per cent of GDP

	AUS	AUT	BEL	CAN	CHE	CZE	DEU	DNK	ESP	FRA	FIN	GBR	GRC	HUN	ISL
EXPENDITURE															
1. Social transfers															
A. Family benefits	0.5	0.7	0.6	-	-	0.1	-	1.4	-	1.1	0.9	1.3	-	1.4	1.0
B. Disability benefits	-	0.3	0.2	-	0.5	0.5	-	1.3	0.6	-	0.9	0.3	-	0.6	-
2. Pensions															
A. Eliminate tax breaks	2.7	0.1	0.1	2.0		0.1	0.8		0.2	0.0	0.1	1.2			1.0
3. Health care															
A. Increase efficiency	0.5	1.8	2.1	2.5	0.5	1.3	1.3	2.8	1.6	1.3	2.5	3.7	3.9	1.7	1.9
4. Education															
A. Increase efficiency in primary and secondary education	0.4	0.4	0.5	0.2	0.2	0.2	0.4	0.6	0.2		0.2	0.2		0.3	1.1
B. Introduce or raise tuition fees for tertiary education	-	0.4	0.4	-	0.4	0.3	0.4	0.4	0.2	0.3	0.4	-	0.4	0.4	0.3
5. Government wage bill															
A. Restore public-private sector pay relativities	-	0.3	0.6	-	-	0.4	0.2	2.0	1.0	-	0.5	1.8	-	-	-
B. Reduce subsidies as share of GDP to OECD average	-	2.3	0.8	-	2.4	0.7	-	1.2	-	0.2	-	-	-	-	0.4
REVENUE															
1. Broaden VAT base	0.6	-	1.4	-	-	-	0.4	-	1.4	1.4	0.1	1.8	2.0	0.1	0.8
2. Introduce or increase taxes on immovable property	-	0.8	0.6	-	0.9	0.8	0.6	-	0.3	-	0.5	-	0.8	0.7	-
3. Environmental taxes															
A. Cut GHG emissions to 20% below 1990 levels via an emission trading system with full permit auctioning	4.2	1.8	1.8	2.5	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	

Table 4. Quantifying the contribution of various policy instruments to fiscal consolidation, *continued*

	IRL	ITA	JPN	KOR	LUX	MEX	NLD	NZL	NOR	POL	PRT	SVK	SWE	TUR	USA
EXPENDITURE															
1. Social transfers															
A. Family benefits	0.7	-	-	-	1.2	-	0.1	1.1	0.9	-	-	-	1.4	-	-
B. Disability benefits	-	-	-	-	0.1	-	0.8	0.7	1.8	0.6	0.3	-	1.3	-	-
2. Pensions															
A. Eliminate tax breaks	1.2	0.0	0.7		0.5	0.2			0.6	0.2	0.1	0.2			0.8
3. Health care															
A. Increase efficiency	4.8	1.1	0.8	0.6	2.0	0.7	2.7	2.6	1.5	1.5	1.0	2.7	2.7	1.5	2.7
4. Education															
A. Increase efficiency in primary and secondary education	0.3	0.4	0.2	-	0.5	-	0.3	0.3	0.8	0.2	0.1	0.2	0.5	-	0.8
B. Introduce or raise tuition fees for tertiary education	0.3	0.2	-	-	0.4	0.1	0.2	-	0.4	0.1	0.1	-	0.4	0.4	-
5. Government wage bill															
A. Restore public-private sector pay relativities	0.9	1.1	0.6	-	0.8	-	0.3	0.9	-	2.2	-	0.8	0.7	-	0.5
B. Reduce subsidies as share of GDP to OECD average	-	-	-	-	0.2	-	0.1	-	0.7	-	-	0.2	0.1	-	-
REVENUE															
1. Broaden VAT base	0.4	2.6	-	-	-	2.5	-	-	0.2	1.4	1.2	0.6	-	3.3	
2. Introduce or increase taxes on immovable property	0.2	0.4	-	0.0	0.9	0.8	0.4	-	0.7	-	0.3	0.6	0.2	0.9	-
3. Environmental															
A. Cut GHG emissions to 20% below 1990 levels via an ETS with full permit auctioning	1.8	1.8	1.2		1.8		1.8	4.2		1.8	1.8	1.8	1.8		2.2

Notes:

An empty cell indicates that no information was available. Cells with a dash indicate that no savings are available from this source.

