Fiscal Federalism 2014

MAKING DECENTRALISATION WORK



OECD

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MAKING DECENTRALISATION WORK

Edited by Hansjörg Blöchliger

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Foreword

Over the past years, state and local governments had to weather the storm of the economic and fiscal crisis. Some were badly hit; others resurged largely unscathed, depending in part on whether intergovernmental fiscal frameworks were well structured. Such frameworks are a key ingredient in fiscal policy, as they can ensure that fiscal consolidation is achieved in an effective and fair manner.

Fiscal federalism is also about how the public sector is organised and how it creates opportunities for more growth and well-being. Decentralising the state can restore confidence in public policies and create a basis for broader policy consensus.

This book presents a compilation of some of the most salient policy issues in fiscal federalism. It is based on the unique data collected by the OECD Fiscal Network, although it is not about accounting technicalities. More interestingly, the book documents the progress with fiscal consolidation at the sub-central government level and provides estimates of further consolidation needs to return debt to a prudent level. It points out that well designed fiscal rules, those that allow flexibility during downturns, but are enforced during upswings, help achieve sound public finances. It also includes an update of the OECD fiscal rules indicator for sub-central governments.

Among its main findings, this work highlights that decentralisation is positively associated with GDP per capita (although the effect is fairly small); it raises the issue of tax competition among different jurisdictions; and points to ways by which governments can reap the benefits of tax competition while avoiding its drawbacks. The text also explains how fiscal equalisation, a key social ingredient of fiscal federalism, can help to eliminate differences in regional wealth, although these systems can, in some cases, also reduce the regions' development efforts. Finally, the main drivers of reforms are discussed, based on actual experiences and lessons learned. Reforms of fiscal relations are not an easy task, but they need to be undertaken in order to achieve robust and resilient intergovernmental fiscal frameworks.

This book draws on the work of the OECD Fiscal Network and the discussions of its delegates. Financial support from Switzerland is gratefully acknowledged.



Angel Gurría

Secretary-General

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Executive summary

The OECD counts around 140 000 elected sub-central governments (SCGs). By providing an array of services and transfers and by taxing residents and firms, SCGs influence economic development and the well-being of citizens. The decentralisation trend of the last 20 years has made SCGs more powerful and more likely to affect the course of a country. The economic crisis that hit in 2008 left a scar on most jurisdictions, and many still struggle to balance their budgets. While intergovernmental fiscal frameworks vary widely between countries, the pressure to rein in deficits and to improve the efficiency of public services and taxation has become almost universal.

Against this background, this book provides analysis and policy guidance in the area of intergovernmental fiscal relations and sub-central public finances. The policy issues covered are of both a structural and a macroeconomic nature. The individual chapters examine: fiscal consolidation across government levels; sub-central fiscal rules; decentralisation and economic growth; tax competition between jurisdictions; fiscal equalisation; and the political economy of reform.

Key findings and recommendations

- *Fiscal consolidation across government levels*: SCGs have been firmly in consolidation mode since 2010. So far, SCGs have achieved consolidation through spending cuts, while overall revenues have remained stable. SCGs in a few countries require additional consolidation efforts, especially if transfers were cut in the process of central government consolidation. In order for consolidation to be successful, SCGs should rely more on market mechanisms in public service provision and better target public investment to where it is most needed. SCGs should also raise taxation of immovable property and increase fees for public service use. Central governments, in some countries could reform the transfer system, including a shift from SCGs relying on central government transfers to relying on their own taxes.
- *Sub-central fiscal rules*: Well-designed fiscal rules can help achieve and maintain sound public finances, while providing room for fiscal manoeuvre in the face of an adverse shock. During and after the crisis, trade-offs between different policy objectives became more apparent. Rules have often proven too rigid, thereby reducing their credibility. Governments should make sub-central rules more flexible, while strengthening enforcement. Moreover, rules may be more effective if self-imposed instead of imposed by higher levels of government. Fiscal rules should be a complement rather than a substitute for well-designed fiscal institutions and for hard SCG budget constraints.
- *Decentralisation, economic activity and the performance of education systems*: Intergovernmental fiscal frameworks affect the behaviour of firms, households and governments. Decentralisation, as measured by sub-central revenue or spending shares, is positively linked to GDP per capita levels, although the economic effect is relatively small.

Investment in physical and human capital as a share of general government spending is higher in more decentralised countries. Educational outcomes, as measured by the OECD Programme for International Student Assessment, are higher in more decentralised countries. Both decentralisation and school autonomy are equally beneficial for achieving better education outcomes.

- *Tax competition between SCGs*: Tax competition is stronger for the corporate and personal income tax than for taxes on consumption and immovable property. Tax rates are lower in wealthier than in poorer jurisdictions and higher in agglomerations than in peripheral areas. There is little evidence of a "race to the bottom" with respect to tax rates and tax revenues. Central governments wishing to reap the benefits of tax competition while avoiding its drawbacks could: introduce or amend fiscal equalisation schemes; increase the share of property taxation; harmonise the tax bases of SCGs; and improve the apportioning of tax liabilities of firms and households with activities in several jurisdictions.
- *Equalisation*: Across OECD countries, equalisation reduces differences in sub-central economic wealth by more than two thirds and in some countries virtually eliminates them. Strong equalisation may weaken local and regional development efforts or prevent migration towards more productive jurisdictions, however. Also, equalisation tends to be pro-cyclical and can undermine sub-central endeavours to stabilise budgets. Equalisation should rely on a few core indicators, which reflect sub-central needs and are immune to manipulation by SCGs. Equalisation should be transparent about donor and recipient jurisdictions and should be accounted for as a distinct budget item.
- *Reforming fiscal relations:* A number of political and economic factors influence the design, adoption and implementation of reforms to intergovernmental fiscal relations. A good economic situation and an electoral mandate seem to be a crucial reform driver. Moreover, reforms must be "ripe". Bundling reforms helps build consensus and allows benefits to be spread more evenly across jurisdictions. Transitional arrangements that compensate jurisdictions and stakeholders for losses in the short run are often necessary. Independent experts can create and sustain the credibility of reforms among the public, by providing impartial and unbiased scrutiny.

Chapter 1

Fiscal consolidation across levels of government

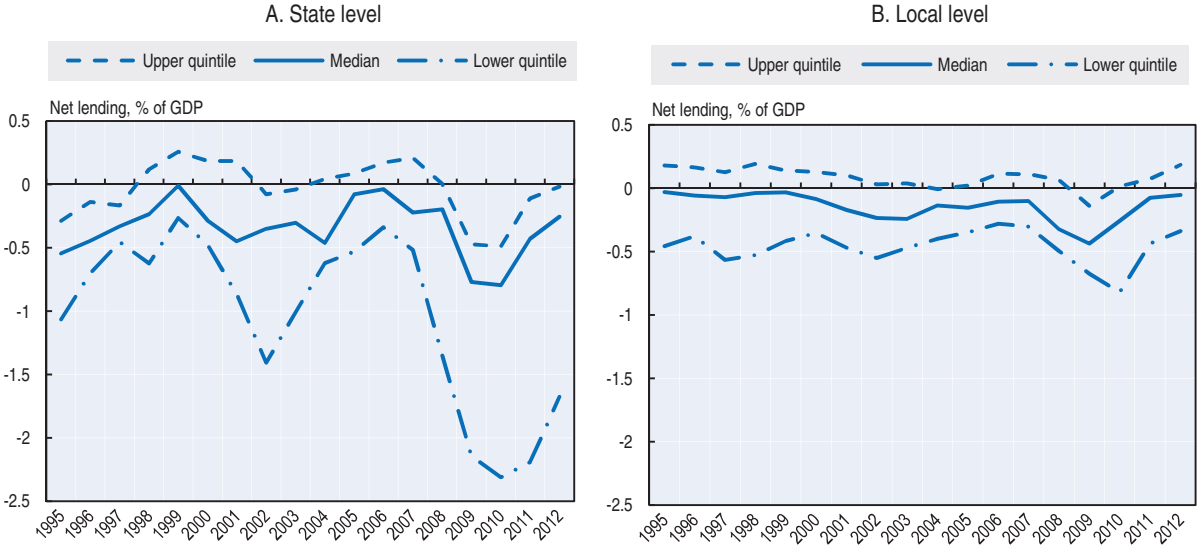
This chapter deals with the consolidation of public finances across levels of government in the aftermath of the 2008-09 crisis. It reviews the pace of consolidation in response to widening deficits and rising debt, then assesses whether consolidation at the sub-central level has been achieved by spending cuts rather than an increase in own tax revenue and intergovernmental transfers. It analyses additional sub-central consolidation needs under various scenarios. Overall, sub-central governments' finances are in fairly good shape in most OECD countries, but considerable efforts are still needed to restore debt to pre-crisis levels in some jurisdictions. The chapter goes on to look at past large-scale consolidation episodes in order to gauge how governments – both central and sub-central – have succeeded in consolidating after economic and fiscal crises. Finally, it surveys policy instruments that could help achieve consolidation while spurring economic activity.

Developments up to 2012

Sub-central deficits and debt before and during the crisis

The 2008 economic and financial crisis shook both central and sub-central budget positions badly. Today, sub-central governments (SCGs) in virtually all OECD countries are firmly in consolidation mode (Figure 1.1). OECD-wide, the general government deficit climbed from around 1% of GDP in 2007 to 8% in 2009, before going back to 6% in 2012. As for SCG balance sheets, they were close to balance in 2007, but then slumped to a deficit of around 2%, before recovering to reach less than 1% of GDP in 2012. Overall, SCGs' fiscal positions were much less affected by the crisis and its aftermath than central governments'. Judging fiscal consolidation by cyclically adjusted financial balances shows that SCGs began consolidating around 2009 – a little earlier than central governments – although many sub-central balances – especially at the state/regional level – only started to improve in 2011.[1]

Figure 1.1. **Sub-central governments are consolidating**

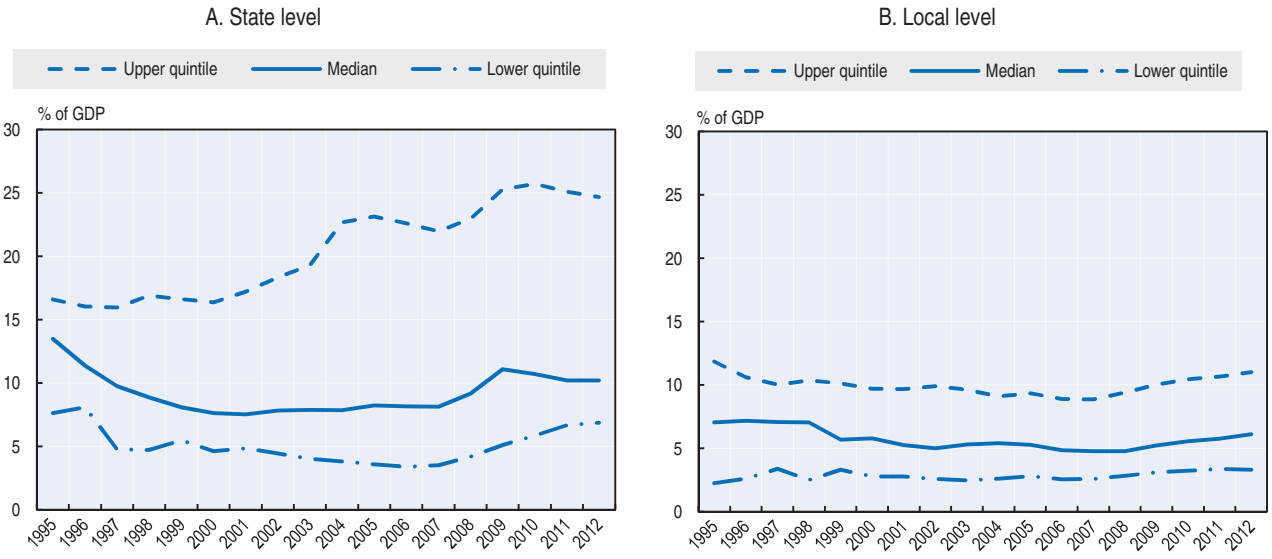


Source: OECD National Accounts Statistics Database.

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Nevertheless, when the crisis struck, all SCGs found themselves having to cope with deficits of a size they had not experienced since the beginning of the 1980s at local level or 1990s for state-level SCGs. Thus, after a relatively long period of stable or declining debt-to-GDP ratios, sub-central debt rose considerably, though it is now stabilising (Figure 1.2). State liabilities amounted to around 11% of GDP on average in 2012, with states in some countries – notably Canada, Germany, and Spain – showing considerably higher debt ratios. At the local level, liabilities amounted to around 5% of GDP in 2012, with the debt ratios of some local governments – particularly in Japan – reaching up to 35% of GDP.

Figure 1.2. **Sub-central debt is stabilising**



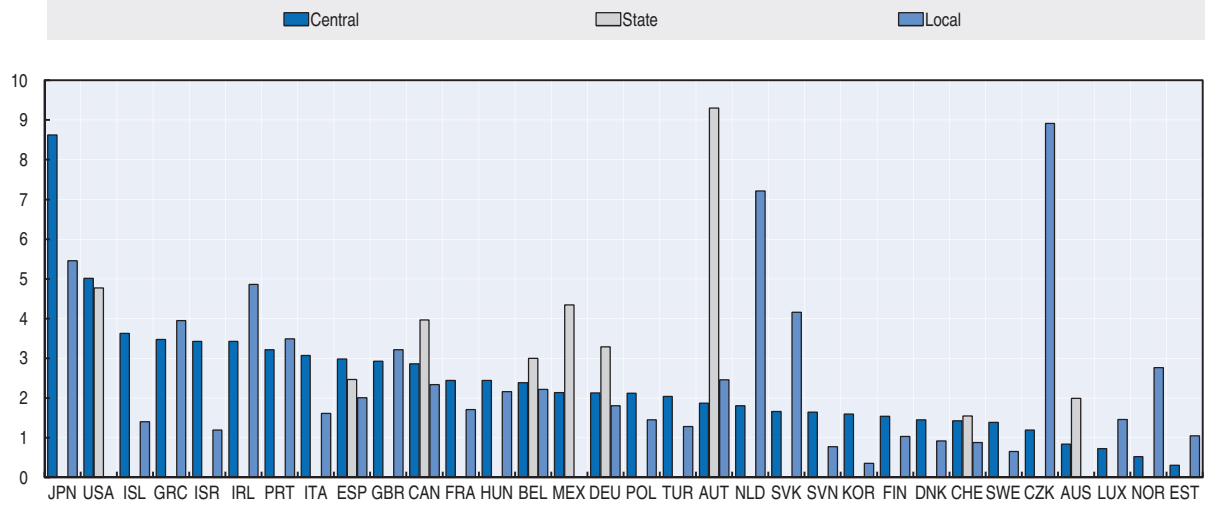
Note: Local level without Australia, Chile, Mexico, New Zealand and the United States.

Source: OECD National Accounts Statistics Database.

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Figure 1.3. **SCG gross financial liabilities are considerable in some countries**

Ratio of debt to own tax revenue, by level of government, 2011



Note: The vertical axis shows the ratio of debt to own tax revenue, or the years needed to pay back debt by its own means. Countries are shown in decreasing order of central government liabilities.

Source: OECD National Accounts Statistics Database.

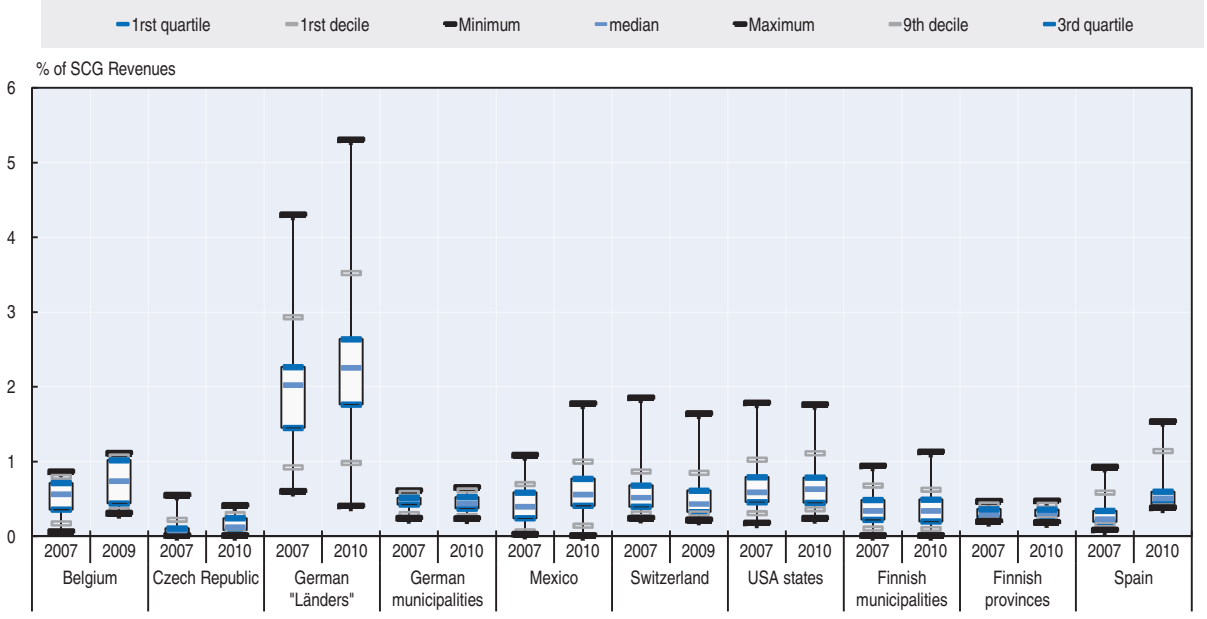
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While such figures might be considered very modest compared with those of general governments, which OECD-wide stand at over 100% of GDP, liabilities must be seen in relation to a government's size. Comparing SCGs' liabilities to their tax revenues suggests that they are as much affected by the crisis as central government (Figure 1.3).

Debt-to-tax-revenue ratios are even higher than central governments' in Austria's *Länder* and Canada's provinces, for example, and in local jurisdictions in a few unitary countries like the Netherlands and the Czech Republic, where SCGs have a very low share in total tax revenue.[2]

Aggregate numbers may hide wide disparities within countries and underestimate the true strain that debt puts on some SCGs. For example, the debt-to-own revenue ratio of the most indebted German *Land* is almost 4½ times higher than that of the least indebted (Figure 1.4). Some Canadian provinces also show relatively high debt-to-revenue levels while in Spain, by contrast, differences in sub-national debt are not particularly wide. However, most countries do have some highly indebted SCGs, which suggests that for some sub-national jurisdictions the issue of debt sustainability has become overarching.

Figure 1.4. **Dispersion of SCG debt**



Source: Vammalle, C. and C. Hulbert (2013), "Sub-National Finances and Fiscal Consolidation: Walking on Thin Ice", *OECD Regional Development Working Papers*, No. 2013/02, OECD Publishing, Paris.

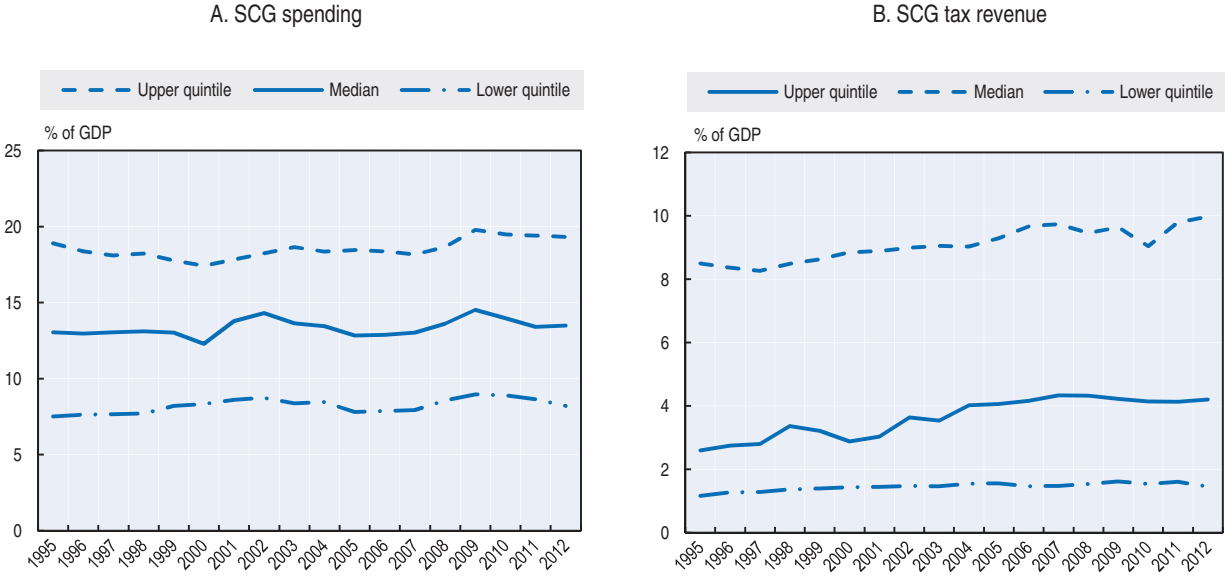
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Sub-central spending and tax revenues

After being inconspicuously flat in the decade before the 2008 crisis, sub-central spending as a share of GDP rose considerably after 2007, reflecting both outright GDP declines in many countries and the effect of stimulus programmes (Figure 1.5). In 2009 it fell back again. Sub-central tax revenues slowly increased during the decade to 2008; then shrank slightly in the aftermath of the crisis. They have remained almost stable since then, suggesting that SCG own-source taxes – often property taxes – are less responsive to the cycle than central governments'. Intergovernmental transfers – a significant revenue

source for SCGs in many countries – remained largely stable during the crisis and have declined very slightly since SCGs began consolidating (not shown). Overall, sub-central fiscal consolidation has so far been achieved mainly through spending cuts, while own revenues and intergovernmental transfers remained broadly the same. The overall picture hides stark differences between countries and even between SCGs in the same country.

Figure 1.5. **Spending has fallen since consolidation started, while tax revenues have remained stable**



Source: OECD National Accounts Statistics Database; Fiscal Decentralisation Database.

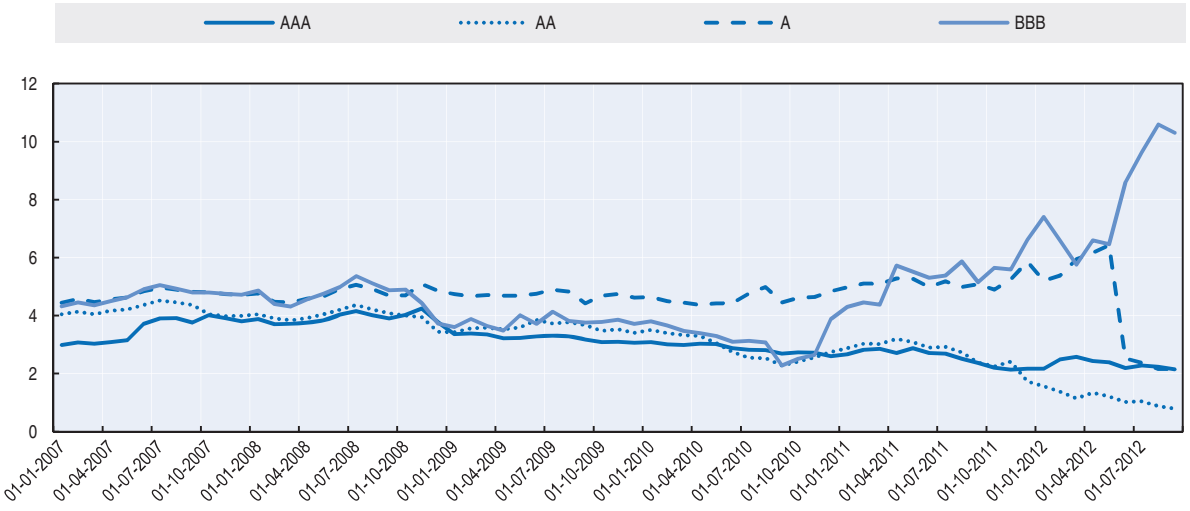
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Spreads between low and high-risk SCGs have increased

During the recent crisis, credit flows to SCGs perceived as risky were temporarily disrupted. In contrast, top-rated SCGs benefited from a flight to quality and continued to tap into international bond markets without any major difficulties (Vammalle and Hulbert, 2013).[3] Since 2011, the trend has strengthened: yields from high quality, i.e. highly-rated, bonds were lower in 2012 than in 2007, while yields from those of less creditworthy SCGs reached record highs (Figure 1.6). As a result, the spreads between maximum and minimum bond yields widened after October 2008 and again at the end of 2011, reaching up to 1 000 base points in Spain in 2012. The widening in spreads reflected investor concerns over the possibility of some SCGs defaulting.

As investors have become more cautious, the correlation between ratings and yields has changed and become more marked. Overall, the average rating of bonds fell from 2007 to 2012, by when more bonds were getting low ratings than in 2007. Differentiation between borrowers also accentuated: while yields from low-rated securities grew, those from top-rated ones actually dropped, as the steeper curve for 2012 in Figure 1.7 shows.

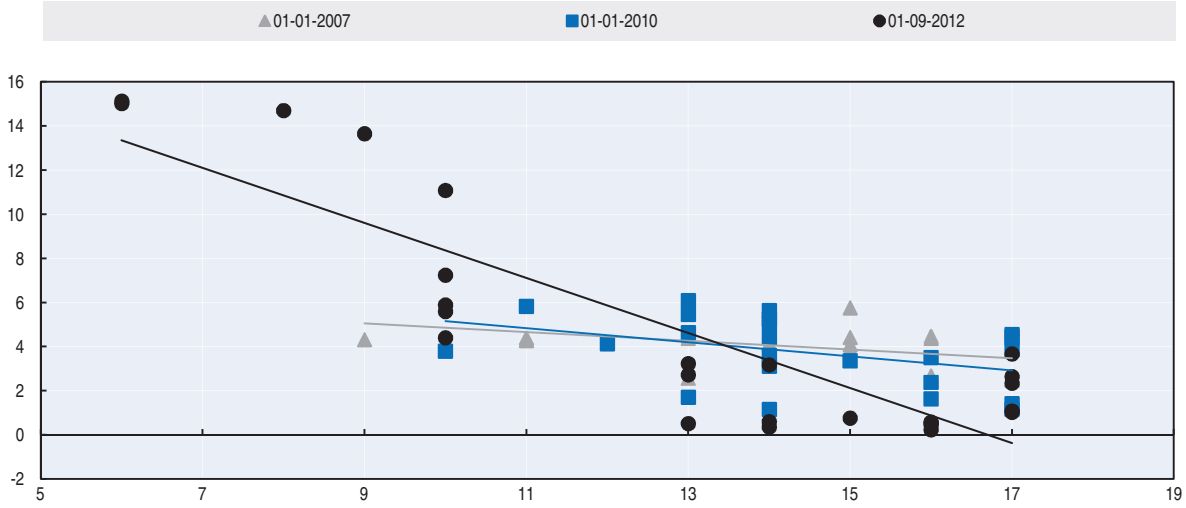
Figure 1.6. **SCG spreads have widened**



Source: Vammalle, C. and C. Hulbert (2013), "Sub-National Finances and Fiscal Consolidation: Walking on Thin Ice", *OECD Regional Development Working Papers*, No. 2013/02, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888932911366

Figure 1.7. **Markets are increasingly punishing low-rated SCGs**



Source: Vammalle, C. and C. Hulbert (2013), "Sub-National Finances and Fiscal Consolidation: Walking on Thin Ice", *OECD Regional Development Working Papers*, No. 2013/02, OECD Publishing, Paris.

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Sub-central consolidation needs

The risks of high SCG debt

In the long term, governments at all levels have to respect the budget constraint whereby the present value of all future government spending must equal the present value of all future government revenues. It prohibits governments from constantly borrowing to

pay their debts. However, theory does not say what determines the optimum or maximum government debt ratio – it merely argues that debt growth should be sustainable. Debt at any government level perceived as unsustainable can prompt rises in interest rates, which worsens budget balances, which may in turn have a further negative impact on financial markets and finally lead to default. The threshold at which that starts happening is open to debate.[4] There are various channels by which government debt can adversely affect economic activity and welfare in the long run (Sutherland et al., 2012), which argues in favour of containing increases in debt or reducing it to a prudent level.