Estimates for family benefits are based on reducing the figure reported in the OECD Socex Database to the unweighted OECD average as a per cent of GDP.

Estimates for disability benefits are based on reducing the figure reported in the OECD Socex Database to the unweighted OECD average as a per cent of GDP.

The elimination of tax breaks for retirement is based on data for 2007 from OECD (2011), *Pensions at a Glance*.

Health care efficiency estimates are from Joumard *et al.* (2010).

Education efficiency estimates are based on Sutherland *et al.* (2007) updated to 2007 spending figures.

Tuition fees for tertiary education are based on raising direct household expenditure for tertiary education institutions to the unweighted average of those countries where households spend on this category.

Government wage relativities are based on returning the government to private sector wage ratio in the early 2000s.

Estimates for subsidies are based on reducing national account data for 2009 to the unweighted OECD average.

The figures for broadening VAT base assume collection efficiency rises to the unweighted OECD average.

The figures for immovable property are based on the unweighted average for 2008 from the Revenue Statistics.

Revenues from greenhouse gas emissions are based on de Serres *et al.* (2010).

6. Conclusion

Two key messages emerge from the previous discussion. First, many policy areas are amenable to reforms that can deliver deficit reductions without harming desired outcomes or policy intentions (*e.g.*, good health outcomes and progressive taxation). Second, many policy reforms can be expected to have favourable effects on the drivers of economic growth (the quantity and quality of labour, investment and the allocation of capital and productivity growth) through improved incentives and reduced distortions. For the favourable growth impacts of fiscal reforms to bear the most fruit, however, they need to be accompanied by more far-reaching structural reforms, to product and labour markets. Policy choices need to be mindful of, and adjusted for, possible adverse short-run impacts, predictable distributional consequences, or unintended harm to other policy objectives.

The greater challenge of fiscal consolidation is not the choice of measures with the greatest immediate budgetary impact, however. It is instead the choice of those measures that improve the long-term fiscal outlook through the combined direct effects on spending and revenues on the one hand and the indirect growth-enhancing effects on the other. In this regard, a number of measures would likely be counterproductive unless they are implemented to minimise aggravating existing distortions and the associated deadweight losses. Thus, for instance, raising the shares of personal and corporate income tax revenues in GDP should be undertaken via base-broadening measures rather than by increasing statutory tax rates in view of the adverse effects of high marginal tax rates on key growth factors. A strategic approach to fiscal consolidation combines spending and revenue reforms that reduce inefficiencies and the excess burdens of distorting taxes on the one hand with careful targeting of measures to protect the most vulnerable households.

Fiscal consolidation unavoidably poses difficult political economy challenges. For fiscal consolidation to succeed, reforms need to be based on solid analysis, reflect a broad-based political mandate, be well and widely communicated and explained, and backed by strong leadership. Making reform happen also requires government cohesion, and, where macro-economically permitted, a phased transition to the new policy setting to allow adversely impacted parties to adapt (OECD, 2010*k*). The structural reforms that underpin consolidation have unavoidably different impacts on various segments of the population, reflecting in part different endowments and preferences, not to mention acquired economic rents. The extent to which partial compensation for losers should be considered will depend on a number of factors, including the ease with which the affected parties can absorb any policy-induced losses, and whether their self-interested political objections risk de-railing the overall consolidation strategy.

A key lesson drawn from OECD countries' reform experiences is that success hinges on winning consent rather than securing compliance. To this effect, government cohesion in support of reform is critical to ensuring that a consistent message is communicated regarding the basis for and gains to be achieved by the reform package; mixed messages allow those opposed to reform to exploit apparent fissures. In addition, engaging potential losers in the reform debate helps to create a sense of trust among opponents that efforts will be made to provide compensation – albeit only partial – without contradicting the overall aims of the fiscal reforms.

Bibliography

- Adema, W. and M. Ladaïque, (2009), “How Expensive is the Welfare State?”, *OECD Social, Employment and Migration Working Papers*, No. 92.
- Afonso, A., L. Schuknecht and V. Tanzi (2006), “Public Sector Efficiency: Evidence for New EU Members and Emerging Markets”, *Working Paper Series*, No. 581, European Central Bank, Frankfurt am Main.
- Ahrend, R., P. Catte and R. Price (2006), “Interactions Between Monetary and Fiscal Policy: How Monetary Conditions Affect Fiscal Consolidation”, *OECD Economics Department Working Paper*, No. 521.
- Alesina, A.F. and R. Perotti (1995), “Fiscal Expansions and Fiscal Adjustments in OECD Countries,” *Economic Policy*, Vol. 10, No. 21.
- Alesina, A.F. and R. Perotti (1997), “Fiscal Adjustments in OECD Countries: Composition and Macroeconomic Effects”, *IMF Staff Papers*, Vol. 44.
- Alesina, A.F. and S. Ardagna (1998), “Tales of Fiscal Adjustment”, *Economic Policy*, Vol. 13, No. 27.
- Alesina, A.F. and S. Ardagna (2009), “Large Changes in Fiscal Policy: Taxes versus Spending”, *NBER Working Papers*, No. 15438.
- Antolin, P., A. de Serres and C. de la Maisonneuve (2004), “Long-term Budgetary Implications of Tax-Favoured Retirement Saving Plans“, *OECD Economic Studies*, Vol. 39, OECD Publishing.
- Arnold, J. (2008), “Do Tax Structures Affect Aggregate Economic Growth?”, *OECD Economics Department Working Paper*, No. 643.
- Attanasio, O.P., J. Banks and M. Wakefield (2004), “Effectiveness of Tax Incentives to Boost Retirement Saving: Theoretical Motivation and Empirical Evidence”, *The Institute of Fiscal Studies Working Paper Series*, No. 2004/33.
- Ayuso, J., J.F. Jimeno and E. Villanueva (2007), “The Effects of the Introduction of Tax Incentives on Retirement Savings”, *Bank of Spain Working Paper Series*, No. 724.
- Barbier-Gauchard, A., A. Guilloux and M-F. Le Guilly (2010), “*Tableau de bord de l’emploi public : Situation de la France et comparaisons internationales*”, *Centre d’analyse strategique*.
- Barnes, S., R. Bouis, P. Briard, S. Dougherty and M. Eric (2011), “The GDP Impact of Reform: A Simple Simulation Framework”, *OECD Economics Department Working Paper*, No. 832.
- Bassanini, A. and R. Duval (2006), “Employment Patterns in OECD Countries: Reassessing the Role of Policies and Institutions”, *OECD Economics Department Working Paper*, No. 486.