Sub-central debt levels, with a few country exceptions, account for relatively low shares of GDP and rose comparatively little during the economic crisis. Generally speaking, fiscal consolidation that is already underway and set to be a concern for years to come is a central rather than sub-central government issue. However, debt creates externalities across governments. In other words, sustainability is determined by joint actions of all governments, and financial difficulties in one government can contaminate other governments. The dynamics of this common-pool problem are even more pertinent if discontinuities or threshold effects are at work, i.e. if interest rates suddenly rise or growth rates start falling once a certain general government debt level is exceeded. Three types of externalities might call for prudent sub-central debt levels:

- **Descending externalities.** Debt dynamics at the central level may affect SCGs by increasing interest rates and debt servicing costs and upsetting all governments' budget balances. For highly indebted SCGs, the cost of refinancing debt could increase considerably. High central government debt may also crowd out SCG debt and investment.
- **Ascending externalities.** SCG debt dynamics can get central government into trouble. In many countries central government guarantees extend to sub-central government debt, sometimes taking the form of implicit or explicit bailout guarantees.[5] As a result, SCGs expecting a bailout may care little about the sustainability of their debt.
- **Horizontal externalities.** Fiscal problems in only a few SCGs can spread to all. The bankruptcy of even a small SCG can disrupt the financing of all sub-central governments and heighten uncertainty about the sustainability of their debt. It may also result in a general rise in risk premiums on sub-central debt.[6]

Sub-central governments often own or co-own public utility enterprises whose debt is not accounted for in National Accounts, which creates contingent liabilities. They may also hold public banks that provide credit to public enterprises and municipalities, thus concentrating rather than spreading risk. And some SCG-owned public entities may simply be too big to fail. A further threat to the sustainability of sub-central government debt in some instances comes from contingent liabilities that arise from underfunded public pension schemes. Apart from keeping explicit debt at prudent levels, SCGs exposed to contingent liabilities need to improve transparency – particularly the transparency of their effective debt levels.[7]

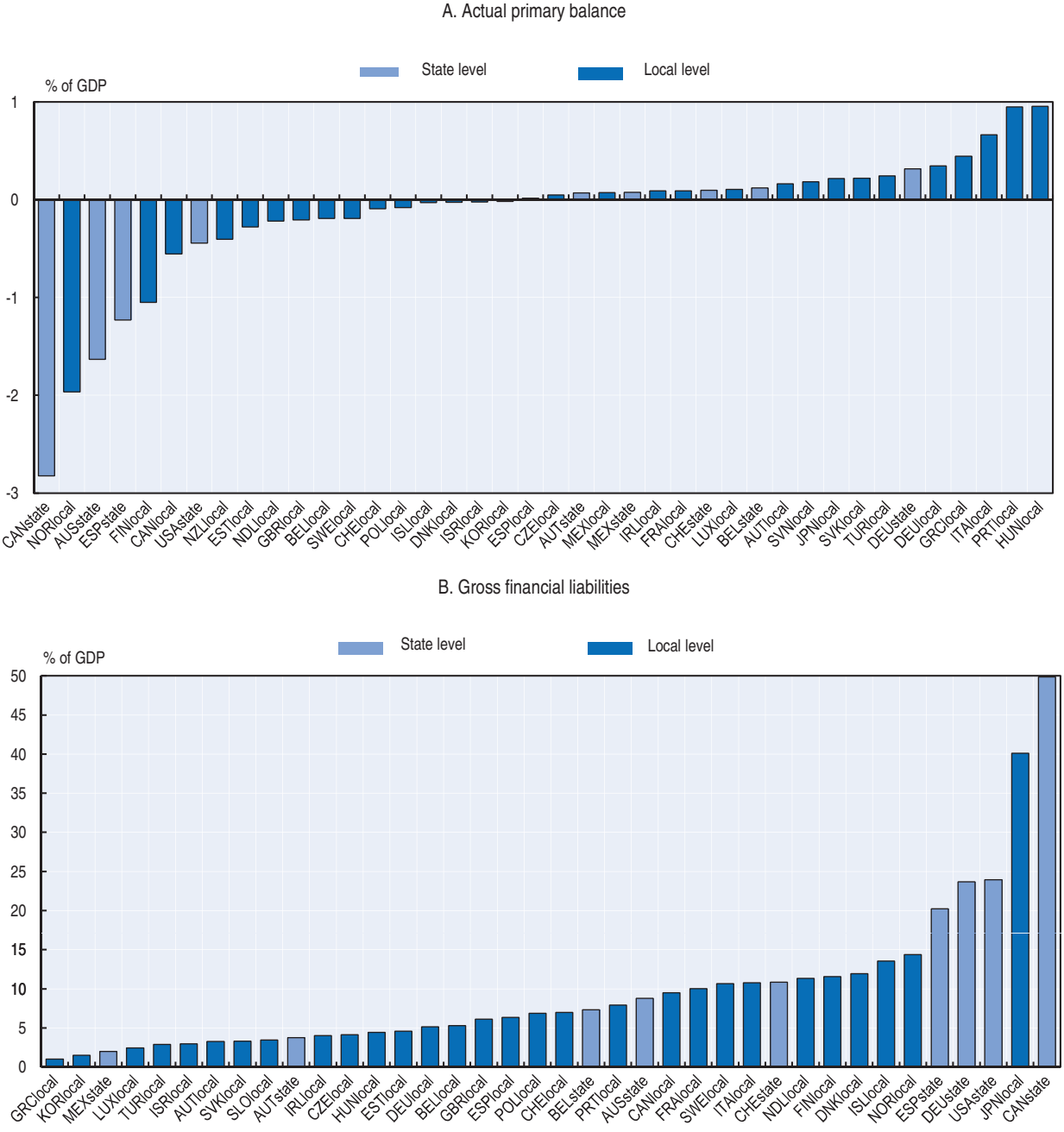
The arguments above demand prudent SCG debt policies and, depending on a country's intergovernmental fiscal framework, medium-term debt targets and debt reduction plans, preferably self-imposed. Because different countries have different institutional set-ups, targets may vary widely according to factors such as the state of the economy, strength and credibility of no-bailout clauses, fiscal rules, the size and structure of public spending, tax autonomy, and the functioning of sub-central financial markets. Different jurisdictions within the same country may also set different targets. All these issues are discussed in greater detail in Chapter 2.

Long-term consolidation needs

SCGs' long-term consolidation needs are calculated in the form of fiscal gaps. These are the *immediate* and *permanent* improvements needed in the current primary balance to restore debt to a certain level. They are calculated with a basic formula that incorporates debt levels, primary balances, the national growth rate, and interest rates. While this method

Figure 1.8. **Sub-central government deficits and debt**

2012



Note: Actual primary balances are constructed values. For more details see Box 1.1.

Source: *OECD Economic Outlook Statistics and Projections Database*; *OECD National Accounts Statistics Database*.

StatLink http://dx.doi.org/10.1787/888932911404

may give a rough idea of the long-term consolidation needs of a sub-central government and the efforts it has to make to bring debt down to a desired level, it should be noted that simulations are highly stylised and simplified. They fail, in particular, to take into account how fiscal consolidation affects interest rates or growth. The main assumptions underlying simulations are outlined in Box 1.1.

Current fiscal positions

The starting point for calculating SCG consolidation needs is the sub-central fiscal position in 2012. Figure 1.8 illustrates how, in that year, around half of all OECD countries showed sub-central primary deficits. At the state level in Australia, Canada, and Spain they were considerable. Several other countries saw their deficits turn into surpluses from 2010. As for SCG debt, it generally stood at relatively modest levels, although states in Canada, Germany and the United States, and local governments in Japan, carried large debts. As a rule, SCGs were in much better shape than central governments.

Box 1.1. **Assumptions underlying long-term consolidation simulations**

Fiscal projections are anchored in the government's inter-temporal budget constraint which posits that the level of outstanding debt equals the present value of past primary surpluses and deficits. Formally, the debt-to-GDP ratio at any point in time is defined as:

$$b_0 = \sum_{j=1}^{\infty} \left(\frac{1+g}{1+r}\right)^j pb_j$$

where b_o denotes the debt level in the terminal (or projected) year, *pbj* denotes annual primary balances, *g* denotes the GDP growth rate and *r* denotes the long-term interest rate (Auerbach, 1994). Solving for pb_j makes it possible to determine the primary balance needed to achieve a certain debt target in the terminal (or projected) year.

The above equation also allows so-called "fiscal gaps" to be derived. They show the additional immediate and permanent improvement in the current primary balance needed to achieve a certain debt target. Using the notation from above, the change in the primary balance as a share of GDP (Δpb) required to attain a certain debt target is equal to:

$$\Delta pb = (r - g)\left[b_t + \left(\frac{1}{1+r}\right)\frac{\sum_{S=t}^{T} - pb_s\left(\frac{1+r}{1+g}\right)^{T-S}}{\left(\frac{1+r}{1+g}\right)^{T-t} - 1}\right]$$

T denotes the terminal year, *t* is the initial year and pb_s is the primary balance as a share of GDP in year *s*. A positive value for Δpb implies that a permanent increase in the primary surplus (or a permanent reduction in the primary deficit) is needed to ensure that the desired debt-to-GDP ratio (b_t) is attained in the terminal year.

Box 1.1. **Assumptions underlying long-term consolidation simulations** *(cont.)*

In order to make long-term SCG fiscal projections based on the above identities, a number of assumptions have to be made about GDP growth and interest rates and about sub-central fiscal policy variables like primary balances and debt. The assumptions are as follows:

- Nominal GDP projections. These build on the assumptions underlying the *OECD Economic Outlook*'s short-term economic projections (until 2014) and long-term baseline projections (from 2015 on). Together they supply projected growth rates to the year 2026. Growth rates for individual SCGs may differ from national averages, but this is not taken into account.
- Projected interest rates on government borrowing to 2026. They again draw on the baseline projections of the *OECD Economic Outlook*. However, borrowing costs differ from one level of government to another, with SCG interest rates usually higher than those of central government. For selected SCGs in Canada, the Czech Republic, Germany, Norway, Italy, Spain, and the USA, interest rates are available for the 2007-10 period, which makes it possible to construct sub-central effective interest rate spreads. Since spreads were not trended over that period (although disparities between highly and lowly rated SCGs were), it is assumed they will remain constant until 2026. For the other countries, a spread of 15% above the central government long-term interest rate is assumed – slightly above the average of the eight countries for which sub-central spreads are available.
- Sub-central primary balances. The *OECD Economic Outlook* makes no such projections, nor are they available through the OECD National Accounts Statistics Database. Sub-central primary balances are therefore calculated by estimating interest payments per level of government and adding the sub-central share to the sub-central budget balance (which is available in the OECD National Accounts). In the baseline projection, primary balances as percentages of GDP are assumed to remain constant until 2026. Underlying primary balances (i.e. cyclically adjusted and adjusted for one-offs) are not available.
- Sub-central debt levels are available for most countries until 2012 from the OECD National Accounts. For countries where debt data are available until 2011 only, the 2012 growth-adjusted budget balance has been added to 2011 debt levels.
- Fiscal gap calculations are run for two scenarios: one which assumes the share of transfers in GDP to remain constant, and one which assumes that transfers decline *immediately and permanently* by 20% of their 2012 levels.

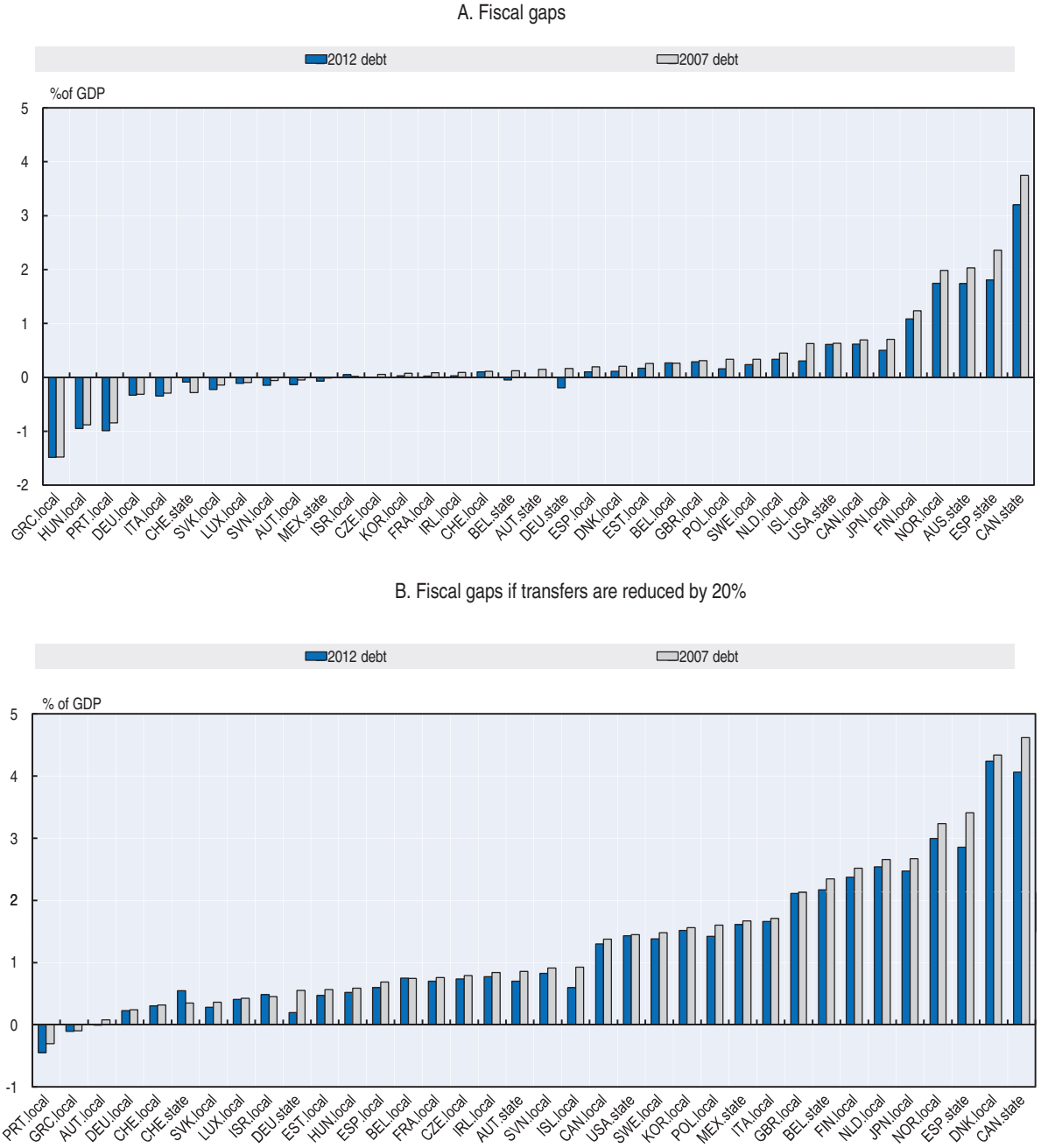
The model does not capture the impact of the fiscal policy path on growth or interest rates. Nor do interest rates depend on debt levels. SCG revenue and spending shares are assumed to remain constant.

Fiscal gaps

Fiscal gaps provide an estimate of the consolidation needs in order to reach a desired debt level. Two simulations are run: the first one restores the debt-to-GDP-ratio to its level in 2012, and a second one to its 2007 level, i.e. before the onset of the crisis. These debt targets are illustrative not normative, as different countries may deem different debt levels to be appropriate. The simulations include two variants: *a)* the transfer-to-GDP ratio in each country remains constant; *b)* transfers in each country are permanently cut by 20%.

While Figure 1.9 indicates the required scale of fiscal consolidation, it does not supply details as to how consolidation will be implemented.

Figure 1.9. **A few sub-central budgets are far from being sustainable**



Note: Fiscal gaps are defined as the additional and permanent improvement – over outcomes in 2012 – in primary balances required to restore debt-to-GDP ratios to their 2007 or 2012 levels by 2026. A fiscal gap of zero means that no additional effort compared to 2012 is needed. For Panel B, a 20% reduction in transfers from their 2010 levels is simulated.

Source: OECD Economic Outlook: Statistics and Projections Database, www.oecd-ilibrary.org/economics/data/oecd-economic-outlook-statistics-and-projections_eo-data-en; OECD National Accounts Statistics Database, www.oecd-ilibrary.org/economics/data/oecd-national-accounts-statistics_na-data-en.

StatLink http://dx.doi.org/10.1787/888932911423

Sub-central fiscal consolidation needs are, in general, relatively low. In a few countries, however, they are substantial, as Panel A of Figure 1.9 shows. As percentages of GDP, state-level sub-central governments in Australia, Canada, and Spain have the largest consolidation needs, while the fiscal gap is negative at the local level in Greece, Hungary and Portugal. Fiscal gaps do not change markedly according to whether the 2007 or 2012 debt-to-GDP ratios are targeted. The picture does shift, however, if a decline in intergovernmental transfer spending by 20% is assumed (Figure 1.9, Panel B). Such a decline would require all countries to step up their consolidation efforts, which also reveals how fiscally fragile many SCGs are and to what extent they depend on external rather than own-source funding.

Intergovernmental fiscal relations in past consolidation episodes

The contribution of SCGs to general government consolidation successes

Intergovernmental fiscal relations may affect the consolidation efforts of all tiers of government. SCGs can support a central government by consolidating their own budgets, but they may also undermine central government endeavours and so weaken overall consolidation. Conversely, central government may tidy up its finances by shifting responsibilities to lower government levels, cutting grants, or increasing its share in the total tax take. Generally speaking, success in consolidating at one tier of government and failure at another may impair consolidation at the general government level.

In order to determine the factors that contribute to successful consolidation across all government levels, a set of regressions were run. "Success" is defined as general government debt stabilisation after one, two, or three years. The empirical analysis covers a sample of 31 OECD countries over the period 1980-2009. The results pertaining to intergovernmental fiscal frameworks are presented below. The other factors that help determine successful debt stabilisation are summarised in Box 1.2.

Box 1.2. **The determinants of the success of consolidation: an analysis for general government**

An econometric analysis of past consolidation episodes (Molnar, 2012) provides insights into what policy measures are most conducive to successful consolidation. The analysis identifies a number of conditions for the initiation, length, intensity, and success of consolidation. It uses probit, duration, truncated regression and the bivariate Heckman selection method to investigate consolidations, highlighting the different ingredients that affect how and when consolidation is undertaken and whether it is successful in stabilising debt after one, two, or three years.

Successful consolidation episodes are typically supported by strong growth. Likewise, falling interest rates help debt stabilisation by reducing debt servicing costs and cushioning the contractionary impact of consolidation. Depreciation of the nominal effective exchange rate seems to be conducive to debt reduction – possibly through competitiveness gains boosting exports – and also appears to lengthen consolidation episodes. These results hold out limited promise of successful consolidation at the current economic juncture, as growth is fairly modest and interest rates already relatively low.

Source: Molnar, M. (2012), "Fiscal Consolidation: Part 5. What Factors Determine the Success of Consolidation Efforts?", *OECD Economics Department Working Papers*, No. 936, OECD Publishing, Paris.

The regression results suggest that SCGs do contribute to the success of general government consolidation policies (Table 1.1).[8] Fiscal consolidation by state-level

government is associated with general government debt stabilisation two or three years into the process. Results are a little less clear for the local level. Here consolidation may compromise the likelihood of a successful outcome to general government debt stabilisation efforts. Still, results are statistically significant only for the first two years and driven by individual countries (Canada and Korea). The apparently negative contribution of local governments to general government consolidation may be because they react against attempts by central governments to shift the consolidation burden onto their shoulders, or because SCGs are unable to reduce politically sensitive spending, such as healthcare and education.

Table 1.1. **Sub-central governments and debt stabilisation**
The factors that determine successful stabilisation

	Debt stabilises at t + 1	Debt stabilises at t + 2	Debt stabilises at t + 3	Debt stabilises at t + 1	Debt stabilises at t + 2	Debt stabilises at t + 3
State-level government budget balance (change)	0.34	0.71***	0.73***			
Local government budget balance (change)				-0.41**	-0.32*	-0.19
Long-term interest rates (change)	-0.14***	-0.20***	-0.13***	-0.06***	-0.09***	-0.11***
Exchange rate (change)	0.04	0.06	0.07	0.15***	0.10**	0.02
Inflation (change)	-0.11	-0.08**	-0.02	-0.06***	-0.07***	-0.07***
Strongly left-leaning government	-0.01	-0.04**	-0.03*	-0.02**	-0.03***	-0.03***
Strongly right-leaning government	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01*
Observations	145	164	183	472	473	474
LR-test of independent equations	7.35***	7.39***	12.75***	4.35**	1.8	1.43

Notes: Significance levels: * significant at 10%; ** significant at 5%; *** significant at 1%. The budget balance measures are cyclically adjusted using the Hodrick-Prescott filter. In order to ensure comparability, consolidation was defined as improvements in the cyclically adjusted central government and social security fund budget balance.
The regressions use the bivariate Heckman selection model. Reported coefficients are the marginal effects (i.e. the change in probability of the left-hand side variable if the explanatory variable increases by one unit). The coefficients of the selection equation variables are not shown in the table, but tests confirmed the selection bias in most cases.

Intergovernmental transfers and general government consolidation success

In order to reduce spending and consolidate its own budget, central government may seek to reduce intergovernmental grants. Doing so may affect in different ways the probability of general government consolidation being successful:

a) Positive effect. Reduced transfers make a successful outcome to general government consolidation more likely because SCGs are forced to furnish an additional effort – to improve the efficiency of service delivery, reduce costs, or raise more own-source revenues.

b) Negative effect. A cut in transfers make a successful outcome to general government consolidation more unlikely, because most SCGs must meet spending mandates, which makes it difficult to reduce expenditure and leads to ballooning SCG deficits.

c) No effect. Reduced transfers have no impact on the success of general government consolidation since they simply shift the consolidation burden downwards to no net effect.

Regression results suggest that a cut in transfers has a positive effect, i.e. it increases the probability of general government consolidation being successful (Table 1.2). The

impact becomes significant only three years into consolidation, however, suggesting that lower transfers take some time to change SCG behaviour. One possible explanation for their improving the success rates of consolidation is the so-called "flypaper effect", whereby SCGs' propensity to spend is greater if spending is financed through grants rather than through own revenues (Hines and Thaler, 1995). Under the flypaper assumption, lower transfers improve the budget balance at central level more than they worsen it at sub-central level – hence the net positive effect.[9]

Table 1.2. **Intergovernmental transfers and consolidation**
The factors that determine successful debt stabilisation

	Debt stabilises at t + 1	Debt stabilises at t + 2	Debt stabilises at t + 3	Debt stabilises at t + 1	Debt stabilises at t + 2	Debt stabilises at t + 3
Central government transfer spending (change in % of GDP)	**-0.09**	**-0.12**	**-0.11***			
State/regional government transfer spending (change in % of GDP)				**-0.12**	**-0.80**	**-1.2*****
Growth rate	8.78***	5.29***	4.78**	8.90***	3.91	2.28***
Long-term interest rates (change)	-0.07***	-0.08***	-0.11***	-0.13***	-0.22***	-0.14***
Exchange rate (change)	0.12**	0.04	-0.04	0.02	0.05	0.03
Inflation (change)	-0.07***	-0.08***	-0.07***	-0.09**	-0.08**	-0.01***
Sub-central budget balance (change)	0.13	0.24	0.22	0.35	0.68***	0.68***
Strongly left-leaning government	-0.02**	-0.03***	-0.02**	-0.02	-0.04**	-0.04**
Strongly right-leaning government	-0.01	-0.01	-0.04	-0.02*	-0.01	-0.01**
Observations	390	365	396	138	157	176
LR-test of independent equations	4.56**	0.30	5.44**	5.89**	7.86***	11.19***

Notes: Significance levels: * significant at 10%; ** significant at 5%; *** significant at 1%. The budget balance measures are cyclically adjusted using the Hodrick-Prescott filter. In order to ensure comparability, consolidation was defined as improvements in the cyclically adjusted central government and social security fund budget balances.
The regressions use the bivariate Heckman selection model. Reported coefficients are the marginal effects (i.e. the change in probability of the left-hand side variable if the explanatory variable increases by one unit). The coefficients of the selection equation variables are not shown in the table, but tests confirmed the selection bias in most cases.

Large-scale consolidation: The contribution of central and sub-central government

Some OECD countries have implemented large, sustained fiscal consolidation packages in the past. Some extended over several years, during which time budgets improved considerably and debt tended to stabilise or decline. This section analyses 13 of the largest consolidation episodes between 1980 and 1998 and how they affected central and sub-central budget balances. The methodology is explained in Box 1.3.

The results suggest that central and sub-central government consolidation efforts evolved very much in parallel (Figure 1.10). While central government balances tended to improve steadily from a trough, SCGs started to consolidate earlier before sliding into a second trough three to four years after central government consolidation had commenced. The pattern was clearly visible in Sweden, Finland, Italy and, to some extent, Canada. The second trough may result from a reduction in intergovernmental transfers or from looser fiscal policy at SCG level.

Box 1.3. **Analysis of large consolidation episodes**

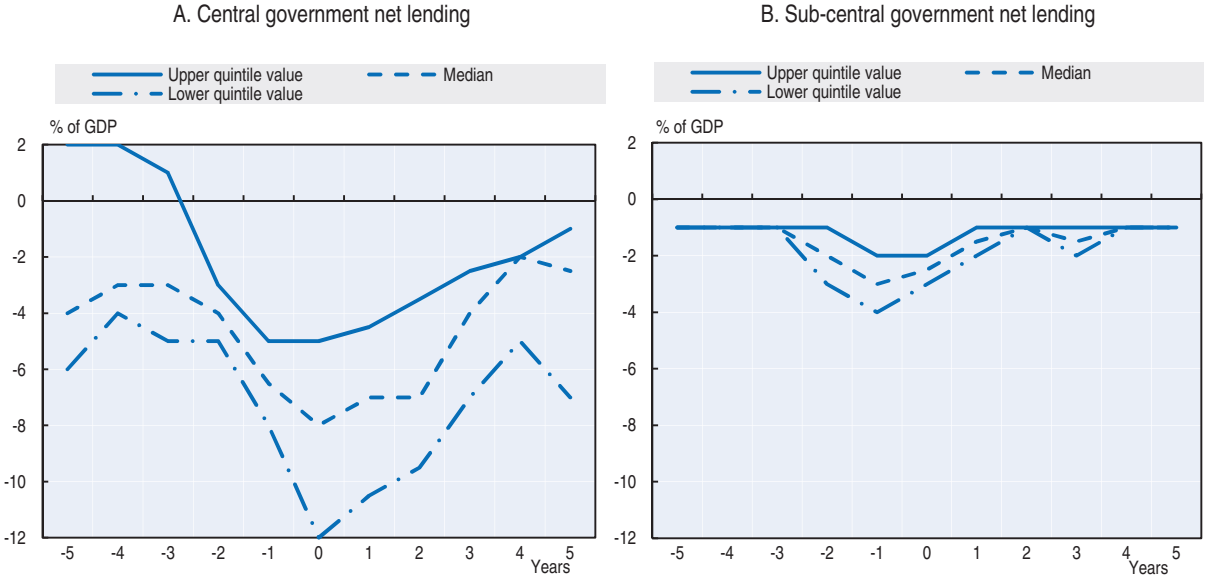
The 13 country cases of large consolidation packages were selected by measuring the trough-to-peak rise of the underlying general government primary balance. The cases selected are: Australia (1984-88 and 1994-98), Canada (1993-97), Denmark (1983-86), Finland (1993-2000), the United Kingdom (1993-98), Greece (1990-94), Ireland (1982-88), Italy (1990-95), Japan (1979-87), Sweden (1981-87 and 1994-97), and the United States (1993-98).

Figure 1.10 offers an aggregate picture of the 13 consolidation episodes. It shows how the median value, the 80% value, and the 20% value of the variables under scrutiny evolved before and during the consolidation period. T_0 denotes the year when consolidation started (i.e. the trough, which was when balances started to improve), and T_{0-x} and T_{0+x} denote the years before or after the trough. The figure shows percentiles, not a given group of countries, because a country may change percentile from one year to the next. Care should therefore be taken not to interpret changes as developments in a single country or country sub-group. The figure covers a time span of five years before and after the trough, which for most countries makes it possible to distinguish three distinct periods: *a)* a pre-crisis period; *b)* a crisis period when fiscal variables tend to deteriorate; and *c)* a consolidation period when most fiscal variables improve.

The methodology also makes it possible to assess how economic variables (GDP, unemployment, interest rates, etc.) evolved during large-scale consolidation episodes. Results of this analysis may be found in Blöchliger et al. (2012).

Source: Blöchliger, H., et al. (2012), "Fiscal Consolidation: Part 4. Case Studies of Large Fiscal Consolidation Episodes", *OECD Economics Department Working Papers*, No. 935, OECD Publishing, Paris.

Figure 1.10. **Central and sub-central government balances do not always evolve in parallel**



Note: Evolution before and during the consolidation period. Data concern 13 episodes. For details see Box 1.3.

Source: *OECD National Accounts*.

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SCGs' deficits and the scale of their consolidation efforts measured as percentages of GDP were much smaller than those of central government, and the cyclical variation is also smaller.[10] However when seen relative to the size of spending, SCGs' deficits and consolidation efforts are only slightly less.[11] Given the relatively restricted number of SCG observations, however, the results should be considered with care.

Policies supporting fiscal consolidation across government levels

Policy reforms to the intergovernmental fiscal framework can support sub-central fiscal consolidation. Although there are many instruments available for reining in public spending or providing additional revenue, they have little effect on economic activity in the short run and, depending on multipliers, are likely to boost it only in the medium to long run. Effective instruments may therefore have an effect both on the nominator (deficit and debt levels) and the denominator (GDP).

However, SCGs seldom enjoy much room for implementing spending and revenue reforms. On the revenue side, many have little control over their tax revenues and no autonomy over tax bases or rates. As for expenditure, much is mandated and regulated by central government or it is politically sensitive. The most powerful lever for sub-central fiscal consolidation is intergovernmental grants – central rather than sub-central government's policy instrument. The following discussion concentrates on instruments which are either related to intergovernmental fiscal frameworks or over which SCGs generally have at least some say. The full set of policies underscoring fiscal consolidation is provided in Hagemann (2012).

Spending instruments

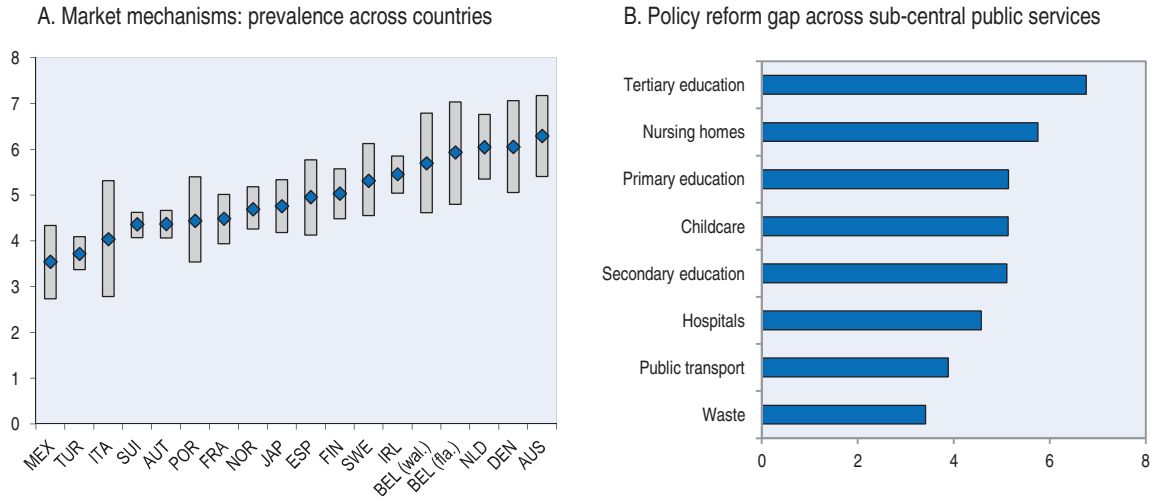
Promoting market mechanisms in sub-central public service provision

Rules and procedures can mimic markets in the provision of public services. Market mechanisms can improve efficiency in the public sector in various ways: they better cater to consumers' tastes and preferences, they raise awareness of the resource costs of providing services, and they improve productivity by raising the quality and lowering the cost of services. This third virtue is particularly relevant in times of fiscal consolidation. Market mechanisms are usually divided into three groups: *i)* privatisation and contracting (tendering, outsourcing, public-private partnerships, etc.); *ii)* user choice and competition among service providers; and *iii)* price signals such as user fees or mechanisms where state funding reflects actual service use or performance. Applied individually or in combination, they can help SCGs ease the pressure on their budgets from public service expenditure and foster productivity.

Previous work by the OECD Fiscal Network analysed the reliance on market mechanisms in eight public services, which together account for the overwhelming share of sub-central spending in most OECD countries (Blöchliger, 2008). The Network developed a composite indicator of the prevalence and strength of market mechanisms which revealed that public services' reliance on them varies considerably across countries and services (Figure 1.11). The indicator allows current arrangements to be set against OECD recommendations in the form of a "policy reform gap". Calculations of this gap suggest that market mechanisms – in particular user choice or performance-related funding – should be used more widely and particularly in "social" services such as education, healthcare, or childcare. In order to avoid undesirable distributional effects, both social and geographic in nature, flanking policies

might be needed, although many market mechanism reforms – such as the introduction of funding-follows-the-use systems or "vouchers" – generally have little or no redistributional consequences.

Figure 1.11. **Market mechanisms in public service provision**



Note: Panel A: Values on a scale between 0 and 10 in ascending order of the use of market arrangements in public service provisions. Panel B: The policy reform gap is the difference, for each service, between actual implementation of market mechanisms and normative benchmarks derived from OECD recommendations. Values are on a scale between 0 and 10, where the greater the reform need is, the longer the bar.

Source: Blöchliger, H. (2008), "Market Mechanisms in Public Service Provision", *OECD Economics Department Working Papers*, No. 626, OECD Publishing, Paris.

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Public investment

Sub-central governments account for around 65% of general government public investment. Public infrastructure investment as a share of GDP has fallen over recent decades, especially during consolidation periods, and in 2009 it amounted to only 2% of GDP on average. With the end of the fiscal stimulus programmes in 2010 that had launched many sub-central investment projects, capital spending dropped further, often sharply. A sound policy framework can help ensure the effectiveness of sub-central investment and its positive impact on growth. SCGs could follow three broad approaches as part of their efforts to improve investment efficiency.