- Bassi, S., P. ten Brink, M. Pallemerts, and I. Homeyer (2009), “Feasibility of Implementing a Radical ETR and its Acceptance”, *Institute for European Environmental Policy Report*.
- Baumol, W.J. and W.E. Oates (1988), *The Theory of Environmental Policy*, Cambridge University Press, New York.
- Bernanke, B. (2011), “Challenges for State and Local Governments”, speech at the 2011 Annual Awards Dinner of the Citizens Budget Commission, New York, New York, 2 March 2011.
- Blanchard, O. and J. Wolfers (2000), “The Role of Shocks and Institutions in the Rise of European Unemployment: The Aggregate Evidence”, *Economic Journal*, Vol. 110, No. 462.
- Blank, R. (2002), “Evaluating Welfare Reforms in the United States,” *NBER Working Paper*, No. 8983, June.
- Blöchliger, H. (2008), “Market Mechanisms in Public Service Provision”, *OECD Economics Department Working Paper*, No. 626.
- Blöchliger, H., D.H. Song and D. Sutherland (2012), “Fiscal Consolidation. Part 4. Case Studies of Large Consolidation Episodes”, *OECD Economics Department Working Paper*, No. 935.
- Blöndal, S., S. Field and N. Girouard (2002), “Investment in Human Capital Through Post-Compulsory Education and Training: Selected Efficiency Aspects”, *OECD Economics Department Working Paper*, No. 333.
- Bouis, R. and R. Duval (2011), “Raising Potential Growth After the Cycle: A Quantitative Assessment of the Potential Gains From Various Structural Reforms in the OECD Area and Beyond”, *OECD Economics Department Working Paper*, No. 835.
- Commonwealth of Australia (2010), *Australia’s Future Tax, Report to the Treasurer*, Part 1 and 2, December, <http://taxreview.treasury.gov.au/content/Content.aspx?doc=html/home.htm>.
- Congressional Budget Office (2011), *Reducing the Deficit: Spending and Revenue Options*, Washington, D.C.
- Congressional Research Service (2008), *Tax Expenditures: Compendium of Background Material on Individual Provisions*, 110th Cong., 2d Session, Print #667, December, http://taxprof.typepad.com/taxprof_blog/2009/02/tax-expenditures-compendium-of-background-material-on-individual-provisions.html
- Corneo, G., M. Keese and C. Schroder (2008), “Can Governments Boost Voluntary Savings via Tax Incentives and Subsidies? – A German Case Study for Low-Income Households”, *Christian Albrecht University Economics Working Paper Series*, No. 2008-18.
- Council of Economic Advisers (2003), *The Economic Report of the President*, Government Printing Office, Washington, D.C
- Duval, R. (2003), “The Retirement Effects of Old-Age Pension and Early Retirement Schemes in OECD Countries”, *OECD Economics Department Working Paper*, No. 370.
- Égert, B., T. Kozluk and D. Sutherland (2009), “Infrastructure and Growth: Empirical Evidence”, *OECD Economics Department Working Paper*, No. 685.

European Commission (2009), *Sustainability Report 2009*, Brussels.

Feldstein, M., D. Feenberg and M. MacGuineas (2011), “Capping Individual Tax Expenditure Benefits,” *NBER Working Paper*, No. 16921, National Bureau of Economic Research.

Fuente, A. de la and A. Ciccone (2003), “Human Capital in a Global and Knowledge-based Economy,” *UFAE and IAE Working Papers*, 562.03.

Fullerton, D. and Monit, H. (2010), “Can Pollution Tax Rebates Protect Low-income Families? – The Effects of Relative Wage Rates”, *NBER Working Paper No. 15935*.

Gayer, T. (2009), “On the Merits of a Carbon Tax”, Testimony before the U.S. Senate Committee on Energy and Natural Resources, December.

Giavazzi, F. and M. Pagano (1990), “Can Severe Fiscal Contractions be Expansionary: Tales of Two Small European Countries”, in O.J. Blanchard and S. Fischer (eds.), *NBER Macroeconomics Annual 1990*, Vol. 5, MIT Press.

Giavazzi, F. and M. Pagano (1996), “Non-Keynesian Effects of Fiscal Policy Changes: International Evidence and the Swedish Experience”, *Swedish Economic Policy Review*, Vol. 3.

Gonand, F., I. Joumard and R. Price (2007), “Public Spending Efficiency: Institutional Indicators in Primary and Secondary Education,” *OECD Economics Department Working Paper*, No. 543.

Groot, T. and T. Budding (2004), “The Influence of New Public Management Practices on Product Costing and Service Pricing Decisions in Dutch Municipalities”, *Financial Accountability & Management*, Vol. 20(4).

Gruber, J. (2006), “The Role of Consumer Copayments for Health Care: Lessons from the RAND Health Insurance Experiment and Beyond,” Washington, the Henry J. Kaiser Foundation.

Guichard, S., M. Kennedy, E. Wurzel and C. André (2007), “What Promotes Fiscal Consolidation: OECD Country Experiences”, *OECD Economics Department Working Paper*, No. 553.

Hall, R. (1988), “Inter-temporal Substitution in Consumption,” *Journal of Political Economy*, 96.

Heller, P. (2003), *Who Will Pay?*, International Monetary Fund, Washington, D.C.

International Monetary Fund (2010a), “Macro-Fiscal Implications of Health Care Reform in Advanced and Emerging Economies,” December.

International Monetary Fund (2010b), *A Fair and Substantial Contribution by the Financial Sector*, Final Report for the G20, June.

Johansson, A, C. Heady, J. Arnold, B. Brys and L. Vartia (2008), “Taxation and Economic Growth,” *OECD Economics Department Working Paper*, No. 620.

Joumard, I., C. André and Chantal Nicq (2010a), “Health Care Systems: Efficiency and Institutions,” *OECD Economics Department Working Paper*, No. 769.

Joumard, I., P. Hoeller, C. André and Chantal Nicq (2010b), *Health Care Systems: Efficiency and Policy Settings*, OECD Publishing.

- Joumard, I., M. Pisu and D. Bloch (2012), “Less Income Inequality and more Growth – Are they Compatible? Part 3. Income Redistribution *via* Taxes and Transfers across OECD Countries”, *OECD Economics Department Working Paper*, No. 926.
- Kaufmann, D., A. Kraay and M. Mostruzzi (2009), “Governance Matters VIII: Aggregate and Individual Governance Indicators, 1996-2008”, *Policy Research Working Paper*, No. 4978, World Bank, Washington, DC.
- Koopmans, C. and E. Kroes (2003), “Estimation of Congestion Costs in the Netherlands”, Proceedings of the European Transport Conference ETC, 8-10 October 2003, Strasbourg.
- Martin, J. and E. Whitehouse (2008), “Reforming Retirement-Income Systems: Lessons from the Recent Experiences of OECD Countries,” *OECD Social, Employment and Migration Working Paper*, No. 66.
- McVicar, D. (2008), “Why Have UK Disability Benefit Rolls Grown So Much?”, *Journal of Economic Surveys*, 22 (1).
- Mello, L. de and P. Padoan, “Promoting Potential Growth”, *OECD Economics Department Working Paper*, No. 793.
- Milligan, K., and D. Wise (2011), “Social Security and Retirement around the World: Mortality and Health, Employment, and Disability Insurance Participation and Reforms: Introduction and Summary”, *NBER Working Paper* No. 16719.
- Mirrlees Review (2010), *Tax By Design*, Institute for Fiscal Studies, Oxford University Press.
- Molnar, M. (2012), “Fiscal Consolidation. Part 5. What Factors Determine the Success of Consolidation Efforts?”, *OECD Economics Department Working Paper*, No. 936.
- O’Brien, P. and A. Vourc’h (2001), “Encouraging Environmentally Sustainable Growth: Experience in OECD Countries”, *OECD Economics Department Working Paper*, No. 477.
- OECD (1994), *Implementation Strategies for Environmental Taxes*, OECD.
- OECD (2003), *Transforming Disability into Ability: Policies to Promote Work and Income Security for Disabled People*, OECD.
- OECD (2009a), *Pensions at a Glance*, OECD Publishing.
- OECD (2009b), *Economic Policy Reforms 2009: Going for Growth*, OECD Publishing.
- OECD (2009c), *Employment Outlook 2009*, OECD Publishing.
- OECD (2010a), *OECD Economic Outlook* 88, OECD Publishing.
- OECD (2010b), *Tax Policy Reform and Economic Growth*, Tax Policy Study, OECD Publishing.
- OECD (2010c), “Health Care Systems: Getting More Value for Money”, *OECD Economics Department Policy Notes*, No. 2.
- OECD (2010d), *Education at a Glance 2010*, OECD Publishing.