- *Improve transparency*. Frameworks for assessing and selecting investment projects can help improve their effectiveness. For example, cost-benefit analysis (CBA) can help establish a ranking of projects according to their net social benefits. The usefulness of CBAs can be further strengthened if selected projects are submitted to a "second opinion" and to *ex-post* evaluations. Stronger reliance on evaluation frameworks would make the ways in which projects affect the wider economy more transparent and increase the pressure to invest only if returns are positive.
- *Increase reliance on the private sector*. Public investment may benefit from stronger private sector involvement in the shape, for example, of public-private partnerships (PPPs) (Araujo and Sutherland, 2010).[12] PPPs hold the promise of a better, more innovative use of inputs

than traditional procurement. They tend not only to increase efficiency, but to allow sub-central governments with limited access to borrowing to defer spending. However, PPPs must be well designed, especially with respect to the sharing of risk between the public and private sectors. Moreover, PPPs may be used to bypass sub-central fiscal rules, with the risk of creating contingent liabilities.

- *Improve co-ordination across governments*. SCG investment projects may generate spillovers across jurisdictions, and failure to address them may result in sub-central over- or under-investment. Central government often uses matching grants or other forms of co-funding to internalise the cross-border externalities of investment projects. However, such arrangements are more widely used than plausible externality estimates warrant (Blöchliger and Petzold, 2009). A better assessment of externalities and stricter rules for central government's co-funding of SCG projects can help contribute to consolidation at both central and sub-central levels. Improved co-ordination through intergovernmental bodies or across ministries can also help ensure that projects are assessed and implemented efficiently (OECD, 2013).

Revenue instruments

Taxes on immovable property

Taxes on immovable property are a typical sub-central tax: more than 95% of property tax revenue accrues to sub-central treasuries, although their share of GDP varies considerably across countries (Figure 1.12, Panel A and B). Property taxes, paid by individuals and businesses, have the attraction of yielding additional revenue at lower economic costs than many other taxes. Given the "immobility" of real estate, property taxes tend to result in smaller excess burdens than more mobile, responsive tax bases. They also tend to be less detrimental to growth (Johansson et al., 2008), although higher property taxes may affect saving and investment (Mankiw et al., 2009). In addition, property tax design can be used as an instrument for shaping land development and use. In sum, not only could increasing the share of property tax revenue fill municipal tills, it could be a boon to economic development and sustainable land use.

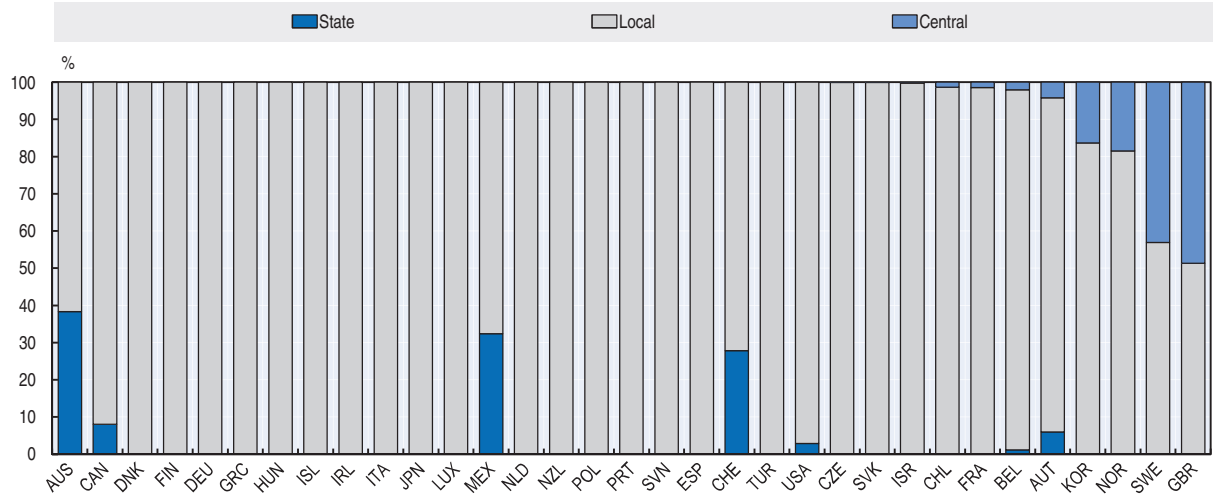
However, political economy pressures have eroded the residential and business property tax base through a variety of exemptions, abatements, and other breaks.[13] In many countries properties have not been re-evaluated for years or even decades, generating considerable distortions and "unfairness" in assessed values across households and jurisdictions. As a result, the share of the property tax in the total sub-central tax take has been declining for decades (see Chapter 4).

There are number of reasons for the unpopularity of property tax that also go some way to explaining why reforms are so seldom undertaken.[14] Real-estate owners may resist any tax hike because they will be capitalised in lower property values. And although property taxes show a relatively strong link between taxes paid and benefits received, this very link tends to make the tax regressive, generating resistance on the grounds of equity.[15] Resistance is particularly strong from liquidity-constrained households, especially those which have large estates but little income. The final reason for the property tax being unloved is that it is highly salient (or visible), as property taxes are usually paid once a year in retrospect and are difficult to avoid (Cabral and Hoxby, 2012).

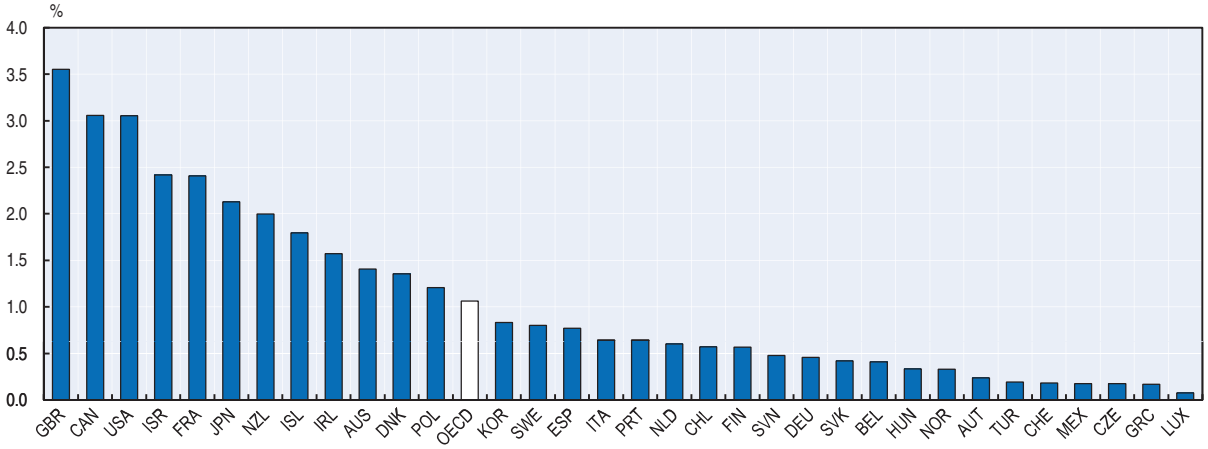
Figure 1.12. **Taxes on immovable property are typically a sub-central tax**

2009

A. Expressed in % of total immovable property revenue and by level of government



B. Expressed in % of GDP



Source: OECD Revenue Statistics.

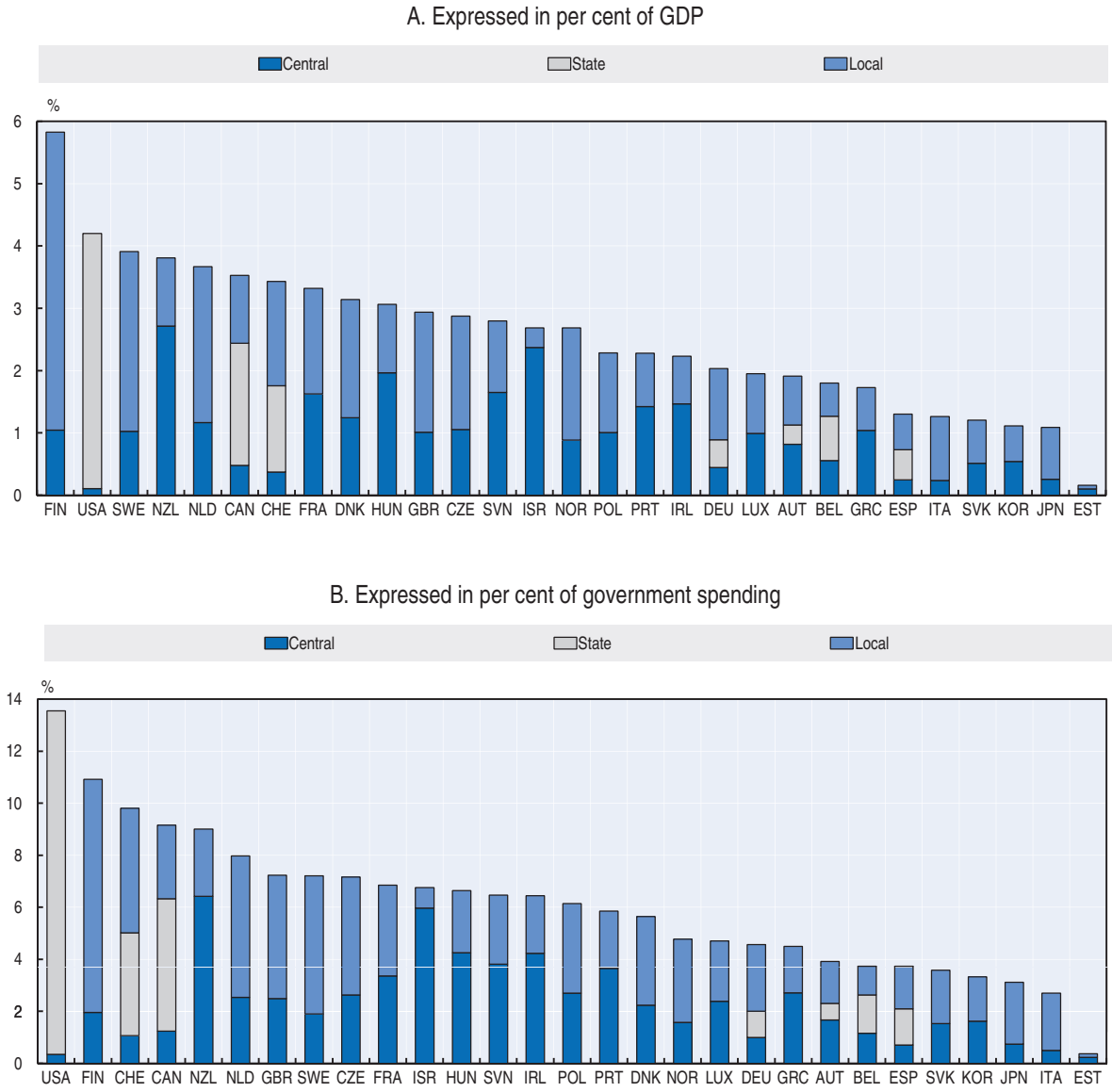
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A strengthened property tax base and higher tax revenues could well require addressing the wider issues of intergovernmental fiscal frameworks and equity. Higher property taxes would increase SCGs' share of the total tax take, probably entailing a shift of responsibilities to lower government levels or a cut in intergovernmental grants once consolidation had borne fruit. An alternative would be a central government or a dual central/sub-central property tax. As for addressing equity concerns, means-testing the tax and levying a lower tax on low-income households is one option. If property tax hikes are passed on to rents, support for low-income tenants may also become necessary.

User fees

User charges, or fees, are individual payments for services provided. They make up a considerable share of public sector revenues in some countries, with the OECD average hovering around 2.5% of GDP (Figure 1.13). User charges are a typical sub-central revenue source, with 50% to 75% of fee revenues accruing to SCGs. Users are charged predominantly for infrastructure services such as transport, water, and waste collection, but less commonly for social services such as childcare or education.

Figure 1.13. **User charges in OECD countries**
2009



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

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User fees are a tool for managing both demand for and supply of infrastructure services and can underpin fiscal consolidation in various ways. They help manage and contain demand. They may also relieve budgets by providing the funds necessary to maintain and expand infrastructure networks. They are particularly appropriate for environmentally sensitive goods and services like waste collection, water and waste treatment, and transport. Properly pricing them can help reduce environmental footprints.

Equity considerations, market structure, and the wider administrative environment may limit too heavy a reliance on user fees, which can disproportionately affect low-income households. They are often levied on essential government services, so there can be trade-offs between equity and efficiency. And since single monopolistic providers supply the bulk of essential services, regulation may need to monitor fees. In that respect, structural reforms to heighten competition between several service providers could strengthen the case for a wider application of user fees.

Generally speaking, user fees work best in a framework where providers compete, SCG budgets report service revenues and costs transparently, and citizens have some control over the level and structure of charges (Groot and Budding, 2004). Two policy areas where a wider application of user fees could help fiscal consolidation are public transport and water.

- *Charging for urban transport infrastructure*. There is a solid case for properly pricing both rail and road transport networks, especially in urban areas. The lack of adequate price signals leads to excessive demand for existing transport networks, while funding shortages restrict investment in capacity expansion. The result is congestion. Pricing as a means of managing and funding urban road networks is rare. As for railways, user charges typically cover 50% or less of urban public transport cost, generating funding shortages for new rail infrastructure (Blöchliger, 2008). In the European Union, the cost of congestion is estimated at around 2% of GDP. A wider use of transport user charges could address both the need for fiscal consolidation and the long-term policy aim of balancing transport infrastructure supply and demand.
- *Water pricing*. Water provision is, in general, a local responsibility. 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, 2010). While tariffs account for the lion's share of recurrent expenditure on water provision, full cost recovery – which includes infrastructure and environmental costs – is rare. Differences in water prices are considerable, with prices lower and the shortfall to full cost recovery usually greater in countries where water is scarce. Properly pricing water at the right level has to factor in several, sometimes conflicting, considerations such as environmental sustainability, economic efficiency, financial sustainability, and social concerns. Price signals to households and industry should be made clearer, and agriculture – by far the largest water-consuming sector and a major contributor to water pollution – should be submitted to the principle of sustainable cost recovery.

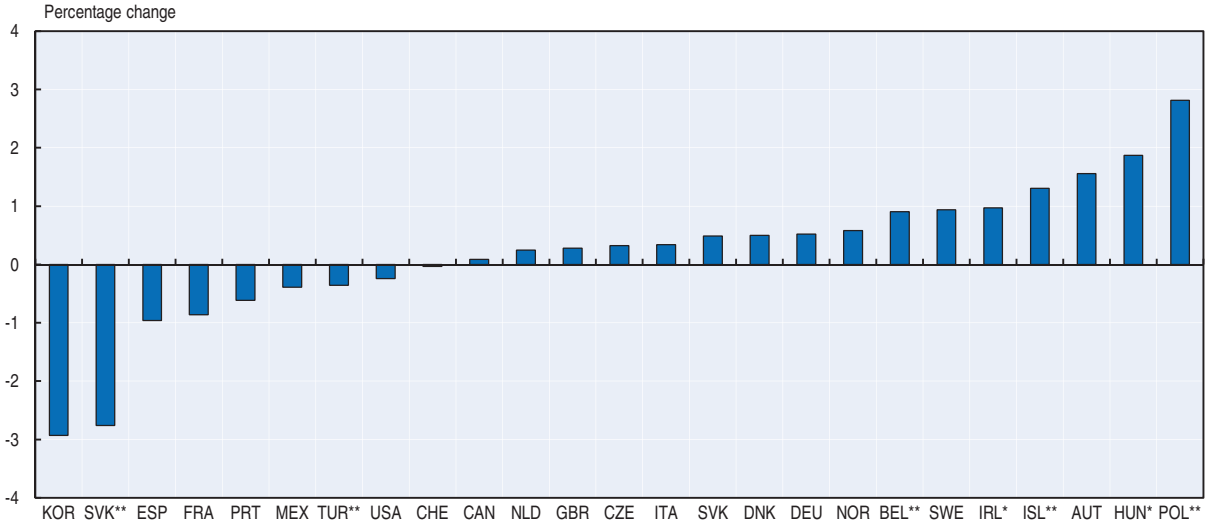
Reforms to intergovernmental grants

Although there are wide variations from one country to another, intergovernmental grants OECD-wide account for around 4% of GDP, 8% of general government spending, and around 50% of total sub-central revenue. Over the last two decades grant systems have

grown in size and complexity as a result of more decentralisation on the spending side not being matched on the revenue side. Moreover, many transfer systems also tend to be pro-cyclical, which exerts a destabilising effect on sub-central budgets (Figure 1.14). Structural reforms to intergovernmental grant systems could contribute to general government fiscal consolidation and yield considerable efficiency gains (see Chapter 5). The objective of inter-jurisdictional equalisation would not have to be compromised and transfers would have a less destabilising effect on SCGs' budgets.

Figure 1.14. **In some countries, grants are pro-cyclical**

Reaction of transfers to the size of the output gap, 1970-2009



Note: The columns show the percentage change in transfer growth if the output gap increases by 1%. A negative value means an anti-cyclical transfer system; a positive value means it is pro-cyclical. The regression is run on a pooled dataset using no lags and excluding annual changes in transfer volumes above +/-30%. Values for countries marked ** or * are significant at the 5% and 10% levels. Full results (including control variables) are presented in Blöchliger and Égert (2013).

Source: Blöchliger, H. and B. Égert (2013), "Fiscal Consolidation Across Government Levels – Part 3. Intergovernmental Grants, Pro- or Counter-cyclical?", *OECD Economics Department Working Papers*, No. 1072, OECD Publishing, Paris.

StatLink http://dx.doi.org/10.1787/888932911518

Reforms to the framework of intergovernmental transfers should rest on three sets of measures:

- *Increase the sub-central tax share*. A higher tax share and correspondingly lower transfer share could help reduce total spending and increase sub-central fiscal responsibility and accountability. As a rule, own tax revenue should entirely cover sub-central spending, with transfers equalising disparities between wealthy and poor SCGs and co-funding projects with inter-jurisdictional scope.[16] Since non-equalising grants account for some 45% of all grants on average (and more in countries with large grant systems), SCGs' tax share and tax autonomy can be increased without running into equity trade-offs.
- *Reduce the pro-cyclicality of grants*. The pro-cyclicality of transfers may be the result of several factors. Transfer spending is often a share of central government tax revenue, which itself tends to fluctuate with the cycle. Moreover, many grants match sub-central spending and therefore tend to exacerbate fluctuations in sub-central spending. Finally, the particular properties of equalisation can make such a system pro-cyclical. As a rule,

transfers should be linked to SCG needs – rather than to SCG spending – and decoupled from central government tax revenue. Factoring multi-year averages of variables into calculations to determine an SCG's yearly grant entitlement may also help reduce excessive volatility.

- *Simplify the grant system*. Many grant systems are overly complex, consisting of dozens, or even hundreds, of individual grants, often based on different allocation criteria. Moreover, almost half of all grants are earmarked, i.e. tied to a specific purpose. A simplification of the grant system may help improve SCG service levels. Better strategic and budget oversight at the central level and more flexibility at the sub-central level can be achieved by: *i*) reducing the number of grants and bundling them; *ii*) reducing the number of criteria applied in the allocation of grants; *iii*) moving from input to output or performance criteria when allocating grants; and *iv*) moving from earmarked towards non-earmarked grants (although SCG service delivery may still be regulated through legislation outside the grant system).

Notes

1. SCGs that had wider deficits *before* the crisis also experienced larger deficit increases *during* the crisis. Foremny and von Hagen (2012) suggest that SCG deficits increased more in federal countries, while SCGs in unitary countries were shielded by intergovernmental transfers which compensated for lower own revenues.
2. SCG revenues are essentially comprised of taxes, user fees, and intergovernmental grants. Comparing liabilities to the sum of the three SCG revenue sources would considerably reduce indicator values and so provide a more favourable picture of the SCG debt situation. However, both user fees and, to some extent, intergovernmental grants are subject to the provision of certain public services, i.e. they cannot, or only in part, be used to reduce deficits. In this sense, the debt-to-tax ratio probably paints a better picture of how much leeway SCGs have to consolidate.
3. AA-rated bonds yields are sometimes lower than those of AAA-rated ones, showing that the financial markets do not always follow the ratings of agencies.
4. Recent research on such threshold effects yielded various results, ranging from debt levels of below 30% to above 80% of GDP (Égert, 2012).
5. For example, if Danish municipalities get into financial difficulties they receive financial help from central government and are put under administrative control (Mau, 2011). In Germany, the constitutional court ruled that the federal government had to help out two *Länder* (states) which were in financial distress.
6. Switzerland provides an interesting example of horizontal contagion. The default in 2000 of a small municipality – less than 0.05% of national GDP – almost caused the municipal bond market to collapse. Uncertainty about the fiscal situation of unaffected municipalities led to their external funding being cut and plunged the body that managed municipal bonds into dire straits. It took municipal bond markets more than one and a half years to return to normal. Similarly, fears of municipal defaults in the summer of 2011 led to rising interest rates on municipal bonds in the United States.
7. Defaults of state-owned banks have led to protracted financial difficulties for some SCGs in Germany, Switzerland, and the United States.
8. However, SCGs do not appear to affect the length, size, and intensity of consolidation episodes. An initially high SCG debt tends to prompt consolidation (not shown).
9. In an earlier study, albeit in a different empirical setting, de Mello (2007) found that higher transfers had a negative impact on SCG budget discipline. An increase in transfers was associated with higher rather than lower SCG deficits, which is in line with the results above.
10. This is in line with the analysis of the cyclical behaviour of SCG/CG balances over the past 25 years (Blöchliger et al., 2010).

11. The ratio of SCG spending to general government's in the countries and periods under scrutiny is around 36%. As a ratio of total spending, deficits were reduced by a little more at central than at the sub-central level. To make the same relative consolidation effort in spending, central government would have to improve its balance by around 4.5% of GDP and SCGs by some 2.5%.

12. Most public-private partnerships (PPPs) are contracted at the sub-central level. In Germany, around 80% of PPP investment is undertaken 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 its "Private Finance Initiative" the United Kingdom has the most advanced PPPs. They account for 10% to 15% of total public investment, mostly administered by local governments.

13. Augustine et al. (2009) review property taxation trends and policies in the United States. Similar trends can be observed in most OECD countries.

14. The 2012 reform in Ireland and the 2011 reform in Italy provide two examples of successful reforms (OECD, 2011).

15. This view is not uncontested and depends on the incidence of the property tax. Property taxes can be designed to be progressive. Some countries also provide income-related benefits to the poorest households.

16. This policy has so far only been enacted in a single country – in Italy, which passed Law 42 on fiscal federalism in 2009.

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Chapter 2

Sub-central fiscal rules: Making fiscal policy sustainable

Sub-central fiscal rules are constraints that limit sub-central budget autonomy. Well designed fiscal rules can help achieve a sound budgetary position, provide a cushion against adverse shocks, help guard against spending excesses, yet still maintain most of the budget autonomy of sub-central governments. The sub-central fiscal rules framework – as reflected in the OECD sub-central fiscal rules indicator established in 2005 and updated in 2012 – has changed little, which suggests that it was already well established prior to the onset of the economic and fiscal crisis in 2008. This chapter deals with a set of reforms that may help increase the credibility and effectiveness of fiscal rules. While fiscal rules can underpin responsible fiscal behavior, they should be a complement rather than a substitute for well-functioning intergovernmental fiscal institutions.

Why sub-central fiscal rules?

Fiscal rules are institutional constraints that limit policy makers' decision-making discretion. Such rules may be imposed by central governments, or, alternatively, sub-central governments may adopt them themselves. The main rationale for fiscal rules is two-fold: *i)* to rectify a perceived spending and deficit bias and *ii)* to counter the reluctance of sub-central policy makers to commit to fiscal sustainability and contain the externalities that, as a result of their irresponsible behaviour, may affect general government finances. Well designed fiscal rules and budgeting procedures can help guard against inappropriate budgetary behaviour. They can underpin fiscal consolidation, reduce excessive spending pressures, cushion economic shocks, and help ensure sustainable longer-term public finances. In many OECD countries, sub-central fiscal rules are an integral part of general government fiscal policy, set out in domestic stability pacts and providing each level of government with guidance on fiscal policy. In a few countries, they are enshrined in the constitution.

Historically, the experience of past fiscal crises was the main motive for adopting fiscal rules and pre-empting future imbalances. The need for forward-looking tools that underpin long-term fiscal sustainability became acute once SCG fiscal policy went off the rails. The strict balanced-budget rules enshrined in the constitutions of most US states were the response to a series of state defaults in the first half of the 19th century. Similarly, many countries tightened their fiscal rules considerably after the recession of the 1990s, when SCG spending and deficit excesses began to affect general government finances. In some sub-central governments in Canada and Australia, the recession in the early 1990s – coupled with chronic deficits and mounting debt levels – strained the existing fiscal frameworks, prompting a number of SCGs to adopt rules that required balanced budgets and medium-term debt reduction or elimination strategies. After the onset of the recent crisis and in the wake of high and/or rising deficits, several countries – such as Germany, Spain, Italy and Portugal – tightened their deficit and borrowing rules, often by anchoring them in the constitution to increase their credibility. However, the crisis also revealed that fiscal rules cannot do much to counteract the adverse effects of flawed fiscal institutions.

Given the present focus on consolidation and sustainability, it is sometimes forgotten that fiscal rules serve a variety of policy objectives. These include efficient public spending, controlling the size of the public sector, and stabilising the economy. In a number of countries the motivation for implementing fiscal rules has arisen from concerns that the public sector was becoming too big. On average, the size of sub-central government relative to general government has increased by almost 3 percentage points in the last 20 years, partly due to new spending assignments and above-average price increases in locally provided services. Fiscal rules may hence constrain spending beyond the socially optimal point. Moreover, rules may help SCGs to adjust their spending and taxation to the economic cycle and overcome the all too familiar problem of pro-cyclicality in sub-central

fiscal policy. Finally, rules can help ensure that the overall budget is allocated efficiently across the various spending categories. However, the variety of policy objectives makes fiscal rules complex and often rigid, and compliance and enforcement have often lagged behind or failed outright. The shortcomings of the current frameworks have now paved the way for a set of "second-generation" rules that could govern sub-central fiscal policy and budgeting in the future.

The design of fiscal rules

Objectives of fiscal rules

Fiscal rules that restrict sub-central government budget autonomy pursue four objectives (Sutherland et al., 2006):

1. **Fiscal sustainability** – Fiscal rules can help maintain the sustainability of public finances and underpin fiscal consolidation. Although sub-central governments' fiscal positions deteriorated much less than those of central government during the 2008 crisis and its aftermath, future debt and deficit financing may still have to be limited on the grounds of intergovernmental fiscal externalities. Financial difficulties in one government may spread to others or prompt rising interest rates across all government sectors (see Chapter 1 on fiscal consolidation). Since overall sustainability is determined by governments' joint action, co-ordination across all tiers of government may be necessary.
2. **Economic stability** – Fiscal rules should help SCGs cope with business cycle fluctuations and exogenous shocks. The rigidity of annual balanced-budget rules in many countries tends to make SCG fiscal policy pro-cyclical (Jonas, 2012). Allowing SCGs to adjust their spending and revenues to the economic cycle reduces pro-cyclicality. Escape clauses, too, can help deal with exogenous shocks and unexpected events such as natural disasters. Recent experience in enforcement suggests that fiscal rules factoring in the business cycle and exogenous shocks may also be more credible.
3. **Aggregate efficiency** – Fiscal rules can help limit the size of the public sector by balancing the marginal benefits of public spending against the marginal tax burden. Although a large public sector may partly reflect societal choices, higher spending does not always produce the intended effects or reflect citizens' preferences. Short-sightedness and the so-called "ratchet effect" may make for an ever-burgeoning public sector, financed by ever-increasing taxes. Fiscal rules capping SCG spending and limiting their tax autonomy can restrict expenditure growth.
4. **Allocative (budget) efficiency** – Fiscal rules can help increase the efficiency of public spending – if they help match public services to local preferences. Fiscal rules that grant SCGs wide-ranging budget autonomy are thought to foster allocative efficiency. When their budget coverage is broad, they also contribute more effectively than rules that discriminate between tax and spending categories – such as the so-called "golden rule" which exempts capital spending. Moreover, multi-annual rules are less constraining than annual ones.

Of course, there is no single fiscal rule that simultaneously meets all four objectives. Trade-offs between rules are inevitable and depend on their design. Although sub-central fiscal rules may also affect distributional objectives, this chapter does not cover their impact on horizontal equity – i.e. the equitable distribution of resources among sub-central governments.

Fiscal rules have gained importance as sub-central autonomy has increased. In this regard, one factor that has aroused interest in such rules has been the drive towards decentralisation since the 1990s in both OECD and non-OECD countries. New spending assignments and responsibilities often preceded increased tax autonomy, which led to the emergence of large-scale transfer systems that were prone to spending excesses at the sub-central level. When they were allowed access to capital markets, SCGs without significant revenue raising autonomy covered deficits through borrowing. Since they depended largely on transfers, lenders perceived them as borrowers whose debt was implicitly guaranteed by central government. The costs of profligate fiscal policy to the rest of the country arose through the moral hazard of potential bail-outs from central government, raising overall borrowing costs and leading to higher, more volatile public spending and tax rates. The crisis has likely sharpened the perception of irresponsible sub-central fiscal behaviour as the cause of unsustainable public finances and strengthened the desirability of long-term sustainability.

Types of fiscal rules

There is a multitude of fiscal rules. They can, however, be grouped into four broad types, where each one reflects a main budget objective. The most common rule is the balanced-budget rule, followed by those that aim to constrain borrowing and limit taxation. Rules that seek to contain spending are rare (Table 2.1).

1. **Budget balance rules** – SCG budget-balance requirements may vary across several dimensions. The first relates to aggregate targeted budgets. Rules may cover both the current budget and capital account, and in some cases, off-budget items. A common rule, especially at the local level, is the "golden rule", which requires a balanced budget for current spending but allows borrowing for capital spending (public investment). The second dimension relates to the relevant time horizon. Many budget-balance rules, both at the state/regional and local level, require an annually balanced budget, which is likely to entail a pro-cyclical fiscal stance. The third dimension relates to who sets the rules. In most countries budget-balance rules are imposed by a higher tier of government, with the exception of some federal countries where state-level rules are self-imposed or negotiated.
2. **Borrowing and debt rules** – Borrowing constraints – typically imposed by a higher tier of government – cover a range of restrictions on SCGs' recourse to debt financing. In the most restrictive cases, borrowing is not allowed at all, while in others it is restricted to such purposes as capital spending or to borrowing in domestic currency only. Rather than prohibiting borrowing altogether, a few countries cap sub-central debt in relation to GDP, own revenues, or debt-servicing costs. Higher levels of government rarely provide an explicit guarantee for SCG debt. However, implicit rescue guarantees are widespread, and several countries have bailed out over-indebted SCGs, which has damaged the credibility of budget-balance and borrowing constraints.
3. **Tax limits** – Most central governments impose limits on sub-central tax rates and/or the tax base (A review of the various types of restrictions on tax autonomy can be found in Blöchliger and Rabesona [2009]). Tax limits usually come in the form of explicit minimum or maximum tax rates, although some countries apply sanctions in the form of lower transfer revenue to restrain hikes in tax rates. Other countries embed sub-central taxes in tax-sharing systems, which leaves SCGs no discretion over tax revenues. Nonetheless, most sub-central governments enjoy some degree of tax autonomy, typically over the

rate or the base, though not always both. Local governments generally have less tax autonomy than state governments.