- OECD (2010e), *OECD Economic Surveys – Hungary*, OECD Publishing.
- OECD (2010f), *Pension Markets in Focus*, July, Issue 7.
- OECD (2010g), *Sickness, Disability and Work – Breaking the Barriers*, OECD Publishing.
- OECD (2010h), *Health at a Glance*, OECD Publishing.
- OECD (2010i), *Tax Policy and Fiscal Consolidation*, Tax Policy Brief, OECD Publishing.
- OECD (2010j), *Tax Expenditures in OECD Countries*, OECD Publishing.
- OECD (2010k), *Making Reform Happen*, OECD Publishing.
- OECD (2010l), *Implementing Congestion Charges*, ITF Round Tables, OECD Publishing.
- OECD (2010m), *Managing Water for All, An OECD Perspective on Pricing and Financing*, OECD Publishing.
- OECD (2011a), *Going for Growth*, OECD Publishing.
- OECD (2011b), *Restoring Public Finances*, OECD Publishing.
- OECD (2011c), *Pensions at a Glance*, OECD Publishing.
- OECD (2011d), *Doing Better for Families*, OECD Publishing.
- OECD/ECMT (2007), *Managing Urban Traffic Congestion*, Summary Document, OECD Publishing.
- Oliveira Martins, J., R. Boarini, H. Strauss, C. de la Maisonneuve and C. Saadi (2007), “The Policy Determinants of Investment in Tertiary Education,” *OECD Economics Department Working Paper*, No. 576.
- Persson, J. and D-H. Song (2010), “The Land Transport Sector: Policy and Performance”, *OECD Economics Department Working Paper*, No. 817.
- Pomp, M. and S. Vujic (2008), “Rising Health Spending, New Medical Technology and the Baumol Effect,” *CPB Discussion Paper*, No. 115, The Hague: Central Planning Bureau.
- Ramsey, F.P. (1927), “A Contribution to the Theory of Taxation,” *Economic Journal*, No. 27.
- Rexed, K., C. Moll, N. Manning and J. Allain (2007), “Governance of Decentralised Pay Setting in Selected OECD Countries”, *OECD Working Papers on Public Governance*, No. 2007/3.
- Serres, A. De, F. Murtin and G. Nicoletti (2010), “A Framework for Assessing Green Growth Policies”, *OECD Economics Department Working Paper*, No. 663.
- Stiglitz, Joseph *et al.* (2010), *Taxing Financial Speculation*, IDEAS Foundation.
- Summers, L. (1982), “Tax Policy and the Return to Savings,” *NBER Working Paper*, No. 995.

- Sutherland, D. and S. Araujo (2010), “Public-Private Partnerships and Investment in Infrastructure”, *OECD Economics Department Working Paper*, No. 803.
- Sutherland, D., P. Hoeller and R. Merola (2012), “Fiscal Consolidation. Part 1. How Much is Needed and How to Reduce Debt to a Prudent Level?”, *OECD Economics Department Working Paper*, No. 932.
- Sutherland, D., R. Price, I. Joumard and C. Nicq (2007), “Performance and Indicators for Public Spending Efficiency in Primary and Secondary Education”, *OECD Economics Department Working Paper*, No. 546.
- Sutherland, D., R. Price and F. Gonand (2009), “Improving Public Spending Efficiency in Primary and Secondary Education”, *OECD Journal: Economic Studies*, Vol. 2009, No. 1, OECD Publishing.
- Toder, E., M.A. Turner, K. Lim and L. Getsinger (2010), “Reforming the Mortgage Interest Deduction”, <http://www.taxpolicycenter.org/UploadedPDF/412099-mortgage-deduction-reform.pdf>, downloaded on 25 October, 2010.
- Whiteford, P. (2009), “Transfer Issues and Directions for Reform: Australian Transfer Policy in Comparative Perspective,” Paper presented for *Australia’s Future Tax and Transfer Policy Conference*, Department of the Treasury and Melbourne Institute of Applied Economic and Social Research, Melbourne, 18-19 June.
- Whitehouse, E. (2010), “Decomposing Notional Defined-Contribution Pensions: Experience of OECD Countries’ Reforms”, *OECD Social, Employment and Migration Working Papers*, No. 109.
- Woodbury, S.A. and R. Spiegelman (1987), “Bonuses to Workers and Employers to Reduce Unemployment: Randomized Trials in Illinois”, *American Economic Review*, Vol. 77, No. 4.
- World Economic Forum (WEF) (2008), *Competitiveness Report*.