4. **Spending limits** – Explicit spending limits are rare in OECD countries. They are linked to income, inflation, or population growth, or to some other needs-based criterion, or to a combination thereof. Some take the form of ceilings on expenditure growth and can be set for annual or multi-annual periods. One of the possibly most restrictive rules is the requirement to hold referenda for expenditure above a given threshold or for certain types of spending (e.g. capital spending). Where there are spending limits, they are generally self-imposed.

Table 2.1. **Sub-central fiscal rules in OECD countries**
Self-imposed or imposed by upper-level government, 2011

Sub-central government	Budget balance rule	Expenditure limit	Taxation limit	Borrowing constraint
Australia state	X	X	X	X
Australia local			X	X
Austria state	X			
Austria local	X			
Belgium state	X		X	
Belgium local	X		X	X
Canada state	X			
Canada local	X		X	X
Chile			X	X
Czech Republic	X		X	
Denmark	X	X	X	X
Estonia	X			X
Finland	X		X	
Germany state	X			X
Germany local	X			X
Ireland	X			X
Italy state		X	X	X
Italy local	X		X	X
Korea	X			X
Mexico state				X
Mexico local				X
New Zealand	X		X	X
Norway	X		X	X
Poland	X			X
Slovak Republic	X			X
Slovenia	X		X	X
Spain state	X			X
Spain local	X	X		X
Sweden	X			
Switzerland state	X		X	
Switzerland local	X		X	
Turkey		X		X

Source: OECD Secretariat calculations based on Network questionnaire responses.

Process rules and rule implementation

Process rules govern the procedures by which substantive fiscal rules are implemented. They cover requirements for accounting transparency, reporting and monitoring and, if substantive rules are breached, sanctions.

- **Accounting transparency** – Accounting transparency encompasses issues such as the pros and cons of accrual against cash accounting; the use of a common accounting framework across all tiers of government (uniform accounting) or between all jurisdictions at the same level (harmonised accounting); and the degree of inclusion or exclusion of off-balance-sheet items such as the assets and liabilities of publicly owned firms or the contingent liabilities of pension funds. Including contingent liabilities in SCG budgets has become a pressing policy issue as SCGs in a number of countries have had to take over large debt obligations arising from bank failures or unsustainable public pension funds. Transparency over the risks of such involvement and the regulatory separation between banks and SCG sovereigns is good budgetary practice.
- **Reporting and monitoring** – An effective monitoring system is particularly important when there is wide information asymmetry between SCGs, on one hand, and the population and higher tiers of government, on the other. While many sub-central governments undertake monitoring themselves, it is often the task of a higher tier of government or an external independent body. In some countries, the national legislature or constitutional court is ultimately responsible. There is also a handful of countries where the fiscal framework sets an AAA credit-rating objective, entrusting rating agencies with the job of external monitoring and compelling SCGs to commit to prudent fiscal policy. When sufficient standardised information is available, local populations and politicians can also play a better monitoring role by comparing budget outcomes with those in other jurisdictions. Such benchmarking can prompt SCGs to innovate and help them develop best practices in their public finances.
- **Sanctions** – Sanctions complement other process rules that foster compliance. In the absence of the threat of sanctions, fiscal rules may be less credible. Their severity varies: higher-tier governments may make recommendations, dictate corrective policy actions, or restrict the freedom of policy making if an SCG breaches the rules. In some countries, individual budget officials may be held liable for failure to meet targets and may even face prosecution and a possible prison sentence. Financial sanctions (e.g. reduced transfers) may be the harshest. Sanctions must be credible, however. Financially penalising an SCG already in fiscal distress, for example, may not be politically acceptable. In fact, experience suggests that SCGs which breach rules are hardly ever sanctioned. The worst thing that can happen to them is to be put under the administrative control of an upper tier of government.

In certain circumstances, process rules provide guidelines for mechanisms that relax the stringency of objective-setting fiscal rules. But in all cases, processes and mechanisms for implementing fiscal rules are key to their effectiveness. They strengthen the commitment of governments to stick to set objectives, so helping to determine their long-term credibility. Appropriate process rules that pave the way to an objective are therefore as important as the objective itself and the fiscal rules that designate it.

Fiscal rules and the intergovernmental fiscal framework

The choice of appropriate fiscal rules and whether they are needed at all is influenced by the wider intergovernmental fiscal framework. While the spending powers assigned to SCGs and the degree of tax autonomy they enjoy can make the need for certain rules more or less pressing, there might be fiscal conditions where aggregate rules are difficult to apply. Alternatively, financial market discipline may act as an independent constraint on sub-central governments, so pre-empting to some extent the need for more formal and/or stricter rules. Finally, political factors may interact with the need for and effectiveness of particular fiscal rules. The experience across OECD countries suggests that fiscal rules can only go so far to make up for malfunctioning intergovernmental fiscal frameworks, and that they work best if they act as a complement rather than a substitute for a well-designed institutional set up.

Tax and spending assignment and intergovernmental transfers

Spending autonomy and spending patterns affect the need for and design of fiscal rules. Limited sub-central spending autonomy or excessive central government regulation can make it hard for jurisdictions to comply with certain fiscal rules and may compromise the efficiency gains of fiscal decentralisation. Spending assignment also plays a role. In many countries politically sensitive spending – such as healthcare, education, and social protection – is assigned to lower government levels, and SCGs under political pressure to maintain spending in these areas may find it difficult to stick to the rules. Responsibility for social spending may also be hard to reconcile with strict annual balanced-budget rules, since compliance can lead to large fluctuations in the spending composition of the budget. If sub-central spending fluctuates strongly over the cycle, budget balances might have to be adjusted to allow greater flexibility.[1] Finally, increases in demand for and the cost of certain services prompted by demographic pressure – in particular healthcare – are important drivers of sub-central government spending. Fiscal rules might have to be adapted to meet such spending needs.

Intergovernmental tax structures and tax autonomy also affect the need for and design of rules. Sub-central tax autonomy, especially when it allows SCGs to set business and income taxes, can fuel tax competition across jurisdictions (see Chapter 4, "Sub-Central Tax Competition"). Tax competition may put pressure on sub-central budgets and reduce the need to impose fiscal rules from above. Indeed, federal countries where state governments enjoy extensive tax autonomy do not impose fiscal rules. SCGs apply them themselves. However, the greater the tax and spending autonomy assigned to SCGs, the more they may become exposed to the business cycle, leading to the risk of the so-called "ratchet effect". The ratchet effect refers governments' propensity to increase spending when times are good, then to have trouble cutting it when times are lean. Instead, they raise taxes, which causes the public sector to swell constantly. Fiscal rules can contain the ratchet effect.

Bail-out clauses and insolvency mechanisms

The extent to which central government rescues SCGs in fiscal distress is central to the need for fiscal rules that work effectively. Spendthrift SCGs that presume they will be bailed out are indulging in moral hazard, sensing they will not have to face the consequences of risk. Although several countries have clear, unambiguous no-bailout clauses, the experience over many decades is that if an SCG default looms, a higher tier of government is likely

to come to the rescue. Reliance on bailout weakens the effectiveness of rules by making them less credible. One egregious example is the constitutional court ruling in Germany that required the federal government to provide financial support to two heavily indebted *Länder* (Seitz, 1999).[2] In contrast, by consistently refusing to bail out SCGs, Switzerland and the United States give them strong incentives to keep their fiscal policy prudent.[3] Bail-out clauses are credible insofar as they demonstrate that fiscal rules complement rather than supersede well-functioning fiscal frameworks. If frameworks fail, rules cannot counteract that failure.

Insolvency legislation is a mechanism for restructuring the finances of a distressed SCG. As such it can help increase the credibility and effectiveness of fiscal rules. Insolvency rules signal to SCGs and their lenders that defaults may have considerable consequences, even if the default process itself is orderly. In most countries sub-central bankruptcy is either impossible or not practiced, although some seem to have embarked on the path of reform and enacted insolvency laws specifically for sub-central governments. Again, a clear, well established insolvency mechanism can improve the credibility of fiscal rules and relieve the pressure on central government to come to the rescue of distressed jurisdictions. A credible threat of insolvency may even alleviate any need for a fiscal rule.

Financial markets

Financial markets can substitute sub-central monitoring mechanisms by imposing higher borrowing costs in the event of imprudent fiscal policy. There is thus less need for formal fiscal rules, since the markets act as an external monitor that effectively sanctions SCG fiscal indiscipline. Consistent with the assumption of market discipline, empirical work on the United States suggests that the risk premium of a state's general obligation bond rises with its level of debt. US states also appear unwilling to borrow to cover current expenditure, fearing that any damage to their reputation will raise future borrowing costs (Bayoumi, Goldstein and Woglom, 1995).

However, financial markets may not take SCG fiscal policy properly into account. They may assume that there will be a bailout from central government and interest rates may not therefore reflect true sub-central fiscal positions. Until around 2010 the risk premia of SCG bonds in certain European countries were almost identical to each other, regardless of how sub-central governments were rated by credit agencies (see Chapter 1 on fiscal consolidation). Financial markets hardly worried about the debt sustainability of SCGs, probably assuming that in the event of any difficulty central governments would help them out. Low interest rates, in turn, lulled SCGs into a false sense of security and they forgot about the perils of profligate fiscal policy.

If financial market discipline is to be effective, several requirements must be met. First and foremost, the commitment by a higher level government not to bail out a fiscally irresponsible government needs to be credible – and that commitment might first have to be tested. Second, financial markets should be deep and well developed so that they can adequately incorporate sub-central risks and withstand an SCG default. Third, SCG politicians should be responsive to market signals and willing to put their finances back on a sustainable track.

Trade-offs and side effects

Fiscal rules may entail trade-offs between fiscal policy objectives. This section analyses such trade-offs and how their impact may be mitigated. It first considers the types of trade-offs and side-effects created by fiscal rules, then assesses how rules can lead to fiscal gimmickry. Finally, it examines the appropriate response to trade-offs and side-effects and how the interaction between the various components of rules can mitigate unintended consequences.

Budget balance and borrowing/debt rules

Budget balance requirements and borrowing/debt constraints may lead to a number of trade-offs and side effects. The more stringent such rules are and the shorter their time horizons, they more pro-cyclical they make sub-central fiscal policy. Yet, extending the budget horizon or introducing mechanisms to address cyclicality may make monitoring and enforcement more difficult and governments less accountable. Such measures may give rise to long-term spending increases as a result of the cyclically induced ratchet effect discussed above. There may also be significant allocative inefficiency because a rule which covers the overall deficit or total spending may be biased against investment, since capital spending is easier to cut than current expenditure in times of fiscal consolidation. On the other hand, "golden rules", which allow borrowing for capital purposes, can introduce the opposite allocative inefficiency because they constrain (physical) capital spending less than other forms of investment-related expenditure like education.

Many countries have built numerical debt or deficit limits into their fiscal rules, much as the European Stability and Growth Pact has done. Although numerical limits can send a strong signal about what is considered the dividing line between sustainable and unsustainable (or simply good and bad) fiscal policy, they may actually undermine prudent policy. SCGs may perceive a limit as an objective to reach rather than a line not to cross. Many countries rushed to the limit set by the European Union's Stability and Growth Pact. Rather than imposing uniform deficit and debt limits on SCGs across a country, central governments could allow them to set their own targets and adapt them to their own specific circumstances.

Tax and spending limits

The main problem with expenditure limits is that they can give rise to distortions in the composition of public spending. When they are applied to certain parts of the budget, they merely cause expenditure to switch to budget items that are not constrained by the same rules (von Hagen and Wolff, 2004). Expenditure limits which apply across the board, irrespective of priorities, may lead to the rationing of key public services or spending cuts that are easiest to implement in the short run. Some studies of the effects of tax and spending limits in the United States have reported that fiscal-rule-induced cuts in education spending may contribute to poorer educational performance (Mullins, 2004). As for selective expenditure rules, they reduce SCGs' fiscal autonomy and may end up in central governments micro-managing sub-central budgets.

Fiscal gimmickry

To evade the constraints of fiscal rules, SCGS may resort to fiscal gimmickry. Accounting principles usually leave some room for interpretation, which makes it tempting to take advantage of them – particularly when fiscal rules threaten to bite. There are different ploys for getting round, some more elegant than others (For fiscal gimmickry at the national level see Koen and van den Noord [2005]). When Spain attempted to restrain growth in public sector employment by setting precise limits on numbers of permanent employees and pay scales, SCGs resorted to temporary contracts which were not bound by those limits. Similarly, when tax increases are capped, SCGs often turn to user charges and service fees to raise revenues. It can also be tempting to circumvent budget balance requirements. US states appear to get round self-imposed fiscal rules by shifting resources between the (controlled) general fund and extra-budgetary funds that are unconstrained by rules.

Links between governments, public enterprises, and financial institutions are particularly prone to gimmickry if they are not properly accounted for in the formal budget. Large (contingent) liabilities may build up unnoticed. The growth of debt in Spanish public enterprises is one example of how sub-central budget-balance requirements can be evaded. In China, too, provincial and local governments face strong incentives to shift the debt burden to off-budget public enterprises, with little transparency about the effective extent of liabilities (Ong, 2012).

How to mitigate trade-offs and side-effects

To ease trade-offs and limit the undesired side-effects of a fiscal rule (summarised in Table 2.2), the most common response is usually to adopt more than one rule. That is what most countries have done and the average number of rules per county is now three (Table 2.1). Alternatively, rule design can mitigate trade-offs and may, in some cases, help prevent rules from piling up and stifling SCG fiscal autonomy. Central government may consider a number of design features that might be appropriate for curbing trade-offs and side-effects.

- **Structural fiscal rules** – When SCGs enjoy greater spending and taxing powers, their budgets become more prone to cyclical fluctuations. Establishing structural rules – i.e. ones that are cyclically adjusted rather than nominal – can help avert any trade-off between short-term stability and long-term sustainability. Multi-annual budgets that allow for carry-overs can support structural fiscal rules and help automatic stabilisers to work better. Rainy day funds, too, can provide additional buffers against cyclical fluctuations. In the wake of the economic and fiscal crisis some countries (Germany, Italy, and Spain) considerably upgraded the design of their sub-central fiscal rules to make them structural rather than actual. Estimating structural budget balances for state, and especially local, government requires some sophistication, although recent research into Italian municipalities suggests that structural balances for local governments are technically feasible (Panicara, Rigon and Tomat, 2012). A drawback of structural fiscal rules, however, is that they leave more room for interpretation and may consequently reduce accountability.
- **Covering the aggregate budget** – Many SCGs apply fiscal rules that exempt certain spending categories. One common fiscal rule, especially at the local level, is the "golden rule" that exempts capital spending from budget balance or borrowing requirements. One consequence of the golden rule is that physical investment takes priority over other

forms of investment such as education (human capital) or research and development. Fiscal rules covering the aggregate budget help reduce distortions that result from prioritising certain spending items, which increases the aggregate efficiency of public spending. If a rule covers the overall budget, SCGs should draw up medium-to-long-term expenditure plans that avert any bias against spending which is flexible in the short term – particularly investment in infrastructure and infrastructure renewal.

- **Overshoots and corrective measures** – The strict application of a fiscal rule – even if it is cyclically adjusted – may require budget cuts that could be detrimental to the economy. Allowing SCGs to overshoot deficit limits set by a rule, but obliging them to make up for the overshoot within a given time period could relieve such budget pressures and make for smoother adjustment. Some recently amended sub-central fiscal rules (like the German and Spanish budget balance rules) allow overshoots which have to be registered in a corrective account and subsequently balanced at a later time.
- **Adapting the rules to the origin of fiscal problems** – Rule designs that seek to mitigate trade-offs and side-effects should be sensitive to the main source of bias in deficit, debt, spending, and taxation. A ratchet effect induced by borrowing constraints may, in particular, call for an upper limit on tax rates. Indeed, it is more common to combine deficit and tax rules than deficit and spending ones. That said, tax competition might relieve the pressure to set upper tax limits. Spending rules constraining the size of the public sector might be necessary if short-sighted policy makers are the source of spending excesses. Finally, a self-imposed rule is sometimes more credible, as SCG policy makers may feel that they "own" it.

Table 2.2. **Impact of fiscal rules**

	Effects on			
	Size of the public sector	Allocative efficiency	Deficits and debt sustainability	Pro-cyclicality
Budget balance requirements	"Ratchet effect" will lead to growing public sector and aggregate efficiency losses.	Neutral, if covering all spending. Can lead to losses if partial.	Stricter rules prevent deficits more effectively and can ensure long-run debt sustainability.	Induces pro-cyclical fiscal policy.
Borrowing limits	Can act as a budget balance requirement.	If coverage is partial, it can distort spending and lead to inefficiencies.	Can reduce the deficit bias and ensure debt is maintained at sustainable levels.	Induces pro-cyclical fiscal policy.
Tax limits	Can help restrain the size of government. The wider the coverage, the more effective they are.		Can lead to deficits if spending is not controlled.	Counter-cyclical if limit is on tax rates.
Expenditure limits	Can help restrain the size of government. More successful, the wider the coverage.	Neutral, if wide coverage. Introduces inefficiencies, if coverage partial or no prioritisation.		Can help smooth spending, but if linked to activity can lead to pro-cyclicality.

Source: Sutherland, D., R. Price and I. Joumard (2006), "Sub-central Government Fiscal Rules", *OECD Economic Studies*, Vol. 2005/2, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eco_studies-v2005-art13-en*.

In general, flexible rules – both at the central and the sub-central level – tend to be more effective than rigid ones and to produce less trade-offs or side effects. This is paradoxical only at first sight. An important lesson from past experience is that overly rigid

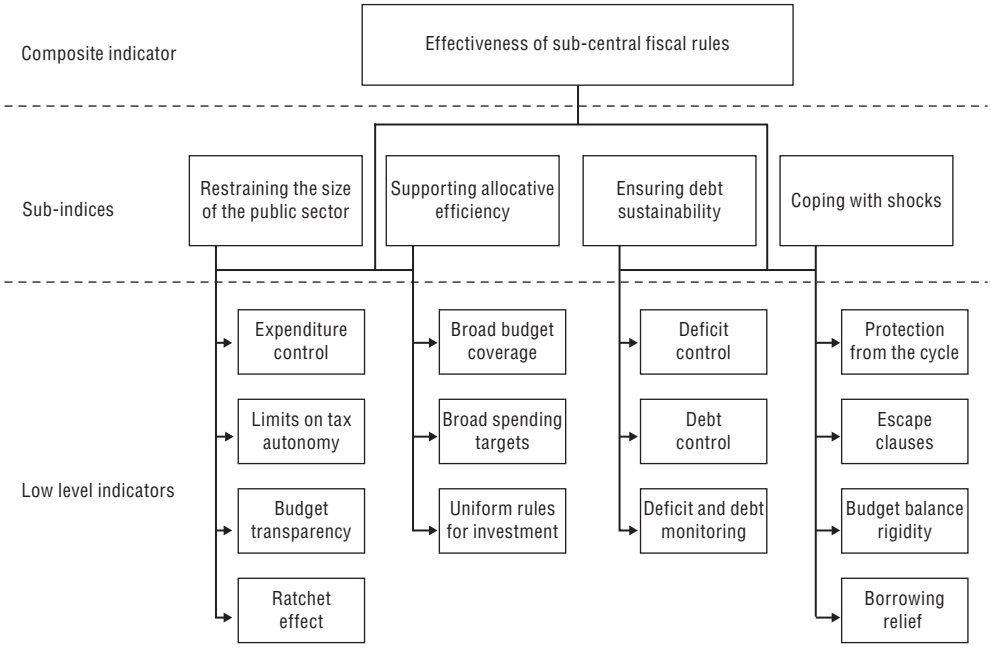
rules do not work and thereby lose credibility. Rules that are insensitive to economic or fiscal circumstances are unlikely to be enforced (Schick, 2010). More flexible rules may give SCGs greater credibility and, by the same token, greater capacity to constrain fiscal policy.

Strength of SCG fiscal rules

Measuring the strength of rules: the OECD indicator

In order to assess SCG fiscal rules and compare their effectiveness over time, the OECD has developed a set of indicators that measure how a country's fiscal rules may contribute to ensuring the stability and sustainability of public finances, restraining the size of the public sector, and enhancing efficiency. The fiscal rules indicators were built from answers to a questionnaire distributed to OECD member countries in 2005 and 2011. The individual responses to the questionnaires are aggregated into "low-level" indicators that capture different aspects of both the substantive and the process rules (Figure 2.1). All indicators are scaled from 0 to 10 in ascending order of desirability of outcome (full details of the coding are given in Fredriksen [2013]). The low-level indicators are then aggregated into sub-indices which denote the capacity of fiscal rules to meet the four fiscal policy objectives described in the first section. Finally there is a composite indicator of the effectiveness of SCG fiscal rules.

Figure 2.1. **The hierarchy of the fiscal rules indicators**



Source: Sutherland, D., R. Price and I. Joumard (2006), "Sub-central Government Fiscal Rules", *OECD Economic Studies*, Vol. 2005/2, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eco_studies-v2005-art13-en*.

Constructing either a sub-index or the overall composite indicator involves assessing the relative importance of each rule attribute which may vary across countries and time. To overcome the difficulty of assigning relative importance to each aspect of a fiscal rule in very different budgetary and institutional frameworks, the random weights method is

used. The random weights are drawn from a uniform distribution between zero and one, then normalised so as to sum to one and multiplied with the low-level indicators. The resulting confidence intervals reflect the extent to which varying weights given to low-level indicators affect the value of intermediate indicators and the composite indicator (For a detailed description of how the fiscal rule indicators are constructed, see Sutherland, Price and Joumard [2006].)

Rules vary across countries but were mostly in place before the crisis

The overall effectiveness of fiscal rules with respect to the four objectives of fiscal policy (sustainability, stability, budget efficiency, aggregate efficiency) scores between 3.5 and 6 on a scale between 0 and 10 (Figure 2.2, Panel A). The vertical bar denotes the 95% confidence interval for the indicator values. The relatively small cross-country variation of the composite indicator is probably due to the inherent trade-offs between fiscal rules that seek to meet several objectives: strengthening one policy objective tends to be at the expense of another objective. Trade-offs between rules and rule ambiguity are denoted by the length of the vertical bar on a country's indicator value. The shorter the bar, the more consistent the rule in pursuing a certain policy objective. The average value and the ranking of the composite indicator changed little between 2005 and 2011, suggesting that the overall sub-central fiscal rules framework was hardly changed during the crisis – or, to put it differently, an adequate framework might have been in place in many countries well before the crisis struck.

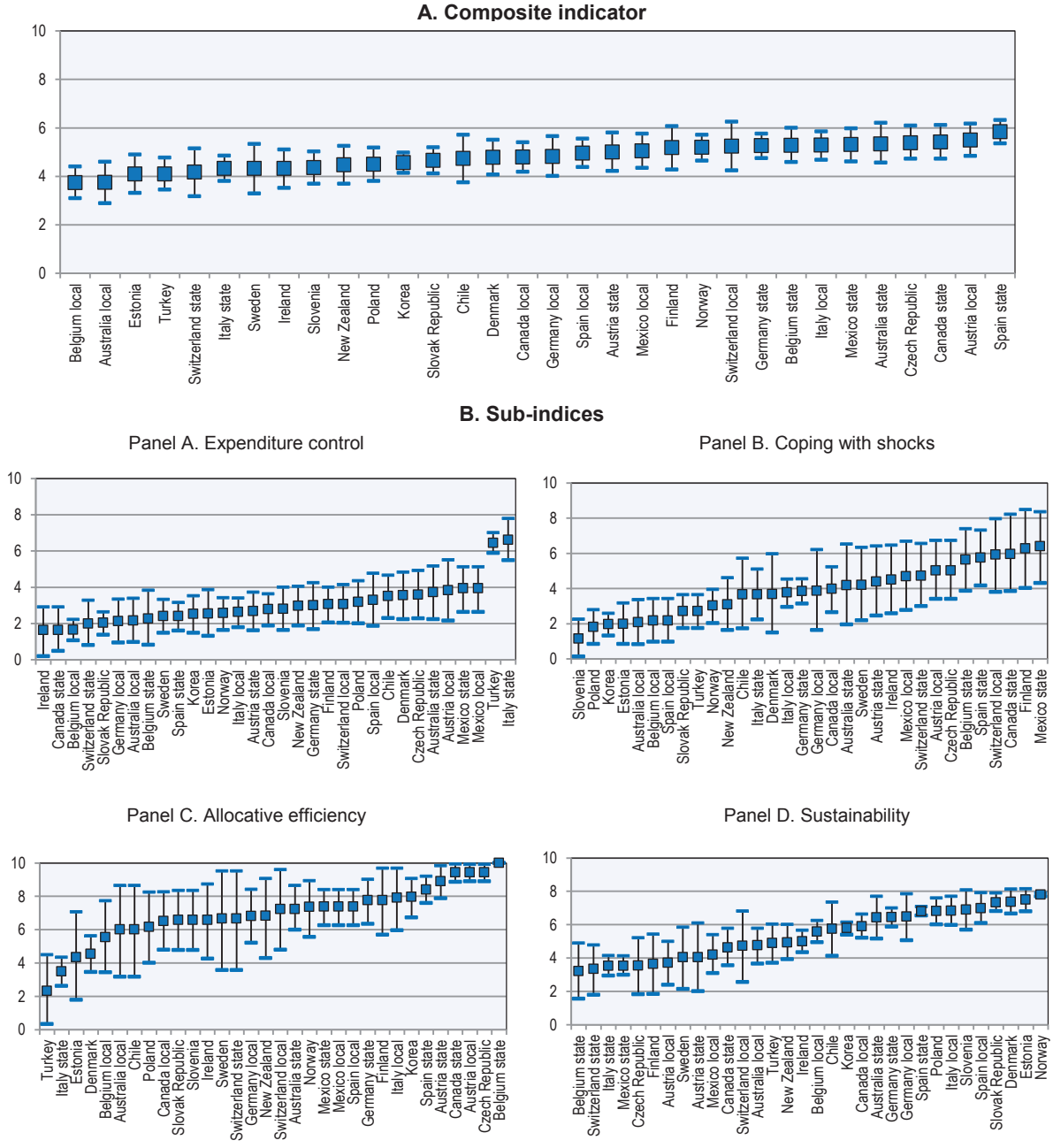
Unlike the composite indicator, the sub-indicators that denote the four objective-setting rules vary considerably across countries. They also evolved considerably between 2005 and 2011, suggesting that many individual rules were adapted in the wake of the crisis. Some were made more conducive to certain objectives while others were weakened, in line with the inherent trade-offs between objectives.

The values of the four sub-indices can be interpreted as follows (Figures 2.2, Panel B and 2.3):

- **Sustainability** – The average score for deficit and debt sustainability is the second-highest among the four policy objectives, suggesting that sustainability is an important policy objective. Variation across countries ranges widely, from 3.2 to 8. The average value of the sustainability indicator rose very slightly from 2005 to 2011, suggesting that deficit and debt rules were slightly strengthened in the wake of the crisis.
- **Stability** (ability to withstand shocks and the cycle) – The average score for the stability objective is lower than for sustainability, reflecting the often strict requirement to balance budgets on an annual basis. Country values range between 1.1 and 6.4. The average value of the stability indicator increased, suggesting that in some countries rule frameworks were better suited to withstanding the budget cycle and shocks.
- **Allocative efficiency** (budget coverage) – The average score for allocative efficiency is the highest of the four policy objectives, suggesting extensive SCG budget autonomy and wide budget coverage. Nevertheless, golden rules and other distorting budget devices reduce budget efficiency in numerous countries. Between 2005 and 2011, the allocative efficiency of sub-central budgets increased, which points to greater SCG budget autonomy.

- **Aggregate efficiency** (restraining the size of the public sector) – This indicator has the lowest average score, which can be explained by the limited use of expenditure limits and the ratchet effect, i.e. alternating spending sprees and tax increases over the cycle. Moreover, the decline in indicator values between 2005 and 2011 suggests that other policy objectives became more important than spending control.

Figure 2.2. **Sub-central fiscal rules strength, 2011**



Note: The square symbolises the mean indicator value and is equivalent to assigning the same weight to each low-level indicator. The range on either side indicates the possible values for different weights assigned to sub-indicators (confidence intervals).

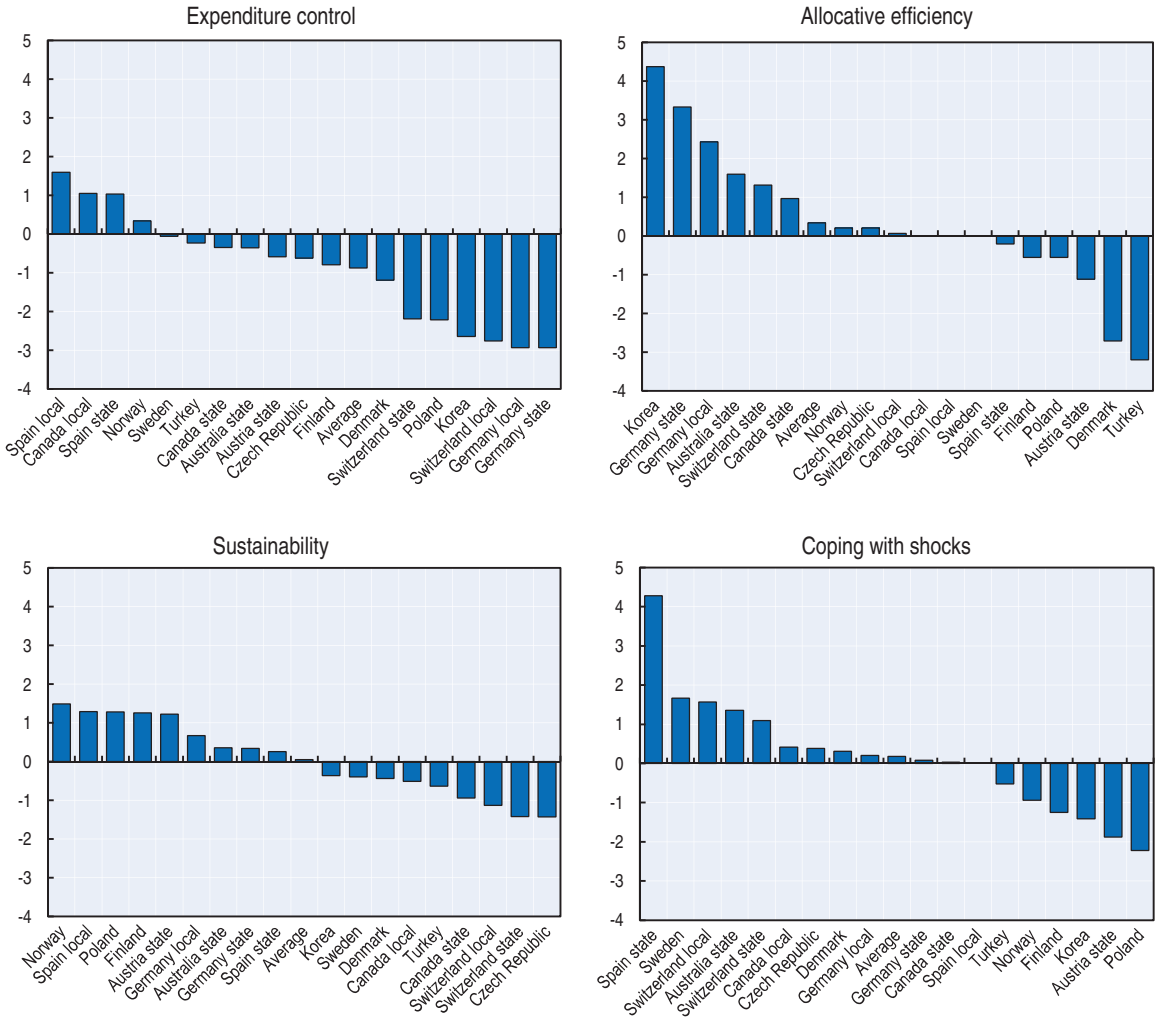
Source: OECD Secretariat calculations based on Network questionnaire responses.