WORKING PAPERS

The full series of Economics Department Working Papers can be consulted at www.oecd.org/eco/workingpapers/

936. *Fiscal consolidation*
Part 5. What factors determine the success of consolidation efforts?
(January 2012) by Margit Molnar
935. *Fiscal consolidation*
Part 4. Case studies of large fiscal consolidation episodes
(January 2012) by Hansjörg Blöchliger, Dae-Ho Song and Douglas Sutherland
934. *Fiscal consolidation*
Part 3. Long-run projections and fiscal gap calculations
(January 2012) by Rossana Merola and Douglas Sutherland
933. *Fiscal consolidation*
Part 2. Fiscal multipliers and fiscal consolidations
(January 2012) by Ray Barrell, Dawn Holland and Ian Hurst
932. *Fiscal consolidation*
Part 1. How much is needed and how to reduce debt to a prudent level?
(January 2012) by Douglas Sutherland, Peter Hoeller and Rossana Merola
931. *Less income inequality and more growth – Are they compatible?*
Part 8. The drivers of labour income inequality – A review of the recent literature
(January 2012) by Rafal Kierzenkowski and Isabell Koske
930. *Less income inequality and more growth – Are they compatible?*
Part 7. The drivers of labour earnings inequality – An analysis based on conditional and unconditional quantile regressions
(January 2012) by Jean-Marc Fournier and Isabell Koske
929. *Less income inequality and more growth – Are they compatible?*
Part 6. The distribution of wealth
(January 2012) by Kaja Bonesmo Fredriksen
928. *Less income inequality and more growth – Are they compatible?*
Part 5. Poverty in OECD countries
(January 2012) by Mauro Pisu
927. *Less income inequality and more growth – Are they compatible?*
Part 4. Top incomes
(January 2012) by Peter Hoeller
926. *Less income inequality and more growth – Are they compatible?*
Part 3. Income redistribution via taxes and transfers across OECD countries
(January 2012) by Isabelle Joumard, Mauro Pisu and Debbie Bloch

925. *Less income inequality and more growth – Are they compatible? Part 2. The distribution of labour income*
(January 2012) by Isabell Koske, Jean-Marc Fournier and Isabelle Wanner
924. *Less income inequality and more growth – Are they compatible? Part 1. Mapping income inequality across the OECD*
(January 2012) by Peter Hoeller, Isabelle Joumard, Mauro Pisu and Debbie Bloch
923. *Current issues in managing government debt and assets*
(December 2011) by Eckhard Wurzel and Lukasz Rawdanowicz
922. *Public spending efficiency in the Czech Republic: fiscal policy framework and the main spending areas of pensions and healthcare*
(December 2011) by Zuzana Smidova
921. *Exploring determinants of subjective wellbeing in OECD countries – evidence from the World Value Survey*
(December 2011) by Sarah Fleche, Conal Smith and Piritta Sorsa
920. *Russia: progress in structural reform and framework conditions*
(December 2011) by Yana Vaziakova, Geoff Barnard and Tatiana Lysenko
919. *Explaining the interest-rate-growth differential underlying government debt dynamics*
(December 2011) by David Turner and Francesca Spinelli
918. *Reassessing the NAIRUs after the crisis*
(December 2011) by Stéphanie Guichard and Elena Rusticelli
917. *Employment protection legislation and plant-level productivity in India*
(December 2011) by Sean Dougherty, Verónica Frisancho Robles and Kala Krishna
916. *Systemically important banks and capital regulation challenge*
(December 2011) by Patrick Slovik
915. *Improving educational outcomes in Slovenia*
(December 2011) by Mehmet Eris
914. *Addressing challenges in the energy sector in Israel*
(December 2011) by Philip Hemmings
913. *Issues in private sector finance in Israel*
(December 2011) by Philip Hemmings
912. *How to improve the economic policy framework for the housing market in Israel*
(December 2011) by Philip Hemmings
911. *Fiscal Prospects and Reforms in India*
(December 2011) by Richard Herd, Sam Hill and Vincent Koen
910. *Structural reforms to reduce unemployment and restore competitiveness in Ireland*
(December 2011) by Álvaro Pina