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Do fiscal rules bring about the expected outcomes?

The link between the OECD sub-central fiscal rules indicator and fiscal outcomes is relatively weak, and it has weakened even further over time. In pre-crisis times, i.e. before 2008, stricter rules seemed to be associated – albeit weakly – with their desired outcomes. For example, there was a loose association between stricter spending rules and lower public spending increases in the first decade of the 2000s (Figure 2.4, Panel A). During and after the crisis that relationship steadily weakened and, in some cases, was even turned upside-down. Fiscal rules now appear to have little – or even an adverse – impact on fiscal outcomes.

Figure 2.3. **Sub-central fiscal rules strength, evolution**
Sub-indices, point changes 2005-11



Source: OECD Secretariat calculations based on Network questionnaire responses.

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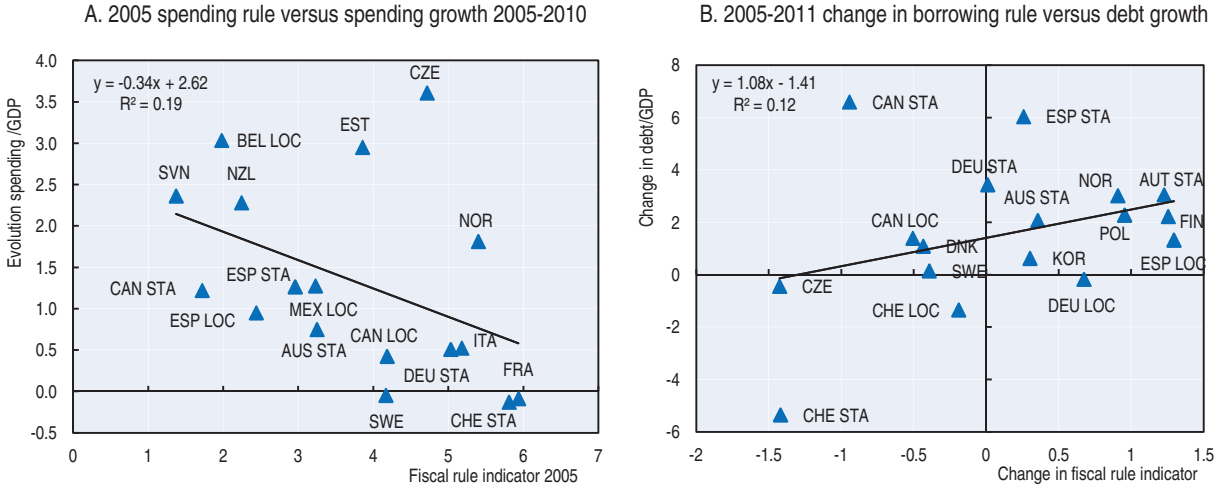
A crude explanation for the weakness of the link is that fiscal rules do not work. A more sophisticated reading points to the interplay between rules and outcomes. Indeed, reverse causality – where performance determines rules – may have predominated in more recent years. Countries facing sterner fiscal challenges might have been more inclined to strengthen their SCG

fiscal rules frameworks. The upward-sloping relationship between the strengthening of deficit and debt rules and the increase in debt levels suggests that countries with rapidly deteriorating fiscal positions were the ones that had to tighten their rules most (Figure 2.4, Panel B).

The wider empirical evidence about the effect of fiscal rules is mixed. Recent findings suggest that sub-central fiscal rules have little impact on fiscal performance (Escolano et al., 2012). Earlier research into the United States, where self-imposed SCG fiscal rules are common, suggests that fiscal adjustments in the form of tax increases and/or spending cuts tend to be larger or quicker and debt levels lower in states with relatively stringent rules (Poterba, 1994). More recent research suggests that, immediately after the introduction of rules, the rate of growth in government spending slows down, while there appears to be little impact in the long run on fiscal sustainability or on the size of the public sector (Zycher, 2013). In Spain, the fiscal rules in force between 1992 and 1998 had no significant effect on the fiscal balances of the autonomous regions (Argimòn and Hernández de Cos, 2012).

Most authors argue that sub-central rules are not credible because breaches are hardly sanctioned. Others contend that rules are made redundant by central government's considerable discretion in addressing breaches, e.g. by bailing out defaulting SCGs or increasing transfers when breaches are imminent. Even if there is a relationship, though, a causal link is often missing: stringent fiscal rules are enacted by governments which adhere to fiscal rectitude anyway, so the rules have no discernable effect on outcomes.

Figure 2.4. **The relationship between fiscal rules and fiscal outcomes is weak**



Source: OECD Secretariat calculations based on Network questionnaire responses.

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Policy considerations

Fiscal rules constraining deficits, borrowing, spending, or taxation can guide sub-central public finances and help governments commit to fiscal discipline. The choice of rules depends on various factors like the state of the economy or the underlying nature of fiscal problems, and rules may have to be adapted from time to time. Moreover, there are trade-offs between the objectives of fiscal rules. With the wave of decentralisation that has swept the last two decades sub-central budgets have become more exposed to cyclical

movements, causing tensions between the need to keep public finances sustainable and the need to stabilise the economy. The short-termism of many fiscal rules – such as the annually balanced budget rule – renders SCG fiscal policy increasingly pro-cyclical.Fiscal rules may underpin fiscal consolidation, but frequent central government interference in SCG spending and taxation, or changes in intergovernmental transfer assignments, may make it difficult for SCGs to establish reliable long-term budget plans. While simple rules may be ineffective in addressing the various budget problems and trade-offs, complex rules can be difficult to communicate and to enforce. Bailouts by central government can undermine the credibility of a fiscal rule, making it largely useless. Overall, there are no "best" fiscal rules. Their effectiveness depends on the wider intergovernmental fiscal framework within which they operate.

Nevertheless, it is possible to sketch a few general policy guidelines for adopting or amending sub-central fiscal rules. These guidelines build on the premise that effective sub-central fiscal rules are a complement to rather than a substitute for well-functioning intergovernmental fiscal institutions. In general, rules that are flexible and adapt to economic and fiscal conditions tend to be more credible and easier to enforce. Within a framework that balances flexibility and credibility, the following observations might make fiscal rules more effective:

- Fiscal rules may work better if they are essentially self-imposed – in other words, it may be preferable if SCGs are responsible for their own fiscal policy. Responsibility creates a sense of ownership of fiscal policy, which makes rules more credible and increases the probability that SCGs will stick to a rule once it is established. If sub-central fiscal objectives impinge on national commitments (e.g. compliance with supra-national limits), the contribution of each tier of government to general government objectives would need to be negotiated rather than imposed by central government. The internal stability pacts in force in several OECD countries may provide some guidance as to how rules may be established and co-ordinated across government levels.
- Fiscal rules may be more effective if based on medium- and long-term SCG plans that set targets for debt levels or the size of the public sector. Such plans should include alternative scenarios – e.g. ones that illustrate the effects of severe economic downturns or of changes in intergovernmental transfers. Once they have established targets, SCGs can then draw up short-to-medium term budget balance rules and/or spending and taxation rules. Given that economic and fiscal situations may differ across SCGs within a country, fiscal rules or the actual application of a rule may also differ. Fiscal rules that take the form of targets may be superior to limits, which SGCs may decide is an objective to reach rather than a line not to cross. Limits, however, may be easier to enforce.
- Fiscal targets should be adjusted to account for the business cycle and pre-empt pro-cyclical fiscal policy. SCGs should also be allowed to deviate from targets on condition that they make good by a pre-determined deadline. Rules will enjoy enhanced credibility if they incorporate escape clauses that allow for exceptional circumstances, but *only* for them. If cyclically-adjusted sub-central budget balances are unfeasible (which they are for most local governments, for example), some provisions that reflects national or regional circumstances may be needed. Research into how to achieve sub-central structural budget balances has progressed.

- Fiscal rules work best if they encompass an SCG's entire budget. They should not discriminate between budget categories (e.g. between current and capital investment) and they should include the budgets of sub-central public enterprises. Golden rules favouring capital spending over other spending items should be abandoned as they distort budget allocation. They are becoming less and less fit for purpose in today's environment where investment at the sub-central level is about much more than just bricks and mortar.
- Process rules are crucial in ensuring that fiscal rules are respected and fiscal gimmickry contained. Budgeting and accounting frameworks should be similar across all SCGs. In order to improve comparability, they should also be harmonised with those of the central government. Rules should be technically and numerically precise in order to avoid any ambiguity about whether targets are met or when breaches are to be punished. Rules should allow easy monitoring by external auditors, central government, and the population at large.

Notes

1. Empirical findings for US states suggest, however, that stricter budget rules actually reduce macroeconomic volatility, probably by reducing the extent to which discretionary fiscal policy prompts a pro-cyclical fiscal stance (Fatas and Mihov, 2006).
2. In 2006, the Federal Court changed course and denied the *Land* of Berlin additional help. This experience was one factor that prompted the German federal government to develop a more stringent fiscal rule encompassing both federal and state levels and to anchor it in the constitution.
3. The strict fiscal rules that US states impose on themselves are a consequence of an array of defaults in the early 19th century. Today most rules credibly and effectively commit state governments not to over-extend credit (Dove, 2012). In 2003, the Swiss federal court ruled that a canton (state) was right in refusing to bail out a bankrupt municipality, bolstering the credibility of the no-bailout principle and prompting a decline in the risk premia of cantonal bonds (Feld et al., 2013).

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Chapter 3

Decentralisation, economic activity and educational outcomes

Fiscal federalism frameworks often reflect fundamental societal choices and history. They are not primarily geared towards achieving economic policy objectives. Yet, like most institutional arrangements, fiscal relations affect the behaviour of firms, households and governments and thereby economic activity. This chapter provides insights on how decentralisation affects output, productivity, public investment and the performance of education systems. Decentralisation, as measured by revenue or spending shares, is positively associated with GDP per capita levels, although the economic effect is relatively small. Revenue decentralisation has a more pronounced impact than spending decentralisation. Moreover, investment in physical and human capital is higher in more decentralised countries. Finally, decentralisation is positively associated with educational performance as measured by the programme of international student assessment (PISA). While educational policies and functions can be delegated either to sub-central governments or to schools, the results suggest that both strategies are equally beneficial for achieving high-quality primary and secondary education.

How does fiscal federalism affect economic development?

Fiscal federalism is part of a country's institutional arrangements. It affects the behaviour of firms, households, and governments and the way they save, invest, spend, and innovate. In a decentralised setting, sub-national governments can shape economic and fiscal policies. The decision of a firm or household to settle or relocate may be affected by such policies, and particularly by the public sector's efficiency in providing services and the tax levels it proposes. Competitive pressures and policy benchmarking may indeed drive jurisdictions to factor the demands and preferences of firms and households into their policies. The extent of inter-jurisdictional competition depends largely on the powers that sub-national governments enjoy and the scope they have for shaping delegated policies. Intergovernmental fiscal arrangements and the interaction between jurisdictions, firms, and households may therefore affect long-term economic and fiscal outcomes.

There are numerous channels through which an intergovernmental set-up affects an economy. In a macroeconomic production function, output is determined by physical and human capital and by their productivity, known as "total factor productivity". Productivity in the private and public sector is, in turn, affected by institutional and policy settings like the extent of decentralisation. Since firms and households rely on public sector services, corporate productivity and household well-being may depend on how and where governments spend money. Fiscal frameworks might, for example, shape the extent to which governments – both national and sub-national – invest in infrastructure or education. Finally, decentralisation may directly affect a particular public sector (e.g. the education system) whose performance can affect human capital formation. Figure 3.1 illustrates some of the ways in which decentralisation can affect economic activity.

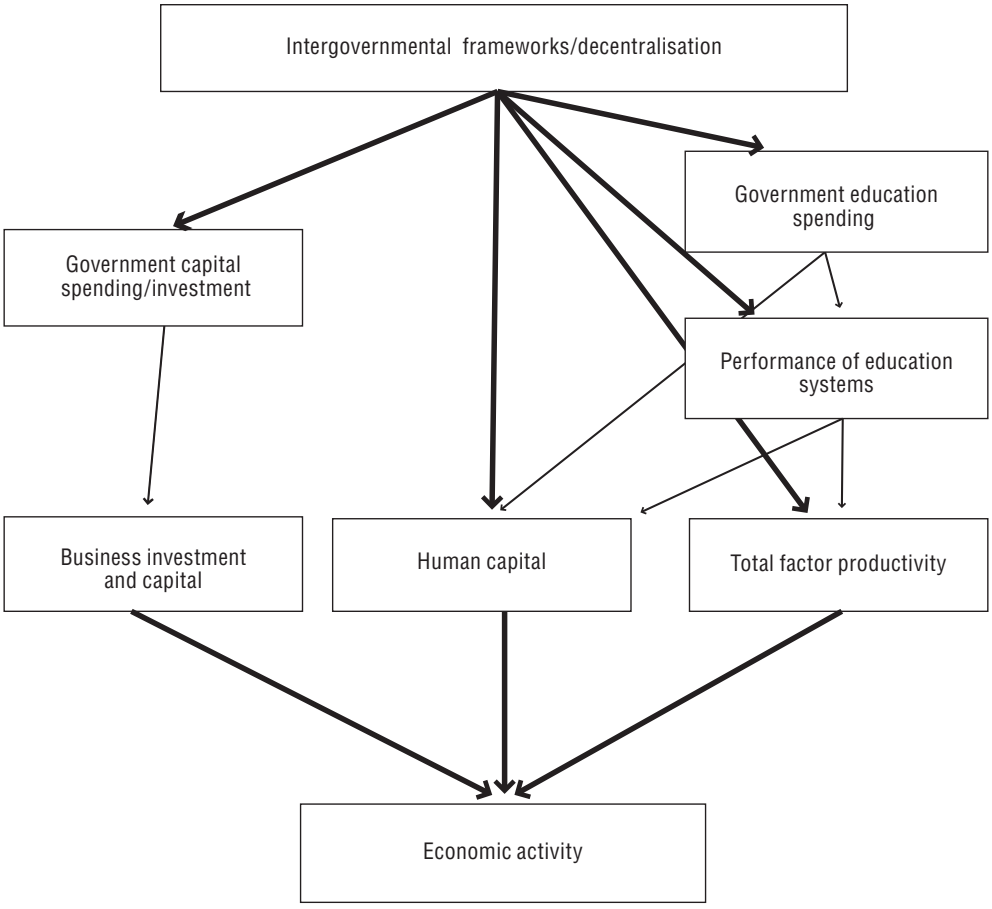
In 2012, the OECD Fiscal Network carried out a number of empirical investigations to test the validity and relevance of some channels through which decentralisation may exert its effects. The remainder of this chapter considers the results of those investigations and their policy implications.

Fiscal decentralisation across the OECD

Decentralisation has increased slightly

The degree of decentralisation varies widely across countries but has changed little over the past 15 years within countries, with a few notable exceptions. OECD-wide, the sub-central share of total expenditure averaged around 31% in 2011, with values ranging between 12% in Israel and 66% for Canada. The average sub-central share of total revenuewas around 15%, ranging from 8% in Ireland to 55% in Canada (Figure 3.2). Spending is clearly more decentralised than revenues, with intergovernmental grants

Figure 3.1. **Channels from decentralisation to economic activity**



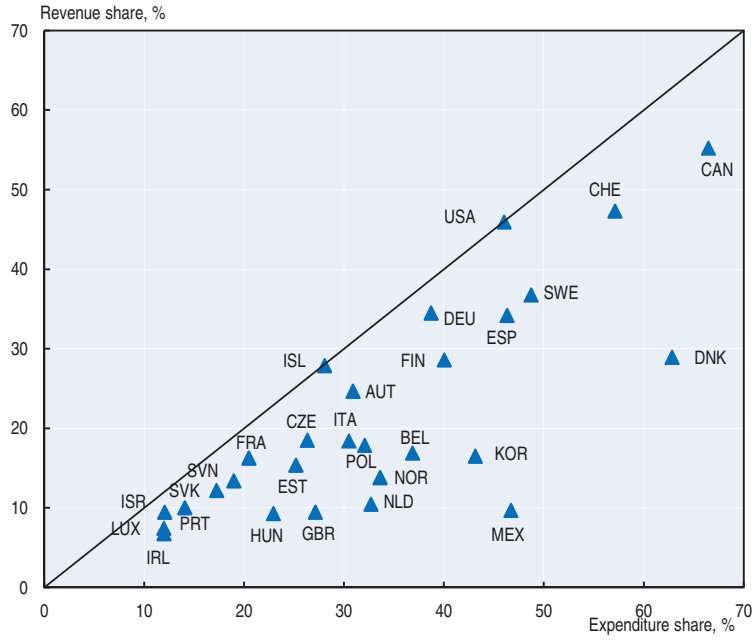
Note: Channels shown by thick arrows are analysed in more detail in this chapter.

covering a considerable proportion of sub-central spending. Tax autonomy – i.e. the share of taxes whose base or rate SCGs have the power to set – is even lower at around 11% of all tax revenue, and a number of countries afford SCGs none at all. Constitutional provisions account only in part for differences in sub-central autonomy, as some federal countries appear more centralised than some unitary ones.

While both revenue and spending have grown more decentralised over the past 20 years, spending decentralisation has clearly outpaced revenue decentralisation, resulting in a higher vertical fiscal imbalance and growing intergovernmental transfers (Figure 3.3). Only a few countries introduced considerable changes in sub-central spending and taxation powers; in particular Spain and Italy that embarked on a secular decentralisation process, and a few Eastern European economies such as Estonia and Poland. Decentralisation is converging towards an intermediate level, with a few highly decentralised countries re-centralising and several strongly centralised countries devolving more power to lower government levels. Moreover, tax autonomy consists increasingly of arrangements where SCGs have some power to set tax rates in accordance with nationally determined tax bases. Box 3.1 provides more information on how fiscal decentralisation is measured.

Figure 3.2. **Decentralisation varies considerably across OECD countries**

SCG shares of general government revenue and spending, 2011

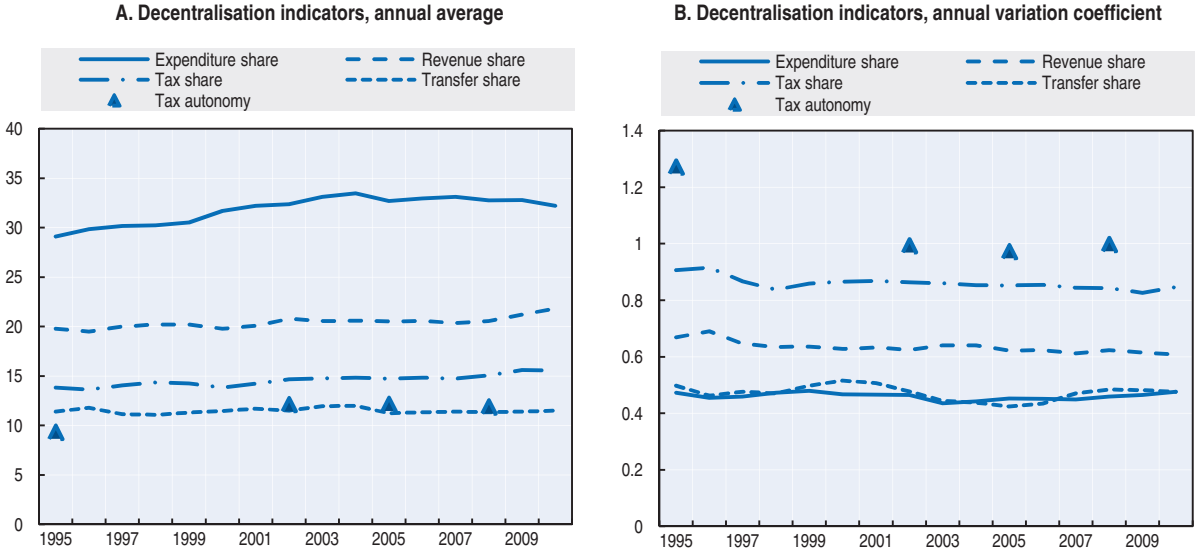


Note: 2010 data for Canada, Korea and Mexico.

Source: *OECD Fiscal Decentralisation Database*. Revenues do not include intergovernmental transfers.

StatLink http://dx.doi.org/10.1787/888932911594

Figure 3.3. **Decentralisation has slightly increased and converged over the past 15 years**



Source: *OECD Fiscal Decentralisation Database*.

StatLink http://dx.doi.org/10.1787/888932911613

Box 3.1. **Empirical approaches to testing the relationship between decentralisation and outcomes**

Most findings discussed in this chapter rely on a set of empirical tests that the OECD Fiscal Network carried out to shed light on the links between decentralisation and outcomes such as economic activity, productivity, composition of government spending, and education performance. This box presents the decentralisation indicators used in the empirical tests and the models and econometric strategies underlying them.

Measuring decentralisation

Decentralisation has many dimensions and it is difficult to judge *ex ante* which indicator best reflects the relationship between decentralisation and outcomes (OECD/KIPF, 2013). It is for that reason that the empirical analyses in this chapter use five decentralisation indicators.

- *Spending decentralisation* (the ratio of sub-central to general government spending).
- *Revenue decentralisation* (the ratio of sub-central own revenue to general government revenue).
- *Tax revenue decentralisation* (the ratio of sub-central tax revenue to general government tax revenue).
- *Tax autonomy* (the ratio of taxes [over which SCGs have some base- or rate-setting autonomy] to general government tax revenue).
- *Decentralisation in education systems* (an institutional indicator showing at which level of government a wide array of education policy decisions is made [OECD, 2012]).

The various decentralisation indicators are inserted into otherwise identical equations in order to compare results and avoid multicollinearity, thereby helping to identify those frameworks that are most conducive to certain outcomes. (Further detail is to be found in Blöchliger et al. [2013].)

Decentralisation and economic activity

The empirical tests that relate (fiscal) decentralisation to economic activity are based on an augmented neoclassical growth model (Mankiw et al., 1992) in which total output depends on physical and human capital and total factor productivity (TFP). Productivity, in turn, depends on a set of institutions and policy-related factors, one of which is the degree of decentralisation:

$$dYt = a + b^{*}(Y_{t-1} + c_1{}^{*} K_{t-1} + c_2{}^{*} H_{t-1} + c_3{}^{*} X_{t-1} + c_4{}^{*} DEC_{t-1}) + \varepsilon_{i,t} \quad (1)$$

where dY denotes the change in GDP per capita, K is physical capital, H is human capital, X is a set of control variables and DEC represents the various decentralisation indicators affecting productivity. In addition, separate estimations are made for the impact of decentralisation on human capital and business investment.

Decentralisation and government spending

The empirical tests that relate decentralisation to the composition of government spending are based on a model inspired by Keen and Marchand (1997) where government investment is a function of the sub-central share in general government revenue or spending:

$$Y_{i,t} = \alpha_i + \beta DEC_{i,t} + \delta X_{i,t} + \varepsilon_{i,t} \quad (2)$$

where Y is the share of public physical plus human capital investment spending in total public spending, DEC the decentralisation variables, and X the control matrix. Regressions are also run separately for the share of capital and the share of education spending.

Box 3.1. **Empirical approaches to testing the relationship between decentralisation and outcomes** *(cont.)*

Decentralisation and performance of education systems

The empirical tests that relate decentralisation to education performance are based on an education production function like that developed by Hanushek (1996), in which performance depends on students' capabilities, the school environment, and the institutional background:

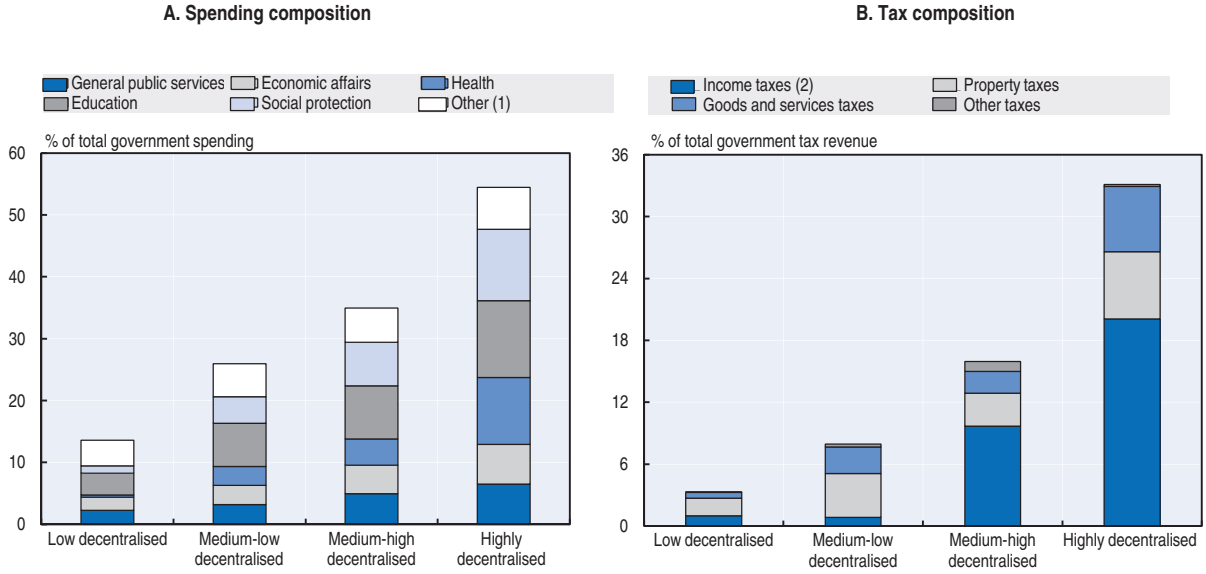
$$PISA_{i,t} = \alpha_i + \beta IND_{i,t} + \delta SCH_{i,t} + \gamma DEC_{i,t} + \varepsilon_{i,t} \quad (3)$$

where PISA denotes a country's score in the PISA assessment, SCH is the school environment, IND is the socio-economic background of the students, and DEC denotes the decentralisation variables.

Sub-central tax and spending composition

The policy and spending areas over which SCGs have control vary with the extent of decentralisation (Figure 3.4). In highly centralised countries the bulk of SCG spending is confined to primary and secondary education, economic affairs, recreation, and other residential services. In the more decentralised ones the spending structure is different, with healthcare and social welfare accounting for a larger share of SGC expenditure and education remaining a core local government responsibility.

Figure 3.4. **The SCG spending and tax composition changes with the degree of decentralisation**



Note: "Low decentralised" countries average an SCG spending share of 13% and a tax share of 3%. For "medium-low decentralised" countries the shares are 26% and 8%, for medium-high decentralised countries 35% and 16%, and for highly decentralised countries 53% and 33%.

1. Other includes defense, public order, environment, housing and recreation.
2. Including social security and payroll taxes.

Source: *OECD Tax Revenue Database* and *OECD National Accounts*.

StatLink http://dx.doi.org/10.1787/888932911632

The tax structure also changes as decentralisation increases. While SCGs in centralised countries rely mainly on property taxes – which in virtually all OECD member countries is exclusively sub-central – those in more decentralised ones rely more heavily on income and, to a lesser extent, consumption taxes. As a result, while spending on services like education and healthcare rises as decentralisation increases, so does funding through progressive taxation. The result may be structural funding imbalances in poorer SCGs and changes in behaviour as income and consumption taxes affect household and corporate behaviour more than property taxes.

Decentralisation and economic performance

Inter-jurisdictional competition as a driver of efficiency

Many firms and households are mobile. They look for the highest returns on their investment or the highest net fiscal benefit where they operate or live, and may migrate, or "exit" if they consider benefits better elsewhere. SCGs generally seek to attract or retain such firms and households in the hope of encouraging investment and economic activity. Since corporate returns or a households' net fiscal benefit depend (partly) on public inputs, an SCG has an incentive to improve its public sector productivity and compete with other SCGs. Inter-jurisdictional competition may have two effects:

- it can increase spending on productive services and spending that benefits the corporate sector more than spending on consumptive, residential and social services;
- it can increase the efficiency of all public spending irrespective of whether it is productive or consumptive, corporate or residential.

The more decentralised a country, the stronger competitive forces are likely to be. Jurisdictions may, in fact, become laboratories for public sector innovation.[1] The pressure for improvements in productivity may not even come from the threat of taxpayers moving to another jurisdiction. They may simply press their governments for tax and spending policy changes by demanding, or "voicing", what they observe in neighbouring jurisdictions and with no intention of moving. The competitive pressure to increase public sector productivity – whether exerted by "voice" or the threat of "exit" – is considered one of the main drivers of better economic performance in decentralised settings.[2]

Wider research paints a varied picture of the relationship between decentralisation and economic performance. Findings depend, of course, on the type of study – what it examined, what decentralisation indicators it used, what countries and time periods it covered, and the empirical methods that it selected. Decentralised revenue assignment and tax autonomy seem to be more closely associated with good economic performance than decentralised spending, while intergovernmental transfers affect performance negatively. Decentralisation is of greater benefit to high- than low-income countries, which points to problems of fiscal decentralisation and local capture particular to developing or transition economies. On the methodological side, cross-sectional analyses tend to yield more positive results both statistically and economically than panel analyses. Finally, the studies that focus on a single country usually deliver a clearer, more positive picture than cross-country ones, probably because the latter have to contend with sharp institutional differences and measurement problems. Since results often depend on the choice of the decentralisation variable, academics and policy makers have recently turned their attention to the question of how to improve the measurement of decentralisation (OECD/KIPF, 2013). Meta-analysis suggests that, overall, the impact of decentralisation on economic performance depends

on the wider intergovernmental set-up and the true power and responsibilities that SCGs enjoy (Feld and Schnellenbach, 2010). (A detailed overview of all studies can be found in Blöchliger, et al. [2013].)

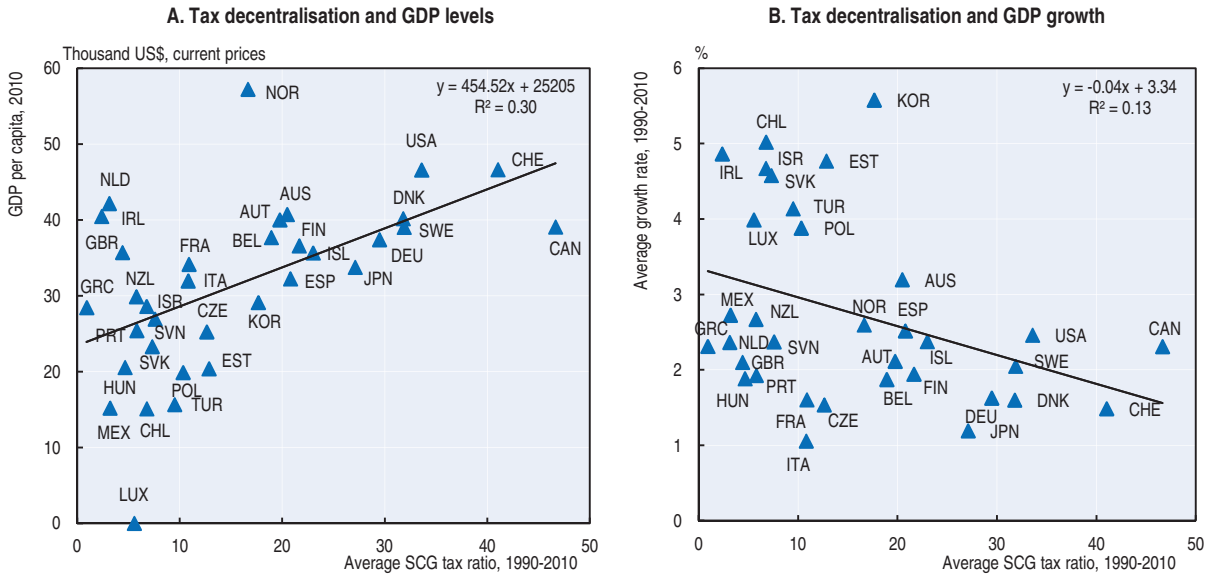
Statistical associations may not imply causality, of course. The relationship between decentralisation and economic activity may even run the other way round, i.e. high living standards may be the root cause rather than the consequence of decentralised fiscal frameworks. Indeed the pioneering decentralisation studies of the 1970s and the 1980s assumed that a decentralised public sector was a "superior good", demand for which would grow with rising income levels. The studies of the time argued, and showed, that high income levels promoted decentralisation.[3] Since both types of studies – the older ones which contend that growth precedes decentralisation and the later ones which argue the reverse – use much the same indicators and datasets, it might be that the results simply mirror a common determinant. For several reasons it is very difficult in a cross-country study on decentralisation and growth to bring out a clear order of cause and effect. And it cannot be ruled out that the two variables interact strongly or that they are simultaneously determined by a third factor, such as a society's preference for small or big government.[4] The results of any empirical study – including those presented in this chapter – must be taken with a pinch of salt.

Decentralisation is positively, but only weakly, associated with economic performance

Simple correlations show that across the OECD decentralisation is positively associated with GDP per capita *levels* – decentralised countries are usually richer – and negatively associated, albeit very weakly, with GDP per capita *growth* (though the negative association with growth is probably influenced by convergence between countries) (Figure 3.5). Decentralised revenue assignment has a stronger impact than decentralised spending assignment, which reflects the fact that an SCG's share of spending tends to be a less reliable measure of effective decentralisation than its revenue share (not shown). Decentralisation is also positively linked to such components of the production function as productivity and human capital, but no clear relationship emerges between decentralisation and business investment. All in all, intergovernmental fiscal frameworks appear to be positively associated both with economic activity and its main determinants, such as human capital and productivity.

A more detailed analysis, using a production function approach (Box 3.1) and controlling for other factors that affect economic activity, confirms that the relationship between decentralisation and outcomes is small but significant (Table 3.1). Doubling the decentralised fiscal power, which is a very big change (e.g. a rise in revenue share from 8% to 16%), is associated with a higher GDP per capita of around 3% in the long run. Decentralisation also affects the components of the production function by prompting higher productivity and fostering human capital, although the impact on business investment is not significant. Whether a country's system of government is federal or unitary makes only a small difference, which suggests that constitutional provisions make no difference. To recap, decentralised revenue raising tends to be more strongly associated with economic performance than decentralised spending powers. Tax autonomy has no significant impact on GDP or productivity. However that changes after the turn of the millennium, which suggests that firms and households are increasingly eyeing tax policy when assessing their business locations and places of residence (not shown).

Figure 3.5. **Decentralisation and economic performance**



Source: *OECD Fiscal Decentralisation Database* and *OECD National Accounts*.

StatLink http://dx.doi.org/10.1787/888932911651

Table 3.1. **Decentralisation is positively but weakly associated with economic activity**

Regression coefficients (elasticities) between output variables and decentralisation indicators

	All countries			Federal countries			Unitary countries		
	GDP per capita	Productivity	Investment	GDP per capita	Productivity	Investment	GDP per capita	Productivity	Investment
Tax autonomy	0.003	0.002	-0.075	0.011	-0.012	0.323**	0.003	0.001	
Tax revenue decentralisation	0.033**	0.006**	0.000	-0.01	-0.002	-0.002	0.033**	0.008*	-0.002
Revenue decentralisation	0.032**	0.005**	0.001	-0.003	-0.008	-0.003	0.031**	0.008	-0.001
Spending decentralisation	0.030**	0.004**	0.005	0.01	-0.011	-0.001	0.027*	0.005	0.007

Note: Coefficients are derived from various multi-variate regressions linking a set of output variables (GDP, productivity, and investment) to the four decentralisation indicators and a set of controls, using time fixed effects. Decentralisation indicators are inserted sequentially into the equations in order to avoid multicollinearity. Coefficients are partial elasticities and represent percentage changes, e.g. 0.032 means that a 100% increase in decentralisation (e.g. a revenue share increase from 6% to 12%) is associated with a GDP level increase of 3.2%. A * means significance at the 10% level, ** at the 5% level, and *** at the 1% level. Coefficients for variables other than decentralisation indicators are provided in Blöchliger et al. (2013).

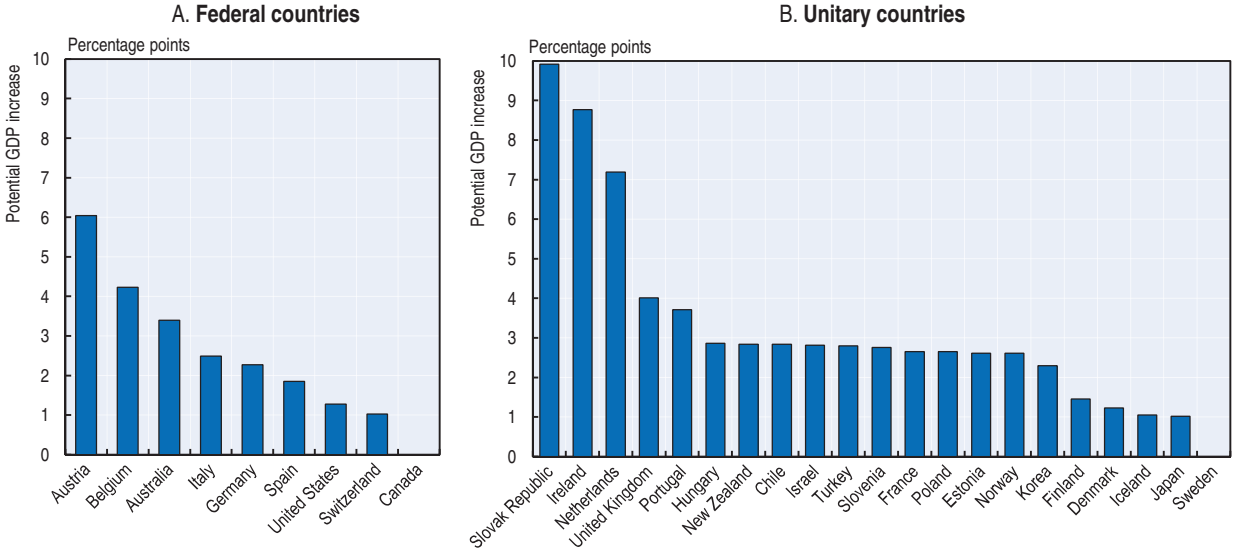
Source: *OECD Fiscal Decentralisation Database* and *OECD National Accounts*.

The relationship between decentralisation and economic activity is likely to be non-linear, i.e. the positive effect fades with higher levels of decentralisation and could even become negative. If decentralised powers are administered by overly fragmented institutions, countries might be unable to reap the benefits of scale and scope and become entangled in internal trade barriers, distorting local tax systems, and the rent seeking

of local interests. Consequently, appropriate territorial and structural reforms and co-ordination between government levels and across jurisdictions should ensure that decentralisation works properly.[5] Additional analysis suggests that there are indeed diminishing returns from decentralisation, although the returns never become negative – which means that more decentralisation is always better than less.

Non-linear analysis allows a more precise assessment of the higher GDP a country might gain if it moved up the decentralisation ladder. To be more specific, the gains were calculated for each federal country if it moved tax decentralisation up to the level of Canada, and for each unitary country if it moved tax decentralisation to the level of Sweden (Figure 3.6). As federal countries approached the Canadian benchmark, they triggered an average GDP increase of around 1% to 2%, while unitary countries gained 3% to 4% as they neared the Swedish level. Given the diminishing returns, highly centralised countries could gain considerably more from decentralisation than countries above the median.

Figure 3.6. **Some countries could gain considerably from decentralising**



Source: Blöchliger, H., et al. (2013), "Fiscal Federalism and its Impact on Economic Activity, Public Investment and the Performance of Educational Systems", *OECD Economics Department Working Papers*, No. 1051, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5k4695840w7b-en*.

StatLink http://dx.doi.org/10.1787/888932911670

Investment in physical and human capital

What is public investment?

Public investment encompasses all spending designed to increase the stock of fixed public capital. While the term "capital" conjures up notions of brick and mortar, investment denotes spending on education, research, and innovation – in a wider sense, a jurisdiction's "soft" infrastructure. Indeed, the rest of this section uses the term "investment" in the broad sense to include both fixed capital expenditure and spending on education. Infrastructure and education expenditure may create externalities, as individuals and firms not resident in a jurisdiction may use its infrastructure while locally educated people may migrate to other jurisdictions. Although cross-border externalities may discourage SCGs from

spending on growth-enhancing infrastructure, the empirical evidence suggests that such an effect is relatively small. There is evidence that SCGs may even over- rather than under-invest (Delgado and Alvarez, 2007). Overall, the benefits of public investment in the form of greater economic activity or higher tax revenues tend to accrue in the investing jurisdiction, so providing the proper incentives. Moreover, central government often fosters sub-central investment by tying grants to investment spending, thereby tackling specific infrastructure externalities.

Public investment is typically an SCG responsibility. Sub-central tiers of government account for 75% of capital spending and more than 50% of education expenditure. Capital investment trended down from around 5% of GDP in 1980 to 3% in 2006 – probably reflecting lower investment needs as physical infrastructure matured. It then increased slightly again in response to the stimulus programmes introduced during the 2008-09 crisis (OECD/KIPF, 2012). Given its "residual" nature in the budgeting process, physical investment fluctuates strongly over business and electoral cycles, and does so even more at sub-central than at central government level. Most OECD countries assign spending on primary and secondary education to lower tiers of government and have continued to devolve it over the last two decades. Education spending was much less affected than investment expenditure in other areas by the 2008-09 downturn. Its share in general government spending remained fairly stable and was characterised by the aforementioned shift to sub-central governments. Given its decentralised nature in most countries, public investment requires well-functioning intergovernmental coordination mechanisms (Box 3.2).

Box 3.2. **Co-ordination of public investment across government levels**

Public investment frequently creates externalities across government levels and between jurisdictions, which requires adequate policy co-ordination. However, transaction costs, resource constraints, differing priorities, and fears that the distribution of costs or benefits from co-operation will be distributed unequally can impede efforts to bring tiers of government together. Some notable co-ordination challenges are: information asymmetries between levels of government; problems in implementing public policy on the relevant scale when administrative borders fail to match functional economic areas; difficulties in taking advantage of complementarities across policies; and a lack of local capacity to deliver services.

In order to help governments improve investment policy, the OECD has developed a set of Principles on Effective Public Investment. They build on three pillars:

1. the importance of seeking and creating complementarities in policies and programmes across policy sectors, levels of government, and sub-national governments with the goal of increasing the effectiveness of public investment;
2. a set of five capacities that should be present at all levels of government to bolster conditions for effective investment and to promote continuous improvement from the selection of investment to its execution and monitoring;
3. adequate framework conditions for effective public investment, notably good practices in public financial management, public procurement, and regulatory quality at all levels of government.

Source: OECD (2013), *Investing Together: Working Effectively across Levels of Government*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264197022-en*.

Decentralisation strongly affects investment

Public investment is positively associated with decentralisation, and the relationship is robust (Table 3.2). Typically a 10 percentage point increase in decentralisation increases the share of public investment in total government spending by around 1 percentage point, lifting it from around 3% to 4% on average. More specifically, decentralisation gives SCGs incentives to spend more on education and – to a lesser extent – on physical capital. Again, the association is stronger for revenue decentralisation than for spending decentralisation. In many countries, earmarked and matching intergovernmental grants enhance incentives to invest rather than to spend on consumptive services.[6] Unitary countries show more significant results, both statistically and economically, than federal countries. That being said, some non-linearities (not tested) might be hidden in the investment channel, as devolving fiscal powers to SCGs could boost investment particularly in the more centralised countries. The downside might be underinvestment in residential and social services, although efficiency increases can offset lower spending.

Table 3.2. **Public investment is positively associated with decentralisation**
Regression coefficients for overall public investment, capital investment, and education spending

	All countries			Federal countries			Unitary countries		
	All public investment	Capital investment	Education	All public investment	Capital investment	Education	All public investment	Capital investment	Education
Tax autonomy	0.11***	0.04	0.09**	0.35***	0.00	0.23***	0.10*	0.04***	0.04***
Tax revenue decentralisation	0.11***	0.05***	0.11***	0.13***	0.00	0.15***	0.33***	0.19***	0.18***
Revenue decentralisation	0.15***	0.00	0.11***	0.12***	-0.03**	0.19***	0.33***	0.14***	0.19***
Spending decentralisation	0.16**	0.02*	0.09***	0.32***	0.01	0.34***	0.13***	0.07***	0.08***

Note: Coefficients derive from linear multivariate regressions using time-fixed effects. Decentralisation indicators are inserted sequentially into the equations in order to avoid multicollinearity. Coefficients are point elasticities and therefore represent percentage point changes, e.g. 0.11 means that a 10 percentage point increase in decentralisation is associated with an increase in the capital spending share of 1.1 percentage points. *** means significance at the 1% level, ** means significance at the 5% level, and * means significance at the 10% level.

Source: Fredriksen, K. (2013), "Decentralisation and Economic Growth – Part 3: Decentralisation, Infrastructure Investment and Educational Performance", *OECD Working Papers on Fiscal Federalism*, No. 16, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5k4559gg7wlw-en*.

Overall, wider empirical research bears out the positive association between public investment and decentralisation. Bénassy-Quéré et al. (2007) and Kappeler and Välilä (2007) find that fiscal decentralisation boosts capital spending. The former note a shift in spending away from social expenditure towards production inputs, while the latter find that decentralisation increases economically productive investment and reduces spending on redistribution. Decentralisation prompts higher investment in infrastructure, although earmarked grants from central government reduce the effect (Kappeler et al., 2013).

Several studies conclude that decentralisation boosts spending on education. Busenmeyer (2008) finds that fiscal decentralisation affects education spending positively and social spending (public pensions) negatively, while Arze del Granado et al. (2005) find that higher spending on both education and healthcare is at the expense of expenditure on pure public goods. On the other hand, Rodriguez-Pose et al. (2009), Gonzalez Alegre

(2010), and Grisorio and Prota (2011) all observe that decentralisation increases current expenditure (which includes education) at the expense of capital expenditure. Faguet (2004) contends that fiscal decentralisation increases investment in more socially oriented sectors, particularly social services and urban development. Moreover, when decentralised, spending appears to be more in line with objective indicators of need.

Decentralisation and educational performance: An assessment of PISA results

The "education production function"

Primary and secondary education is one of the few public sector areas where internationally comparable performance data exist. The Programme of International Student Assessment (PISA) regularly evaluates the performance of students nearing the end of compulsory secondary education in a range of subjects. The PISA programme supplies rich datasets on the performances of individual students, schools, and the functioning of educational systems. PISA also includes an indicator on the extent to which decision-making powers – setting the curriculum, managing personnel, budgeting, etc. – are delegated to SCGs or schools. This PISA dataset thus makes it possible to establish so-called "education production functions" that link the outcome of educational systems to a number of determinants, one of which is the extent to which education policy is decentralised (Box 3.3).

Box 3.3. **Modelling education production functions**

Education production functions analyse the relationship between educational outcomes and its various determinants. Educational outcomes – usually measured through standardised test scores – are considered to depend on three main factors: students' characteristics and innate abilities; the characteristics of teachers and schools; and the properties of the wider institutional environment – in this instance, the delegation of powers. Students' characteristics are often captured by indicators of socio-economic background such as income and parents' educational attainment. School characteristics are usually captured by total spending or spending on teachers, which is thought to be an important determinant of teaching quality even though most empirical studies find only a weak relationship between teachers' salaries and teaching quality. The third factor, i.e. the division of powers between tiers of government, reflects the perceived advantages of having local constituencies (SCGs or schools) manage and combine the other input resources, i.e. students and teachers. Education production functions are widely used not only to assess student and school performance, but also to determine the allocation of financial resources to sub-central governments and to the individual schools (e.g. Reschowsky and Imazeki, 2001). Education production functions in their general form are described in Wössmann (2007) or Hanushek (1996).

In its *Education at a Glance Database,* the OECD proposes a decentralisation indicator that reflects sub-central autonomy in education. This indicator is a valuable addition to the four traditional decentralisation indicators and is used in the empirical investigation in addition to the latter (see Box 3.1).

Education is today the single most important sub-central spending item, with more than 50% of education systems funded by SCGs. The decentralisation of primary and secondary schooling is thought to increase responsiveness to the demands of local constituencies, improve the quality of schools, raise the potential for innovation and adaptation in learning,

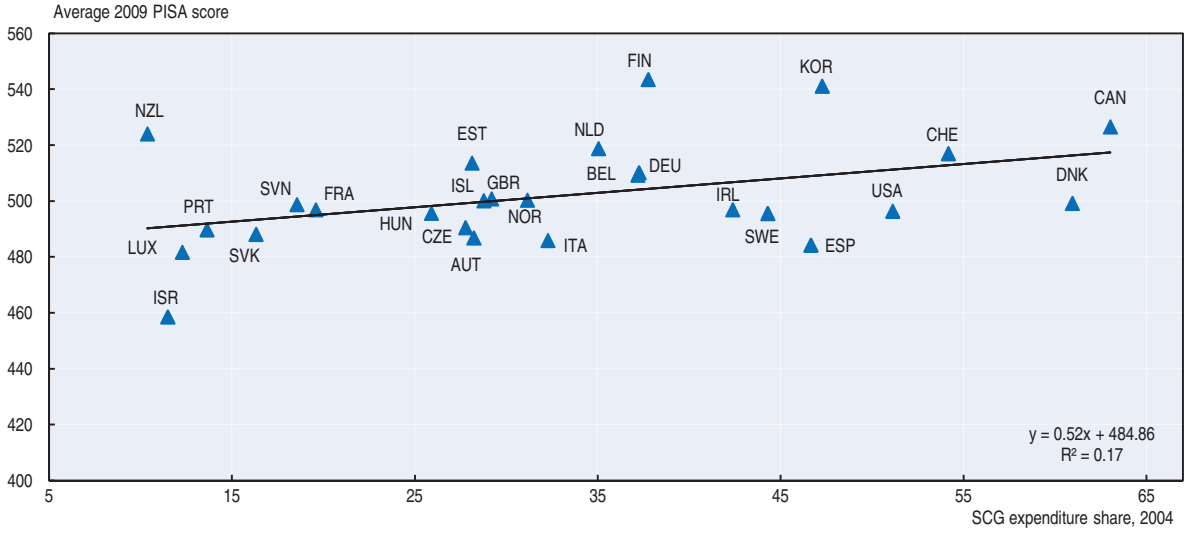
and improve financial and human resource management in education.[7] The pressure to deliver on education originates in competitive forces and benchmarking across SCGs and the demand for increased accountability from education providers. By offering "good" educational policy (high quality teaching or a stimulating school environment), SCGs may attract or retain firms interested in a well-educated workforce and residents interested in more and better opportunities for their children. Some SCGs have started to use education as a strategic policy tool by targeting highly mobile families and investing heavily in schools. The more autonomous SCGs are in all matters of education policy, the stronger such strategic interactions are.

Decentralisation is likely to improve education performance

The simple correlation between PISA results and SCG shares of spending indeed suggests a positive relationship between decentralisation and educational outcomes. Simply put, more decentralised countries tend to have better student performance (Figure 3.7), a statement that the more sophisticated multivariate analyses tend to support (Table 3.3). A 10% increase in education decentralisation improves PISA results by four points, which translates as an average improvement of around four places in the PISA country ranking. Again decentralisation has a stronger effect – both statistically and economically – in unitary than in the federal countries where education is already widely assigned to lower tiers of government. However, the traditional decentralisation indicators (spending, revenue and tax decentralisation) are often insignificant, probably because they do not properly reflect the devolution of power to schools (school autonomy).

Figure 3.7. **Spending decentralisation and the performance of educational systems**

OECD countries



Note: Data do not include Mexico.

Source: *OECD Fiscal Decentralisation Database; OECD Education at a Glance Database;* Fredriksen, K. (2013), "Decentralisation and Economic Growth – Part 3: Decentralisation, Infrastructure Investment and Educational Performance", *OECD Working Papers on Fiscal Federalism*, No. 16, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5k4559gg7wlw-en*.

StatLink http://dx.doi.org/10.1787/888932911689

Table 3.3. **Both sub-central autonomy and school autonomy are conducive to good educational performance**

Elasticities (regression coefficients) between decentralisation indicators and PISA results

	All countries			Federal countries			Unitary countries		
	Overall decentralisation	SCG power	School autonomy	Overall decentralisation	SCG power	School autonomy	Overall decentralisation	SCG power	School autonomy
Education decentralisation	0.40***	0.49***	0.51***	0.14	0.54**	0.37	0.65***	0.76***	0.49***
Education spending/GDP	1.42***	1.57***	1.57***	1.02	1.39*	1.39*	1.41**	1.30*	1.30*
Students characteristics	40.14***	37.81***	37.81***	59.34***	54.13***	54.13***	1.40**	13.42	13.42

Note: Coefficients derive from linear multivariate regressions using time fixed effects. Decentralisation indicators are inserted simultaneously since they are not highly correlated. Coefficients are point elasticities and therefore represent percentage point changes. For example, 0.49 indicates that a 10-percentage-point decentralisation increase is associated with a 4.9 PISA point increase. *** denotes significance at the 1% level, ** significance at the 5% level, and * significance at the 10% level.

Source: Fredriksen, K. (2013), "Decentralisation and Economic Growth – Part 3: Decentralisation, Infrastructure Investment and Educational Performance", *OECD Working Papers on Fiscal Federalism*, No. 16, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5k4559gg7wlw-en*.

Results suggest that decentralisation is about more than just the SCG share of general government outlays and that it encompasses all aspects of educational regulation and management. Moreover, not all education functions may be properly assigned to lower government levels. A detailed analysis of various educational functions suggests that devolving powers related to school organisation and relations with teachers yields more positive results than in financial matters (OECD, 2010).

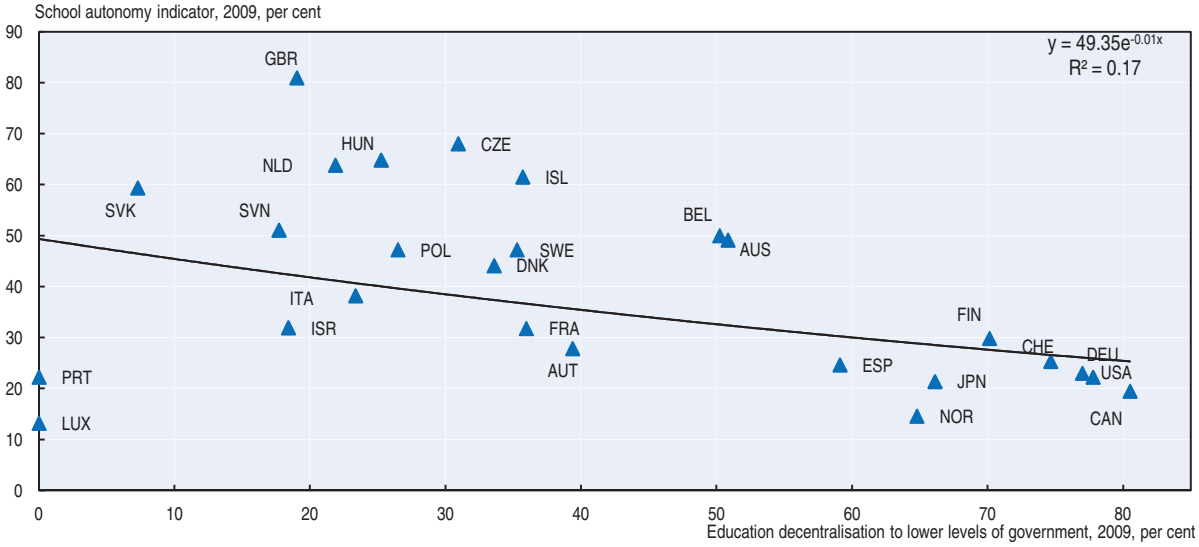
Both decentralisation and school autonomy are conducive to education performance

Decentralisation in education has various facets, with powers not only devolved to lower levels of government or special school district authorities, but also – like other public services such as healthcare or public transportation – to the providers themselves, namely the schools and their governing bodies. Decentralisation to lower government levels and school autonomy appear in various combinations, albeit as substitutes for each other more often than complements (Figure 3.8). Countries where SCGs enjoy less power grant schools more autonomy, while federal countries usually devolve much power to SCGs but little to schools.

The two approaches may well be two quite different forms of devolution with very different factors driving them. While the decentralisation of educational powers to local government is generally part of a broader, more general public sector reform, moves to increase school autonomy are prompted by specific concerns about educational performance and the operational tools needed to improve it (Burki et al., 1999). In other words: decentralisation is motivated by wider political objectives, while school autonomy is a management device.

Figure 3.8. **Decentralisation and school autonomy are mutual substitutes rather than complements**

Education is either decentralised to SCGs or to schools



Note: Data for Belgium and the United Kingdom are averages of each countries' constituting communities (GBR: England and Scotland, BEL: Flanders and Wallonia).

Source: *OECD Education at a Glance Database* and *OECD National Accounts*.

StatLink http://dx.doi.org/10.1787/888932911708

The rationales behind school and SCG autonomy might well be different. Yet empirical results suggest that both may have similarly positive effects on school outcomes (Table 3.3), since bringing the makers and beneficiaries of education closer together is thought to increase accountability in both cases. Since both forms of decentralisation are beneficial, countries may get the best of both decentralisation worlds if they combine the devolution of education policy with greater school autonomy. Again, reverse causality cannot be excluded: countries whose educational systems perform well may be more inclined to decentralise certain functions to lower government levels or schools.

Most empirical studies support this chapter's findings. Sutherland and Price (2007) find that giving schools greater decision-making autonomy improves performance, although the effect depends on which education functions are decentralised. The OECD (2010) finds that, while granting schools autonomy over curricula and student assessments is related to performance, giving them greater financial management powers does not. Using panel data relating to Swiss *cantons* (states), Barankay and Lockwood (2006) find that decentralised spending power in the education sector has a positive impact on the number of 19-year-olds who graduate. Freinkman and Plekhanov (2009) conclude that fiscal decentralisation has a positive effect on student performance in that it helps to increase productivity, while other input variables like spending have no effect. Akai et al. (2007) find that decentralisation has a stronger positive impact on secondary than on primary education. Burki et al. (1999) summarise several studies that evaluate the effect of decentralised education in Latin America and the United States. They find that, in general, decentralisation curbs teacher absenteeism, increases attendance, reduces age-grade gaps, but does not have a consistent impact on student performance.

Policy considerations

Devolving power to sub-central government can have beneficial effects on a number of policy objectives such as economic activity, productivity, and educational performance. Decentralisation is associated with higher productivity and GDP per capita, although the effect is relatively small in economic terms. It appears to be particularly conducive to high standards of performance in primary and secondary education, partly as a result of higher government spending on education, and partly because of the greater accountability and responsiveness of an education sector that is close to local communities. Decentralisation on the revenue side tends to be more effective than on the spending side, and large intergovernmental grants can dilute the decentralisation dividend. The extent to which certain policies and functions can be decentralised is very country-specific. However there might be a few general rules with regard to how decentralisation can be managed to reap benefits:

- Revenue decentralisation should roughly match spending power. Sub-central tax autonomy can be particularly conducive to public sector efficiency, although this has to be weighed against considerations of equity (see Chapter 4, "Sub-Central Tax Competition" and Chapter 5, "Fiscal Equalisation"). Large transfer systems that fill the gap between own spending and own revenues, can be harmful to the benefits of decentralisation.
- Decentralisation should focus on those areas and functions where sub-central governments have an incentive to increase public sector performance. Local and regional physical infrastructure and education are well suited to meaningful decentralisation. Evidence suggests that public spending in those areas is higher if more power is allocated to lower government levels.
- Appropriate decentralisation in primary and secondary education can help increase the performance of the education system. In some cases, partial decentralisation might yield better results than decentralising all functions. And the evidence suggests that school organisation and teacher management would be particularly well suited for greater decentralisation. Autonomy should be granted to both schools and sub-central governments.

Notes

1. Evidence as to the impact of sub-national competition and experimentation on aggregate economic growth of China is provided by Xu (2011).
2. The terms "exit" and "voice" (plus "loyalty") were coined in the seminal contribution by Hirschmann (1971). They describe how people can react to a decline in firms, organisations and governments: they may leave, protest, or stay quiet.
3. Examples include Oates (1972) or Pommerehne (1977). Some more recent studies also link decentralisation to economic performance rather than the other way round, e.g. Bahl and Nath (1986) and Tanzi (2000).
4. The causality of the relationship could be tested using the instrumental variable (IV) or generalised method of moments (GMM) approaches. However, there are no good instruments for decentralisation, and the number of countries in the dataset is too small for a GMM estimation to be applied.
5. For a discussion on capacity building at the sub-national level see Mizell and Allain-Dupré (2013). An analysis and recommendations on the conditions for improved co-ordination across levels of government is to be found in OECD (2013).

6. Central governments often co-fund sub-central investment projects, and capital grants belong to the most common form of earmarked matching grants, so giving SCGs incentive to spend on physical capital. The European Union Structural Fund also chiefly provides capital grants.
7. An overview of the most recent developments in education decentralisation can be found in OECD (2012).

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Chapter 4

Tax competition between sub-central governments

Tax competition is a sensitive topic and views as to its merits vary widely. Some consider that it brings sub-central fiscal policy closer to what the public wants, increases the efficiency of the public sector, and tempers tax and spending excesses. Others argue that tax competition erodes the tax base, distorts the tax structure, and causes the under-provision of publicly financed services. This chapter finds that corporate and personal income taxes are more prone to tax competition than the property tax and consumption taxes. While tax rates tend to be lower in wealthier jurisdictions, there is little evidence that tax rates and tax revenues race to the bottom. Inter-jurisdictional differences in tax-raising capacity – or economic wealth – appear to be lower in countries with more tax competition. This chapter also observes that tax autonomy and tax competition provide incentives for economic development, especially in small and poor jurisdictions. In that light, it makes a number of recommendations to governments wishing to reap the benefits of tax competition while avoiding its drawbacks.

What is tax competition?

Tax competition is competition between jurisdictions for a mobile tax base which they seek to attract and retain. It assumes that firms and households are willing and able to move their profits, income, and consumption to another jurisdiction whose tax policy they may find more favourable. In recent decades, as taxation has become a key factor in determining where firms locate and households settle, governments have come to use it as a strategic instrument for making their jurisdictions competitive. Taxation can also be the focal point in another kind of competition – "yardstick", or political, competition. Taxpayers and policymakers may decide to use the neighbouring jurisdiction's taxation practices as the yardstick for their own and adjust them accordingly. Tax competition and yardstick competition can be seen in terms of "exit" and "voice": Firms and households may either move if they are unhappy with their jurisdiction's tax policy (exit), or they may raise their concerns by protesting or voting in elections (voice).[1]

Tax competition and its outcomes – such as tax base mobility, tax levels, disparities in tax-raising capacity, investment, and economic activity across sub-central governments (SCGs) – depend on a multitude of factors. These range from SCGs' tax autonomy and the sub-central tax mix to a number of institutional, economic and geographical factors. Furthermore, taxation is just one policy instrument among others. To influence their economic and fiscal base, SCGs have options like the level and efficiency of public services, spatial planning, the quality of infrastructure, and their regulatory and administrative environments. Tax competition should not, therefore, be seen in isolation, but in the broader context of SCGs interacting with each other or with central government, from where the main fiscal parameters often originate.

This chapter focuses on tax interaction and tax competition *within* a country or, in other words, between sub-central governments. Policy issues in international tax competition might differ from domestic competition. A final point: tax competition is not an issue only for federal countries where sub-central states often have constitutionally guaranteed tax powers. It also matters in unitary countries where local governments often actually enjoy far-reaching tax autonomy.

Tax competition and tax base mobility

Tax competition and tax mimicking

Tax competition between sub-central governments is widespread in the OECD, even in highly centralised countries that grant their SCGs little tax autonomy. The tax policy of one sub-central government seems to depend, at least partially, on what other sub-central governments do, have done, or plan to do. Such behaviour is called "tax mimicking". Competition applies to all taxes, be they business, personal income, consumption, or immovable property taxes. In other words, sub-national governments compete on every component in their tax mix.

Findings from the wide range of empirical studies into tax competition that cover the last 20 years and half of all OECD countries may be summarised as follows (Blöchliger and Pinero-Campos, 2010):

- Tax competition depends on types of taxes. It is stronger in business and personal income taxation than in consumption and property taxes. Income tax competition works on taxpayers' mobility, or willingness to exit. Competition between jurisdictions on property tax is more of the yardstick type, where taxpayers "voice" their sentiments. The two kinds of competition generally go hand in hand across most kinds of taxation. And competing jurisdictions generally react to each other's tax policy changes positively. In other words, a rise or fall in tax rates in one prompts a rise or fall in tax rates in another.
- Tax competition depends on various economic and geographical factors. Populous urban jurisdictions benefit from economies of agglomeration which allow them to set higher tax rates. Tax competition between small SCGs is fiercer than between large ones. Similarly, it is fiercer between local governments than between state or regional governments. Jurisdictions that are adjacent or that have strong economic ties compete more strongly with each other.
- Intergovernmental fiscal frameworks play a crucial role in tax competition. For example, intergovernmental grants that equalise tax-raising capacities tend to blunt tax competition, probably by reducing jurisdictions' incentives to develop their own economic and fiscal base. Non-equalising grants generally lower tax rates, in all likelihood because jurisdictions need less own-source revenue to fund their public services.
- In tax competition there is often a lead competitor who sets the pace and whose policies are then followed by other governments. Small and sometimes poor jurisdictions appear to be the first movers: they are more exposed to tax competition and stand to gain more. The emergence of small, low-tax jurisdictions may provoke reactions from other jurisdictions and central government, which in some cases imposes minimum tax rates.
- Vertical tax competition – i.e. the competition of different government levels for the same tax base – usually leads to rising tax rates and may therefore partly offset the impact of horizontal – i.e. between SCGs of the same level – competition (Box 4.1).

Tax base mobility

The intensity of tax competition depends on how willing and able households and firms are to move in response to an unwelcome change in sub-national tax policy. The crucial question is, then, to what extent tax bases react to sub-national tax policy changes. In other words, what is the propensity of households and firms to relocate their place of production, consumption, or residence because of a change in taxation in one or several jurisdictions? Surprisingly, and despite the lively policy debate about tax base erosion, there is only scant evidence as to the impact of tax competition. One reason is that simultaneous tax interaction and tax-induced mobility are very difficult to measure.

Box 4.1. **Vertical tax competition**

Vertical tax competition occurs when different government levels have discretionary powers to set rates on a common tax base. When an individual government or level of government changes its tax rate, it affects the tax base for other government levels. For example, an increase in a central government business tax tends to curb business investment, thereby reducing the capital stock in all sub-central jurisdictions. Similarly, a rise in the central government personal income tax rate lowers incentives to work and thus reduces the income tax base for all SCGs. Since a tax hike introduced by one government level diminishes the tax revenues of other tiers of government, they may in turn have to raise their own taxes in order to offset the revenue shortfall. The tax base becomes a common good, where each tier of government imposes a tax externality on the others. Vertical tax competition or tax externalities can be quite pervasive in countries where there is concurrent taxation of corporate income, personal income, and sales or value added. Examples are a central government income tax on which SCGs set individual surcharges or a combined central/sub-central VAT/sales tax.

Vertical and horizontal tax competition interact. Vertical tax competition tends to raise tax rates and therefore to partially offset the effects of horizontal tax competition, even though the overall effect depends on the tax mix and the elasticity of the shared tax base. If an inelastic tax base – e.g. the property tax or consumption taxes like the petrol tax – is shared across government levels, the upward pressure on tax rates can become an issue. It matters less, however, when a more mobile base like corporate or personal income tax is shared. Vertical tax competition also depends on the extent to which central government can commit as a "first mover" to a tax policy that SCGs then take as given. In other words, the more "hierarchical" the relationship between the central and the sub-central levels, the less vertical tax competition there is. Finally, political economy constraints – such as direct democracy – limit the extent to which government levels can exploit the joint tax base. Tax policy co-ordination across government levels may further help reduce vertical tax competition and excessive taxation. (For an overview see Devereux et al., 2007.)

The current state of the empirical evidence can be summarised as follows:

- *Moving is only one way to react to taxation*. Households and firms have three main options when it comes to responding to increases in the tax burden: *i*) move to another jurisdiction; *ii*) reduce their work input and investment; *iii*) try to avoid taxes. The extent to which they take up the geographical mobility option and make their exit, depends on the availability of the other two options. Recent research on the personal income tax at the international level suggests that migration is often preferred to changing labour inputs or dodging taxes (Kleven et al., 2013).
- *Taxation is only one rationale for moving*. The spending side of sub-national budgets, i.e. the provision of public services, also plays a role. Competition is thus multi-dimensional: households may migrate to another jurisdiction because of the quality of its public services (good schools, reliable public transport, high environmental quality, etc.), while governments may use spending to attract firms by investing in infrastructure or higher education, for example. In this sense, it is useful to think of SCGs as engaging in *fiscal* rather than *tax* competition. Several studies conclude that competition on the tax and spending side interact (Hauptmeier et al., 2008).
- *Taxation may not be the main rationale for moving*. The initial decision to move often depends on the general economic constraints and opportunities in a jurisdiction – sales markets,

job availability, or housing affordability, for example. In most countries, the mobility of households and, to a lesser extent, businesses is driven by the labour or housing market rather than the tax burden. A new job is the single most powerful reason for households to move. However, once people or firms decide to migrate, tax policy considerations kick in, and their choice of a new location is influenced by tax levels. The inference is that tax-induced mobility is a "second-step consideration".

Tax competition and lower tax rates do not always pay off for SCGs that seek to increase tax revenues. The elasticity between tax rates and the tax base is usually less than one, so a cut in an SCG's tax rate of *x* per cent increases its tax base by *less* than *x* per cent. The result is that tax revenues will actually decline, at least in the short and medium run. An exception to this rule holds true for corporate income tax or small jurisdictions, where tax base elasticity tends to be clearly above unity.[2] The relatively sluggish reaction of households and firms to tax policy changes also suggests that most SCGs are located on the rising slope of their revenue hill, or Laffer curve. In other words, SCGs do not appear to maximise tax revenues. If they *wished* to do so, they would have to raise rather than lower tax rates.

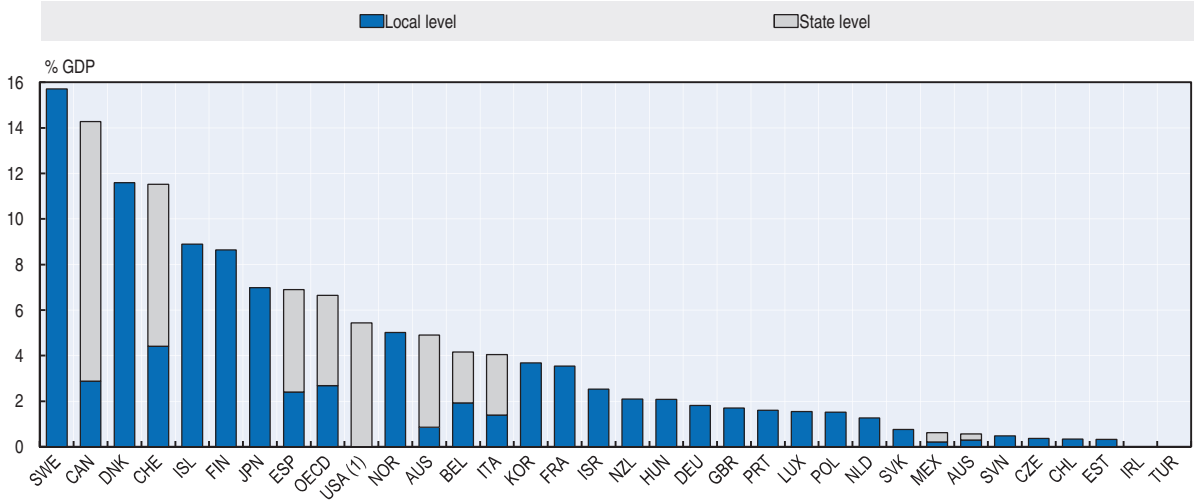
Tax base mobility has increased in recent decades, mainly because the costs of moving have fallen drastically. Economic activities rely more and more on non-physical assets such as licenses, patents, and other intellectual property, which are easier to transfer to low-tax jurisdictions. Technological and financial innovations make tax base and profit shifting across sub-national jurisdictions easier, just as they do across international borders. Lower transport costs and electronic commerce allow firms to cover greater distances between the production, sale, and consumption of goods and services. Better transport networks and improved infrastructure also allow individuals to commute – in other words, to separate residence and workplace and thereby exploit differences in tax rates between nearby jurisdictions. Tax competition studies from the 1980s concluded that tax differentials had little impact on migration, while similar studies carried out after 2000 discern substantial tax-induced mobility, particularly among the young, the well-educated, high-income earners, and firms where intellectual property accounts for a large share of business. Because of the higher tax base mobility, sub-national governments use tax policy in a much more active way today than they did two or three decades ago (Frey et al., 1981; Liebig et al., 2007).

No tax competition without tax autonomy

Tax competition depends essentially on sub-central tax autonomy. There is no tax competition without it. In an attempt to measure the degree of tax autonomy that sub-central governments enjoy, the OECD has drawn up an institutional indicator that measures the percentage of the tax revenue over which sub-central governments have full or partial policy control. The indicator is based on a classification of country-specific rules and regulations in sub-central tax laws (Figure 4.1).

Figure 4.1. **The tax autonomy of sub-central governments**

Taxes where SCGs have power to set the tax base and/or tax rates, 2008



1. Local governments in the United States have a wide variety of taxing powers but it is not possible to identify the share of each.

Source: *OECD Fiscal Decentralisation Database*.

StatLink http://dx.doi.org/10.1787/888932911727

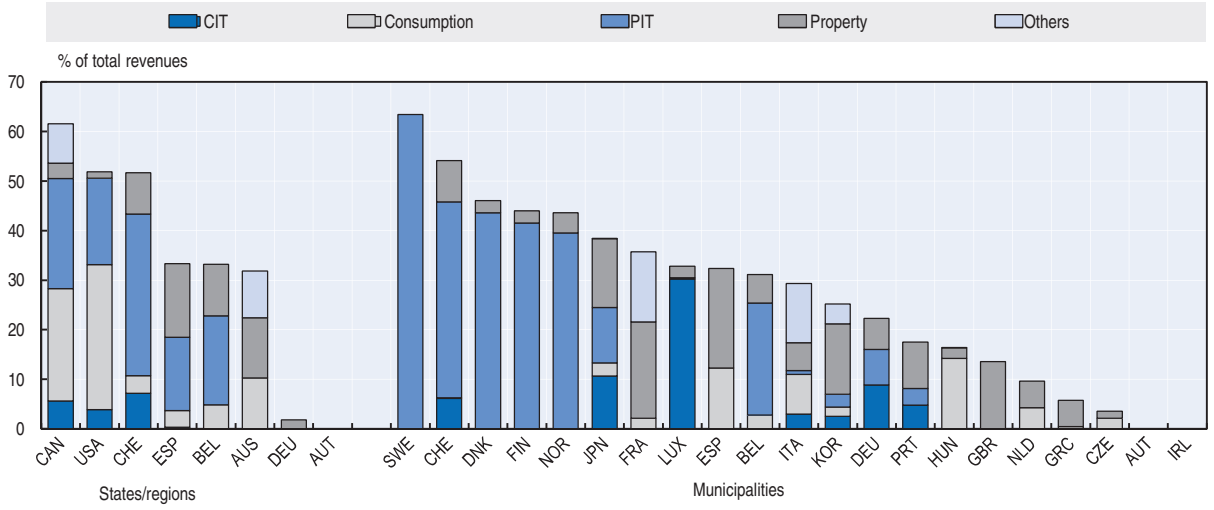
Most sub-central governments enjoy some taxing power and may therefore compete on tax policy, although such power varies considerably across countries. Taxing power is highest in "classic" federations such as Canada, Switzerland, and the United States where the constitution prevents central government from interfering with SCG tax policy. Some unitary countries – e.g. the Nordic countries – also have a long-standing tradition of local self-government and taxing prerogatives. SCGs generally enjoy greater autonomy over property taxes than income or consumption taxes, which are often embedded in tax-sharing systems where an individual jurisdiction has no taxing power.

The tax mix is the main driver of SCG tax competition

The strength of tax competition depends essentially on the mix of autonomous sub-central taxes (Figure 4.2). A hike in a sub-national corporate income tax, for example, may induce firms to relocate headquarters and production plants, or to try to shift their profits across borders. Rises in personal income taxes may induce individuals to change residence, though sometimes without changing workplace. An increase in consumption taxes may induce individuals to change how and where they purchase and consume and, if the tax is origin-based, firms may relocate.

Levels of mobility vary with the tax base. A bit stylised, capital tends to be mobile at national and international levels, workers move across regional labour markets and metropolitan areas, and consumption shifts at the local level. As for immovable property, it can be considered as immobile once in place, which is why property taxation triggers little tax competition. It is in fact possible to establish a descending order of tax base mobility by type of tax: capital income taxes are the most mobile, followed by personal income and wage taxes, then consumption taxes and, finally, property taxes. However, and as argued above, tax competition is likely to have grown for all types of taxes in recent decades. And given that tax competition varies across taxes, the tax mix itself may become a policy tool, as SCGs try to rely on revenue from taxes when competition benefits them most or harms them least.

Figure 4.2. **Taxing power and the tax mix**
Autonomous taxes by tax type, in per cent of total SCG revenue, 2009



Source: OECD Fiscal Decentralisation Database.

StatLink http://dx.doi.org/10.1787/888932911746

Corporate income tax

Corporate income and capital taxes (or business taxes) affect a firm's return on capital and give it an incentive to relocate to jurisdictions where profits are taxed less heavily. There are eight OECD countries with a sub-central corporate income tax (CIT). While the average rate declined from 14% in 1987 to 9% in 2012, CIT's share of total sub-central tax revenue rose from 7% to 9% (OECD Tax Database).[3] Tax competition is seen as one reason for the considerable decline in statutory corporate income tax rates and – to a lesser extent – the fall in effective average tax rates over the past 20 years, even though SCGs broadened the tax base more than enough to offset tax rate declines.

Effective mobility varies across types of firms. Companies with manufacturing plants face hefty costs, while those which rely on intangible assets like intellectual property can move more easily and can also shift their profits across borders without actually relocating their activity. Thus SCGs that host "old" heavy industries set higher tax rates than SCGs that are home to "new" industries (Carlsen et al., 2005). Finally, corporate mobility also hinges on tax incidence. If tax increases can easily be passed on to consumers as higher prices and on to employees as lower wages the incentive to relocate is smaller.

An issue in sub-central business taxation is how to treat firms with activities in several jurisdictions and how to "apportion" tax liabilities between them (OECD, 2013) – as opposed to separate accounting. Traditionally, apportionment relied on a mix of factors such as the number of employees, payroll, property values, sales, or turnover in each jurisdiction. Most formulas, especially those relying on employment, seem hardly to be related to a firms profits and likely distort corporate decisions (Hines, 2009). To offset tax competition and profit shifting and to link tax liabilities to effective business income, countries are moving towards apportionment that is more difficult to manipulate and less distortive, such as sales or turnover. Since the 1990s, a large majority of US states has switched to apportionment formulae that weight sales and turnover more heavily, even if this move

does make the corporate income tax akin to consumption taxes (Edmiston and Arze del Granado, 2006).[4]

Personal income taxes

Personal income taxes reduce a household's net income and provide an incentive to move to a jurisdiction with lower rates. Many OECD countries levy sub-central personal income taxes, which account for more than 35% of SCG revenue on average. As a general rule, sub-central personal income taxes appear to be less prone to tax competition than corporate income taxes, as households are usually less mobile than firms. Still, highly skilled people and high-income earners have a higher propensity to migrate and are more likely to do so for tax-related reasons (Liebig et al., 2007). As a consequence, sub-national governments tend to compete with each other more for high-income households than for other income groups. To attract high-income earners, some SCGs have reduced their tax burden considerably. In one illustration, the Canadian and Swiss sub-central top marginal income tax rates have come down more and faster than rates for lower incomes in the past two decades.

In some instances, competition on personal income tax has grown fiercer, especially within regional labour markets and commuting zones where there are many jurisdictions with local taxing power. As regional labour markets extend, it is more and more common for taxpayers to shop around for the lowest income tax rate without having to change workplace. The "shield of distance" that once protected local income tax revenues is disappearing and local governments become competitors for residents. Suburban local governments within a metropolitan area are inclined to set lower income tax rates than city centres, which, together with restrictive zoning laws, help them attract high-income residents. One consequence is fiscal imbalance between central cities and suburban areas. Another one is that personal income tax competition can lead to "income sorting", whereby different local populations become homogeneous as they belong to the same income bracket. In Switzerland, for example, income levels differ widely across the country, but much less within any *canton* (OECD, 2011).

Policies of income tax revenue apportionment can reduce tax competition. For instance, taxing income from property and self-employment at their point of origin rather than at the income earner's home address reduces the incentive to change residence on tax grounds, and probably leads to a more balanced revenue distribution across jurisdictions as well.

Consumption taxes

Sub-central consumption taxes comprise value-added taxes, sales taxes, or excises, like cigarette or fuel taxes. Only a few OECD countries have sub-central autonomous consumption taxes, i.e. taxes not embedded in tax-sharing systems. Tax-base mobility is determined by the goods that are taxed, on how and where they are taxed, and on geography – cross-border shopping tends to be more of an issue for small than for large SCGs. The experience of consumption tax competition may be summarised as follows:

- Taxes on goods that are easy to transport are more prone to competition. For example, there is likely to be stiffer competition over a sub-central cigarette tax than a sub-central gasoline tax.
- Taxes with a narrow tax base such as excises are more exit-prone than broad-based taxes like general sales taxes or a sub-central value-added tax.

- An origin-based consumption tax (i.e. taxes are paid where the goods are produced) is more vulnerable than a destination-based consumption tax (taxes are paid where the goods are consumed) because firms are more mobile than consumers.

Competition on consumption taxes has likely intensified with the rise of cross-border shopping. In the United States, the rules on interstate trade enable individuals and firms to escape consumption taxes, at least partially. This holds especially true for e-commerce, since a state needs to provide evidence that a business is physically present in that state – holds property, employs staff, etc. – before it can tax it (the principle of "nexus"). The same applies to the origin-based state-level VAT in Brazil (de Mello, 2008).

In reaction to rising tax competition, several countries have amended sub-central consumption taxes. Incorporating them into tax-sharing systems is the most radical policy. Germany and Australia, which introduced the Goods and Services Tax in 2000, now have tax-sharing systems that strip sub-national governments of all tax-base and rate-setting autonomy. Other, less radical, reforms have focused on merging national and sub-national taxes into, for example, a destination-based dual central/sub-central VAT or a mix of central VAT and sub-central sales taxes. The 2010 tax base harmonisation of central and sub-central value-added taxes in several Canadian provinces points in this direction. In 2013, the US Supreme Court tightened the "nexus" rules, enabling states to tax interstate e-commerce more effectively.

In general, SCG consumption tax systems are confined to large countries with large jurisdictions. SCGs in the European Union are prohibited from levying sales and consumption taxes, with some sub-national consumption-like taxes coming under review to ascertain whether they comply with EU directives.

Taxes on immovable property

Taxes on immovable property make up almost one-third, i.e. the bulk, of sub-central tax revenue, even though the significance of property taxation varies widely across countries. More than 90% of immovable property taxes are recurrent taxes, with the remainder being levied in various ways on property transactions.

Property taxes are considered the ones least likely to prompt exits, largely because immovable property is, well … immovable. Given the near impossibility of moving land and buildings – coupled with the usually inelastic supply of land due to zoning restrictions – taxation levels and changes are capitalised in property prices. Any drop – or even the expectation of a drop – in property tax rates is likely to be reflected in rising real estate values. Moreover, property taxes tend to forge a strong link between taxes paid and public services received, further reducing taxpayer arbitrage across jurisdictions and incentives to migrate. Most studies of residential property tax interaction suggest that tax policy in a sub-central jurisdiction mimics those in neighbouring jurisdictions and can be traced back to voters' tax preferences and public service levels rather than the quest for new residents and firms.[5] Property tax interaction is therefore essentially of the "yardstick competition" type.

Tax competition on immovable property taxes and tax-induced migration cannot be fully excluded, however. Capitalisation may be incomplete, leaving incentives for both residents and firms to arbitrate between different locations. In addition to property tax changes, jurisdictions may alter land use planning and zoning restrictions, further weakening the link between property values and property tax rates. If a jurisdiction has sufficient land available and imposes few restrictions on its use, overall land prices may

hardly move once new land is developed. In that event, property tax reductions become an effective means of attracting residents and firms. Many jurisdictions provide tax credits and other forms of tax relief for business property, which demonstrates that, to some extent, the property tax is indeed a strategic instrument for attracting economic activity. Moreover, while the taxation of land is unaffected by how firms develop their activities, the taxation of physical capital – infrastructure, buildings, etc. – depends on what firms are investing in, which gives rise to strategic interaction between jurisdictions and firms over property tax rates and the rate of property development. Under these circumstances, the only property tax that effectively excludes any form of tax competition is a pure tax on land values.

Despite its obvious advantages, the share of property tax in sub-central tax revenue has declined for several decades to its current level of around 32% (Figure 4.3). Political economy factors may partly explain the erosion of the property tax base. Voters contest the tax, not least because tax hikes show up in lower property prices. Moreover, the tax is not linked to ability to pay, which can affect the elderly and other groups that are income-poor, but housing-wealthy. The rise of property prices in the years prior to the 2008-09 financial crisis created sustained pressure on SCGs to limit property tax increases, as exemplified by the so-called "tax revolts" in many US states. As a result, a variety of often social-policy-induced measures – such as tax caps, abatements and exemptions, – gnaw away at local property tax revenue. In many OECD countries, the tax base, i.e. property/cadastral values, has not been updated for years, even decades, so creating distortions and unfairness between different types of property and property owners. As for business property taxation, the dwindling significance of manufacturing with its large physical facilities – for long the backbone of property tax revenues in many jurisdictions – may also explain the declining share of business property taxes in the sub-central tax take.

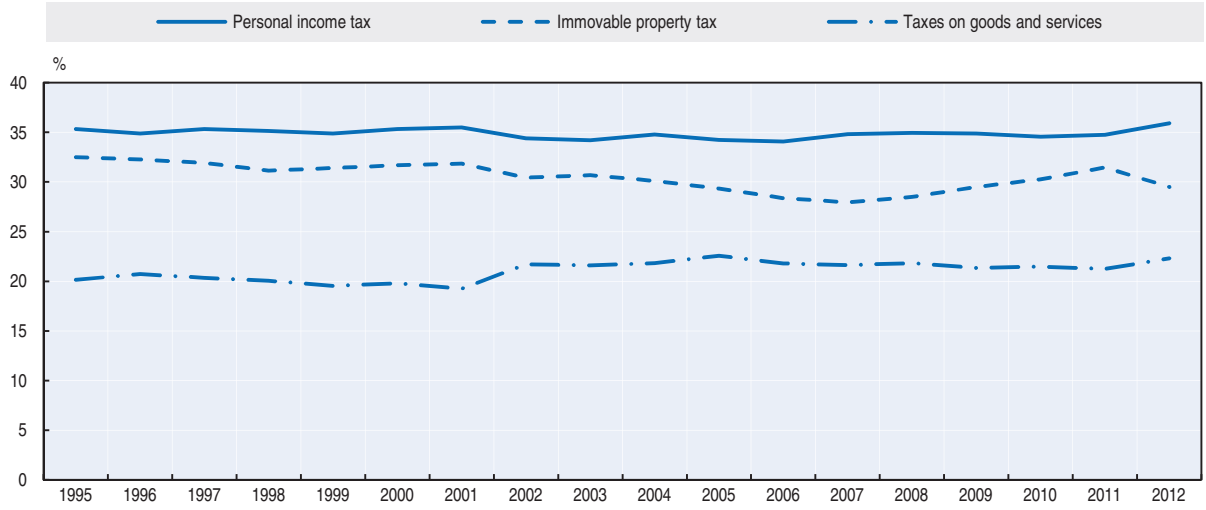
Other factors affecting tax competition

Geography

The size and location of sub-central governments, in addition to agglomeration effects, are crucial factors in determining the extent of tax competition. Large jurisdictions have "market power" that allows them to keep tax rates at relatively high levels. Small ones – all things being equal – tend to set lower rates in order to retain households and firms whose exit would hit their tax bases hard.

Internationally, the size effect is widely acknowledged: small countries, i.e. with less than one million inhabitants, practice lower tax rates than large ones. Although empirical tests have not verified the same pattern at sub-national level, some country evidence does exist. In Switzerland, for example, personal income tax rates are generally higher in large cantons than in small ones. Similarly, jurisdictions that lie at the geographical core of a

Figure 4.3. **The property tax's significance is declining**
Share of main taxes in total sub-central tax revenue



Source: OECD Revenue Statistics Database.

StatLink http://dx.doi.org/10.1787/888932911765

country have higher tax rates than peripheral SCGs. As for agglomeration economies – with their clusters of highly productive firms, pools of well-educated and qualified labour, good infrastructure, etc. –, they are an asset for both residents and firms, and these assets can be taxed. In Spain, municipalities located in agglomerations have higher tax rates but up to 40% lower tax base mobility than those that lie outside agglomerations (Jofre-Monseny and Solé-Ollé, 2008). In the United States, metropolitan areas levy local wage and income taxes which suburban and peripheral areas cannot (Hoyt, 1992).

Differences in tax rates can be seen as a boon to small and peripheral jurisdictions (Baldwin and Krugman, 2004). They cannot offer the advantages of an agglomeration, but they do have a policy tool for attracting and retaining firms and residents: the ability to offer low levels of taxation. Businesses that do not need an agglomeration or much public service input to prosper may choose to settle in a peripheral area and enjoy low taxes. In this vein, tax autonomy is a tool that small and peripheral regions can use to compete against the gravitational pull of large agglomerations. Tax competition can thus be seen as a counterweight to the geographical concentration of economic activities, even though the "aggressive" low-tax policies of small, peripheral (and sometimes poor) SCGs usually meet with great scepticism and political hostility, often from large SCGs where tax rates are higher.

The spending side

Taxes fund public services. In other words, the revenue and the spending sides of budgets interact. Households and firms choose their location not only for tax considerations but for the relationship between taxes paid and services rendered. Competing SCGs may be mindful not only of the tax side of competition but of the spending side, too. They pursue comprehensive *fiscal competition*. Findings as to how fiscal competition works may be summarised as follows:

- SCGs faced with fiscal competition invest more in public service inputs that raise the productivity of private investment, such as physical infrastructure, environmental

quality, and education (Fredriksson, List and Millimet, 2005). On the other hand, they invest less in social and residential services. Higher tax rates are generally met with higher standards of public service, allowing households and firms to choose among different tax-and-service packages across jurisdictions. Such findings tend to support the so-called "Tiebout" hypothesis, which posits that households and firms tend to group together across SCGs according to their tax and public service preferences.

- Within a country, jurisdictions that practice low tax and service levels appear to co-exist over extended periods with high-tax, high-service jurisdictions, without there being much fiscally induced mobility (Bénassy-Quéré et al., 2007). SCGs hardly ever move out of their tax-service level in which they are placed, as the tax elasticity – the reaction of the tax base to tax rate changes – is generally below unity, and a change in tax rates could entail fiscal imbalances over long periods. These results again point to the relevance of the "Tiebout" hypothesis.
- Rather than cutting tax rates uniformly, SCGs sometimes prefer to grant tax-benefit packages to highly mobile households and firms. In some countries, specific tax allowances, combined with subsidies for new firms, are an important policy tool for SCGs. Low tax autonomy intensifies competition on the spending side: SCGs with little tax autonomy tend to make frequent use of targeted subsidies and selective spending programmes and competition becomes less transparent.
- Minimum spending needs in policy areas like social welfare may put pressure on SCGs to raise tax rates. Tax rate differences observed across Switzerland appears to be partly attributable to minimum spending obligations agreed upon by all cantons and spillovers from adjacent jurisdictions, and not to different preferences for public service levels. If SCGs enjoy little tax autonomy, the focus of competition switches to spending and jurisdictions reduce welfare spending.

Inter-jurisdictional collaboration on spending – common in most OECD countries – may reduce tax competition. By funding shared services or facilities like a hospital or university, SCGs reduce cross-border externalities and distribute spending commitments more evenly, thereby reducing the scope for competing on tax rates. On grounds that pertain more to political economy, too, inter-jurisdictional collaboration may make it difficult to compete on tax policy. An SCG that collaborates in various areas with its neighbours will hardly engage in a do-or-die tax war with them.

Fiscal equalisation

Fiscal equalisation is the transfer of fiscal resources across SCGs to offset differences in revenue-raising capacity and public service expenditure needs. Fiscal equalisation is thus aimed at fostering inter-regional equity. It can also be seen as increasing efficiency since it prevents households from moving to high-income SCGs solely to enjoy better public services at lower tax rates. Fiscal equalisation involves disbursing grants inversely related to an SCG's fiscal capacity: the higher its tax-raising capacity or the lower the cost of its public service provision, the fewer grants it gets.

Fiscal equalisation works in two ways. It narrows discrepancies between SCGs' tax raising capacity and expenditure needs. And it lessens the incentives for SCGs to lower tax rates and attract mobile tax bases, as part of the additional revenue would have to be dedicated to equalisation. While fiscal equalisation tends to reduce inter-regional differences in tax-raising capacity, it preserves sub-central tax autonomy and allows

jurisdictions to set tax rates in accordance with voters' public service demands. While equalisation is effective in reducing tax competition and providing all jurisdictions with sufficient resources to fund public services, there is growing evidence that over time it can slow down regional convergence between rich and poor jurisdictions (Kessler and Lessmann, 2011).

Figure 4.4. **Tax rates and tax raising capacity are negatively correlated**

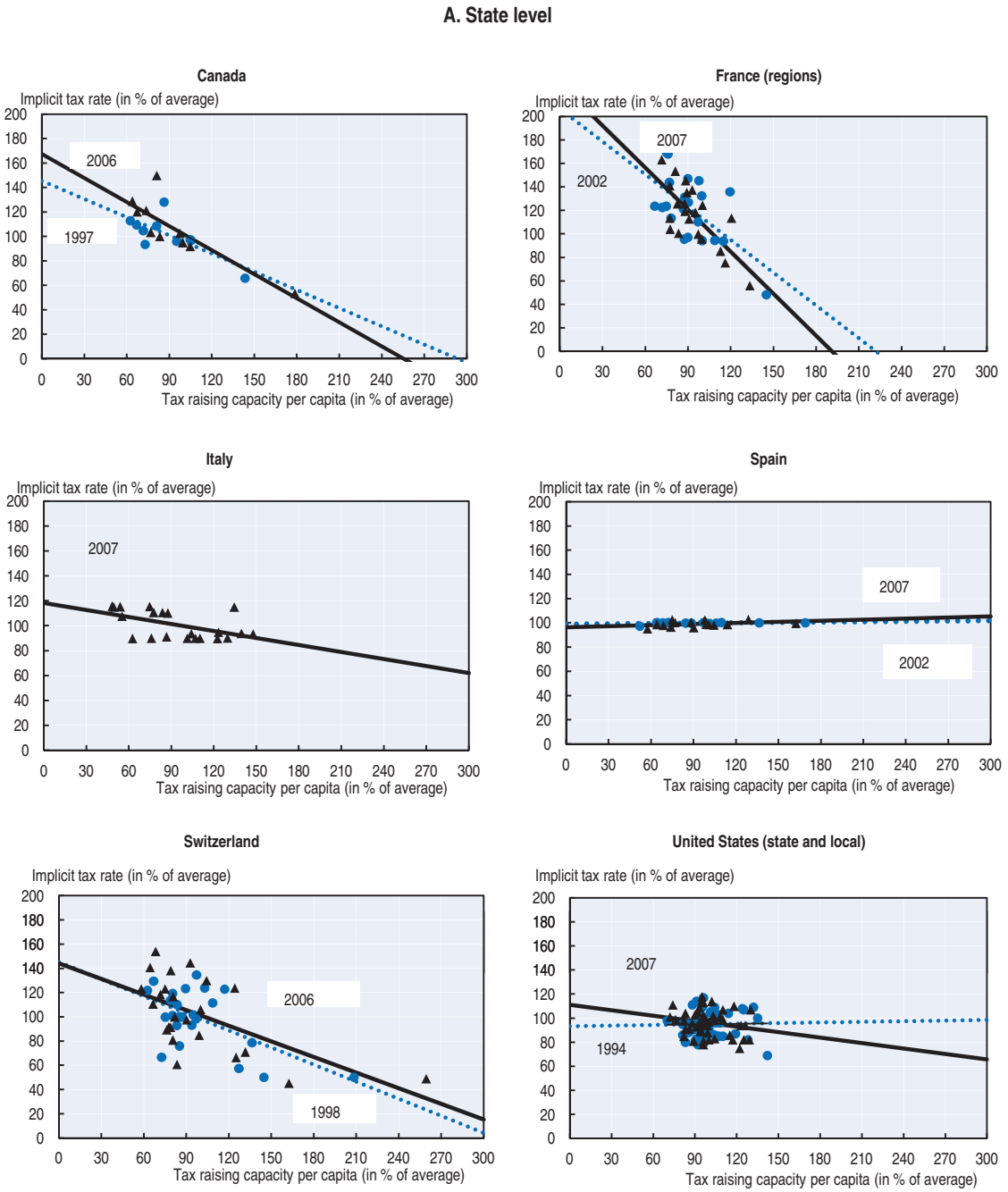
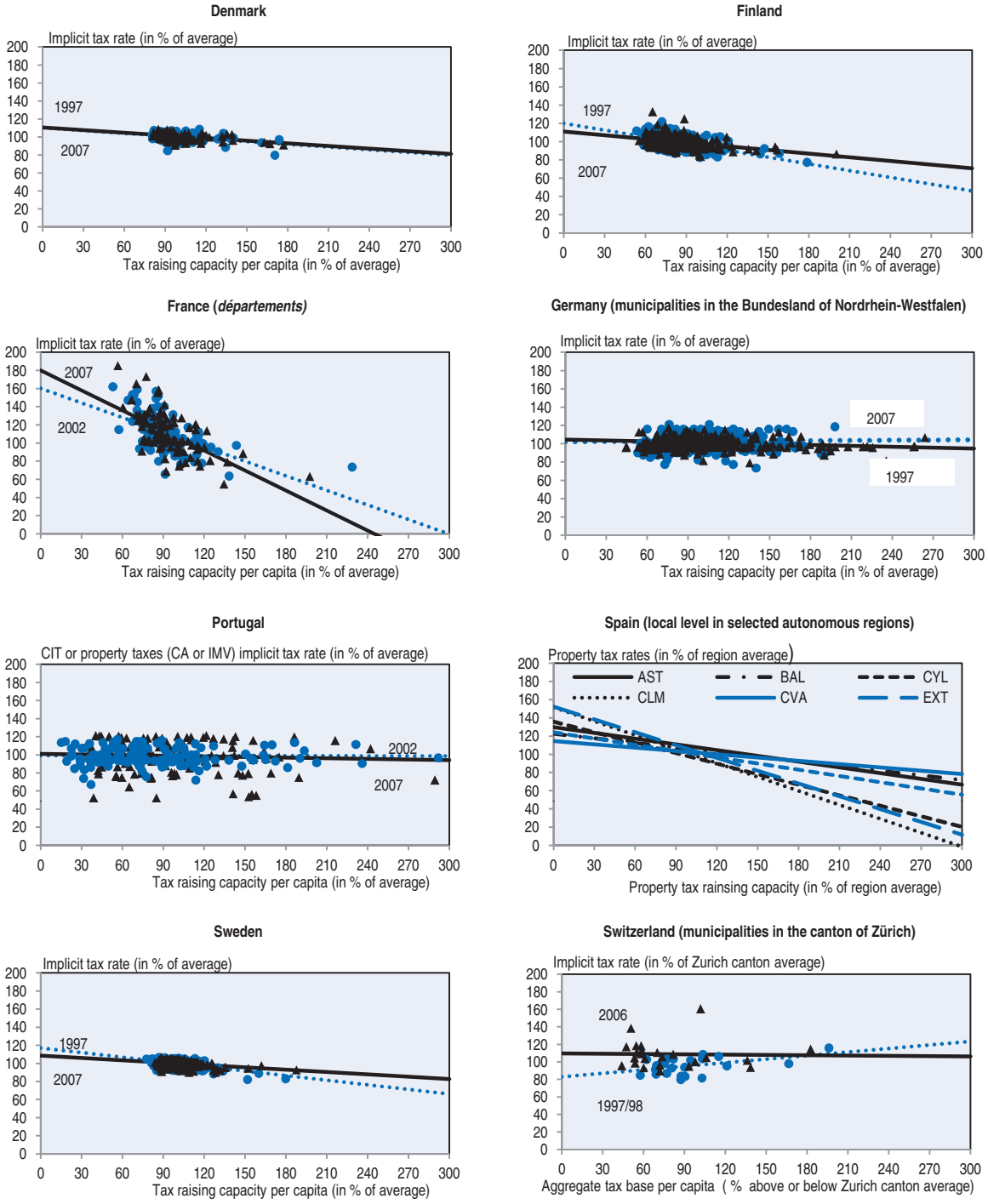


Figure 4.4. **Tax rates and tax raising capacity are negatively correlated** *(cont.)*

B. Local level



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The impact of tax competition on fiscal outcomes

Tax rates are lower in wealthier jurisdictions

Tax rates are consistently lower in wealthy SCGs than in poor ones. In other words, there is a negative relationship between their tax rates and tax-raising capacity per capita in most countries (Figure 4.4).[6] Moreover, the correlation has become stronger over time as high-low tax rates and low-high tax-raising capacity have become more closely interconnected and disparities between rich and poor SCGs have widened. The inference is that wealthier households tend to live in jurisdictions with a lighter tax burden, and that this trend has become more pronounced.

The relative tax-raising positions of individual SCGs evolve very differently over time. While tax-raising-capacity rankings remain very stable in some countries – pointing to little mobility and similar economic growth across jurisdictions – sub-central jurisdictions change their relative positions very frequently in others. Some initially poor SCGs have converged towards or even risen above the national tax capacity median in relatively short times (Blöchliger and Pinero-Campos, 2009). However, the relationship between tax autonomy, tax competition, and other determinants of regional convergence remain little researched.

The negative relationship between tax-raising capacity and tax rates and the fact that it has grown more pronounced over time could support the idea that weak SCGs with low tax revenues are forced to raise tax rates, so falling foul of a vicious circle of higher taxes, exits, and even lower tax revenue. However, correlations do not imply causality and reverse causality cannot be excluded. Seen from one side, poor jurisdictions are obliged to set high tax rates because they need to fund minimum standards of public service, which may be defined by central government. Seen from another perspective, high-tax SCGs are poor because they set high tax rates and so curtail their economic growth potential. The fact that rankings of tax raising capacity change very seldom in some countries but frequently in others – as poor SCGs escape their fate – lends credibility to both views, as does the empirical literature.

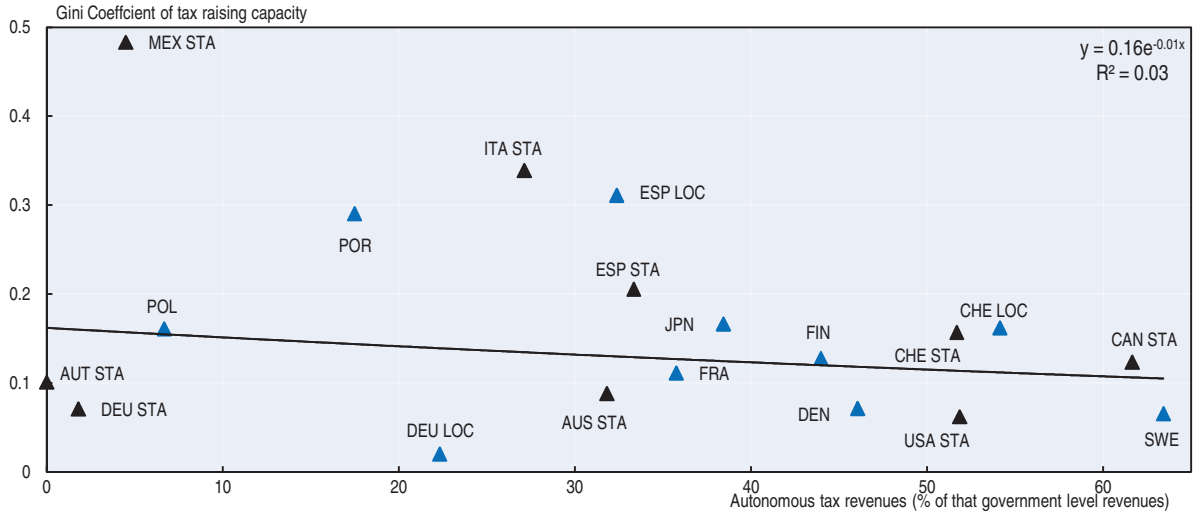
Tax capacity disparities are lower in high-autonomy countries

Tax raising capacity and tax rates are negatively correlated, as shown above. This observation could prompt the conclusion that disparities in tax-raising capacity are necessarily more pronounced in countries with high tax autonomy and vigorous competition. However, such a view is challenged by the simple relationship between tax autonomy and the differences in tax-raising capacity across jurisdictions (Figure 4.5). Countries where there is considerable sub-central tax autonomy show narrower interregional disparities in tax-raising capacity. The stronger a country's sub-central tax autonomy is, the lower are its tax disparities. Viewed from that perspective, there seems to be no vicious circle between a jurisdiction's tax rates and its fiscal resources.

The simple static relationship illustrated in Figure 4.5 fails to show how disparities in tax raising capacity have evolved over time. Nor does it say anything about causality – countries with an even distribution of tax raising capacities may be more inclined to decentralise taxing powers than countries where wealth is geographically concentrated. Yet recent research into the determinants of convergence hints not only at the negative

Figure 4.5. **Regional wealth disparities are narrower in countries with more tax autonomy**

Relationship between the share of autonomous taxes (to total taxes) and disparities in tax capacity



Source: OECD Fiscal Decentralisation Database; OECD Secretariat calculations based on Network questionnaire responses.

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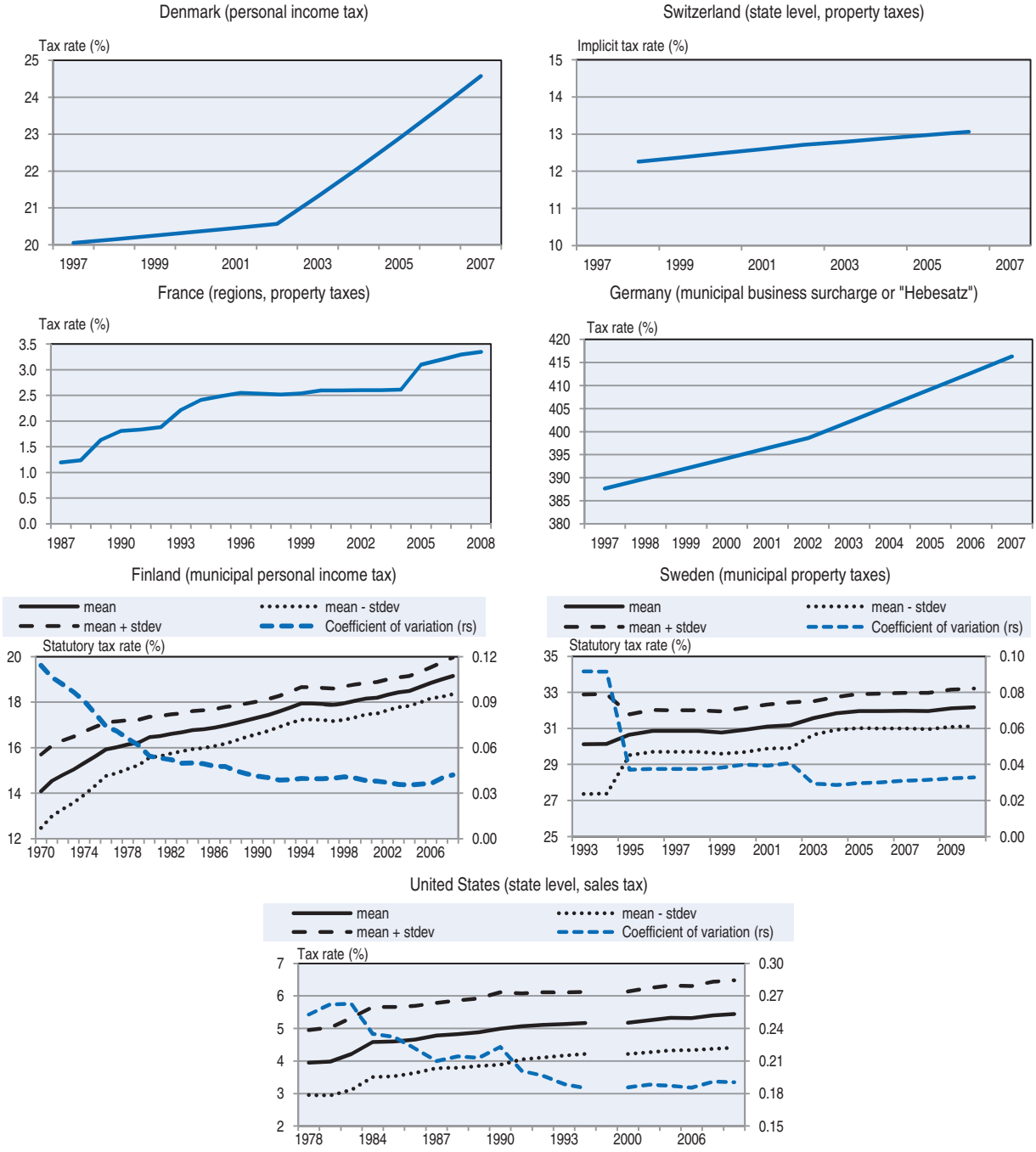
impact of intergovernmental grants but at the positive impact of fiscal autonomy and the role such autonomy can play in expanding the economic and fiscal base (Persyn, 2009). Studies suggest that sub-central governments with large fiscal autonomy converge faster towards the national income average than jurisdictions that depend largely on central government support. As argued above, smaller and poorer SCGs in particular may consider tax autonomy and a low-tax policy as an economic development device, helping them to catch up with wealthier regions. Centralised tax systems provide fewer such incentives.

No race to the bottom

Confounding another widely held belief about the long-term consequences of tax competition, sub-central tax rates have trended up rather than down and generally converged over time, regardless of the tax type (Figure 4.6). There is little or no sign of a "race to the bottom", which contradicts the contention that tax competition results in taxation levels that are too low to sustain adequate public service levels. Moreover, tax rate differences between jurisdictions have not widened. In the few countries for which data are available, tax rates have mostly converged, not diverged. And while results do not cover all OECD countries with highly autonomous sub-central governments, they still constitute a fairly broad sample of sub-central tax-setting behaviour.

Different factors may explain why the "race-to-the bottom" hypothesis is not confirmed. The trend towards similar packages of public services across jurisdictions, often prescribed by central government regulations, may oblige jurisdictions to set similar tax rates. And any differences that do remain are only because service levels or productivity vary marginally across jurisdictions. Also, many fiscal arrangements – particularly fiscal equalisation – can reverse incentives and prompt SCGs to raise rather than lower tax rates (see Chapter 5 on fiscal equalisation). The upshot is a trend towards more equal taxation across SCGs.

Figure 4.6. **SCG statutory tax rates tend to rise and to converge**



Source: OECD Secretariat calculations based on Network questionnaire responses.

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Tax assignment and vertical tax competition may also play a role, when the sub-central level taps the same tax base as central government. Vertical tax competition – which has the effect of increasing rather than lowering tax rates – may act as a counterweight to horizontal tax competition forces. Finally, certain regulations, like those that set minimum tax rates, may prevent individual SCGs from entering into an all-out tax-cutting battle.

Tax competition boosts public sector productivity and efficiency

There is a general view that more tax competition leads to a more efficient, more productive public sector, both by making public providers more responsive to households' and firms' demands and by raising the quality and lowering the cost of publicly funded services. This viewpoint is often difficult to test since public sector efficiency and productivity are notoriously hard to measure. However, some empirical studies are available. Findings across the OECD suggest that the decentralisation of taxing powers tends to prompt increased spending on productive investment such as infrastructure and education (see Chapter 3). Similarly, the decentralisation of educational functions tends to improve education outcomes (see Chapter 3). Country-specific research also points to fiscal autonomy exerting a positive impact on the efficiency of municipal spending (e.g. Kalb et al., 2012). Moreover, more tax autonomy and tax competition are usually associated with a smaller public sector.

Policy considerations

Tax competition between sub-central governments is widespread and has become stronger with growing tax base mobility. The 2008-09 economic and fiscal crisis, too, may have played a part, whetting sub-central governments' appetite for strategic tax policy. After all, taxation is one of the most straightforward policy measures a government can use to boost its economy.

Tax competition can benefit sub-central economies as it improves the efficiency and productivity of the public sector and brings tax policy in line with voter preferences. Fears of a race to the bottom in tax rates or regional income divergence have proven unfounded so far. Still, tax autonomy needs to be properly incorporated into the wider fiscal framework in order to avoid any nasty surprises. Both central and sub-central governments may consider the following policy reforms.

Move towards property taxation

An obvious way to reduce tax competition is to tax immovable property more heavily than corporate and personal income. Property taxes also happen to be friendlier to economic growth than most other taxes, and distortions from tax exporting are relatively small. Sub-central governments should have full autonomy over property tax rates in order to shape the size and structure of their public sector as they see fit and follow the examples of neighbouring jurisdictions (yardstick competition). Property tax hikes always encounter stiff resistance, however, so they should be embedded in wider tax reform. Some sub-central consumption taxes also resist tax base erosion well. Destination-based sub-central VAT or sales taxes and combinations of central and sub-central VAT can work well, especially in large countries with large jurisdictions.

Harmonise – to some extent – the sub-central tax base

Central government or all a country's SCGs together may "harmonise" the sub-central tax base so that tax base legislation is no longer left to the discretion of an individual jurisdiction. Tax base harmonisation could apply, for example, to tax credit and relief, to the right to introduce or abolish a tax or taxable object, or to procedural aspects of taxation such as tax periods. Central government may require SCGs to align their tax bases either with each other or with the tax of a higher level of government. Once the tax base has been harmonised, the only policy lever SGCs have left is tax rates. Tax base harmonisation

can help improve the transparency of the tax system and lessen sub-central governments' incentive to grant special tax and benefit packages. It might be particularly advantageous for personal income taxes. However, strict tax base harmonisation also risks stifling tax innovation because it rules out policy changes that involve tax base definitions.

Adapt apportionment

Apportionment is the division of the tax liabilities of an economic entity whose activities span several jurisdictions. The formula by which liabilities are apportioned across those jurisdictions affects the extent of sub-central tax competition. Apportionment formulae should reflect an entity's income in each jurisdiction and reduce excessive inter-jurisdictional tax base mobility. When governments consider apportioning the sub-central corporate income tax they should give more weight to sales or turnover than to payroll or employment. As for sub-central personal income taxes, they could be deemed origin-based and levied (at least partially) where income is generated rather than where the income earner lives. Similarly, revenues from immovable property or self-employment could be taxed where the property is located or the self-employed person works, and not at a place of residence.

Provide adequate equalisation

Most countries use fiscal equalisation as a tool for reducing disparities between wealthy and poor jurisdictions (see Chapter 5, "Fiscal equalisation"). It can therefore be used to offset the potentially negative effects of tax competition and, on the grounds of equity, prevent inter-jurisdictional disparities from becoming unacceptably wide. Robust equalisation may prompt a jurisdiction to raise rather than lower its tax rates, thereby putting in place an effective barrier against a downward-spiral in tax rates. Some equalisation systems set very high marginal equalisation rates for poor jurisdictions, which could be detrimental to their development efforts and prompt divergence rather than the convergence of regional and local incomes. Governments should therefore carefully weigh the advantages of equalisation against those of tax autonomy and tax competition.

Notes

1. The terms "exit" and "voice" were coined by Hirschman (1971) who describes the various reactions to decline in firms, organisations and governments.
2. Brett and Pinske (2001) estimate the municipal property tax base elasticity in the Canadian province of British Columbia at 0.2 to 1. Büttner (2003) estimates the business tax base elasticity in Germany at 1.4. A high corporate tax base elasticity at the international level is also shown by Riedl and Rocha-Akis (2008) and Barrios et al. (2008). Solé-Ollé and Viladecans (2001) estimate the property tax base elasticity in Spain at 0.4 and vehicle tax elasticity at 0.3. Liebig and Souza-Poza (2007) estimate the income tax elasticity in Switzerland between 0.1 and 0.7.
3. OECD Tax Database at *www.oecd.org/tax/tax-policy/oecdtaxdatabase.htm*.
4. Apportionment *between* rather than *within* countries raises many additional issues which are not treated here.
5. There is no evidence on tax competition and tax base mobility for residential property taxes. Brueckner and Saavedra (2000) claim strong tax interaction between local property tax rates in the United States but are unable to estimate tax base mobility. Only Conway and Houtenville (2001) find some evidence that property taxation could have an incentive for the elderly to move across US states, but the overall effect appears to be weak and mobility appears to be determined by service levels rather than taxation. Bordignon et al. (2003) see yardstick competition as the relevant driver for tax interaction among Italian municipalities. Lytkänen (2008) finds no evidence for property tax competition in Finland.

6. Tax raising capacity measures a SCGs' economic wealth, similar to GDP or household income. It is defined as the tax revenue that an SCG could obtain by applying a standard tax rate to a standard tax base. Tax raising capacity is expressed in per capita or as a percentage of the national average.

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Chapter 5

Fiscal equalisation: A key to decentralised public finances

Fiscal equalisation is a transfer mechanism that allows different jurisdictions to provide their citizens with similar public services at similar tax rates despite differences in economic wealth. Across OECD countries, equalisation has a strong redistributive effect: on average it reduces pre-equalisation disparities by more than two-thirds and, in some countries, to virtually nil. After equalisation, tax and public service levels are much more evenly distributed across a country than GDP or household income. Strong equalisation comes at a cost. Strong equalisation may undermine local and regional development efforts or may prevent firms and households from migrating towards more productive jurisdictions. Equalisation systems also tend to be pro-cyclical and exacerbate asymmetric shocks to a jurisdiction. Moreover, large equalisation systems can undermine fiscal discipline at the sub-central level. Equalisation arrangements should rely on revenue and needs indicators that cannot be manipulated by sub-central jurisdictions, and they should be transparent about donors and recipients.

Equalisation – pivot of decentralised fiscal policy

Fiscal equalisation is the transfer of financial resources to sub-central governments (SCG) to enable them to provide their citizens with similar levels of public services at similar levels of taxation. Fiscal equalisation can be viewed as the natural companion to fiscal decentralisation in that it seeks to correct disparities and any imbalances that may result from sub-central fiscal autonomy. Distinct fiscal equalisation arrangements first emerged during the 1940s and 1950s in a number of federal countries. Today most OECD member countries run redistributive programmes to reduce fiscal disparities. The significance of fiscal equalisation is reflected not only in its extensive use in both federal and unitary countries but also in that its objectives and procedures are often laid down in the constitution and form a central pillar of national fiscal policy. Across the OECD, fiscal equalisation transfers average around 2.5% of GDP, 5% of general government spending, and 50% of intergovernmental grants.

Fiscal equalisation is an inter-jurisdictional rather than an inter-personal redistributive programme. It is concerned with disparities between communities in access to public services rather than with differences in individual household income. (For individual income inequality, see Hoeller et al. [2012].) Although individual and spatial redistribution interact to some extent – through the progressivity of the tax system or the design of social security – their purpose and outcomes are not the same, and countries have adopted quite different patterns of individual and spatial redistribution.

Equalisation is sometimes justified on the grounds, not of productivity differences, but of efficiency in that it can help curb fiscally induced inter-jurisdictional migration and labour mobility (Boadway and Shah, 2009). However, it may also undermine SCGs' incentives for developing their economic and fiscal base. And, although it can also act as insurance against regional business cycles or asymmetric shocks, equalisation and stabilisation can conflict and are usually addressed by separate macro-fiscal approaches. The overarching objective of fiscal equalisation is inter-jurisdictional redistribution, and the main policy issues are to ensure that redistribution schemes minimise trade-offs and distortions.

While reform of fiscal equalisation was largely dormant until around a decade ago, it has gathered pace. Canada, Denmark, Italy, Mexico, Spain, and Switzerland, to note a few, have all undertaken wide-ranging overhauls of sub-national government financing. They have sought to separate equalisation from other transfer arrangements clearly and transparently, factoring in the effective needs of sub-national governments and providing them with more incentive to develop their own economic and fiscal base. While these reforms have started to bear fruit, challenges remain – particularly the demographic pressures building up in some jurisdictions more than others, or the growing concentration of economic activity in large urban agglomerations. Moreover, the on-going economic and fiscal crisis has further exposed inefficiencies in many systems and revealed the need for deeper reform. This chapter draws extensively on responses to a questionnaire on fiscal

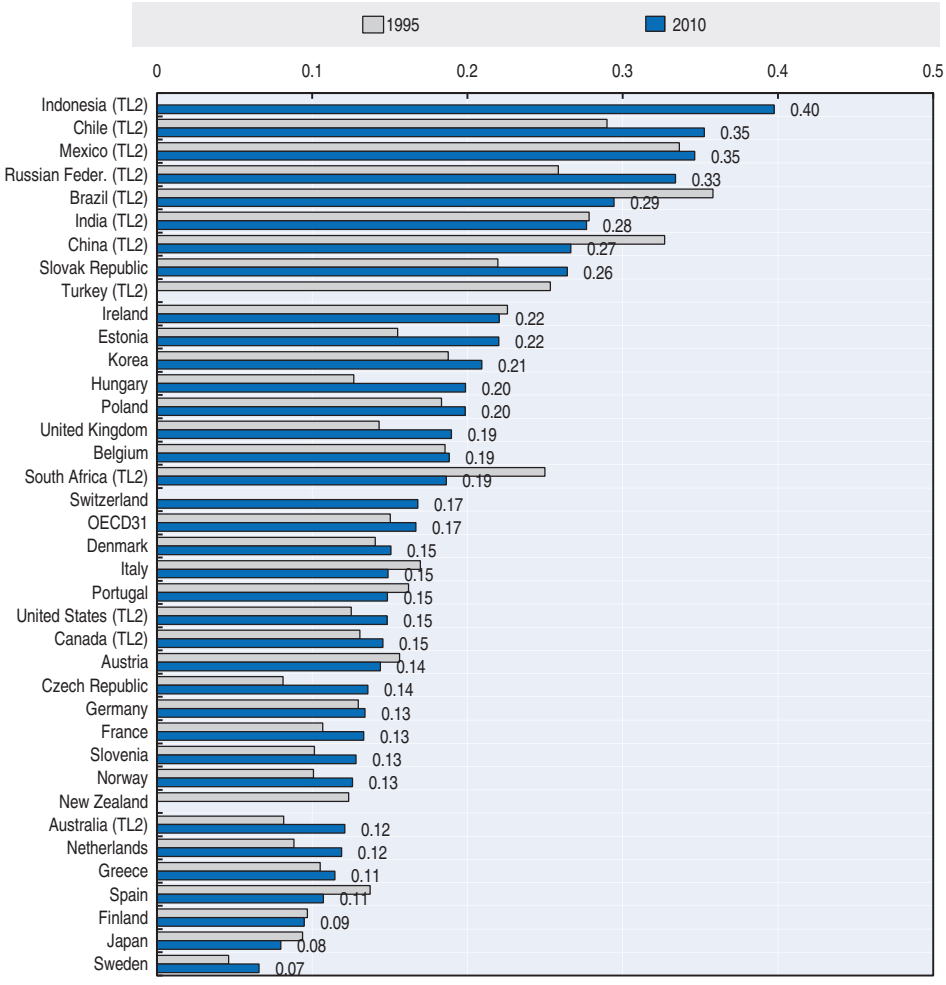
equalisation devised by the OECD Fiscal Network, sent to all OECD countries in 2006 (Blöchliger and Charbit, 2008) and partially updated in 2013.

Economic disparities across regions

Economic disparities – i.e. variations in sub-national GDP per capita or in household income – constitute the single biggest factor behind unequal access to public services across a country. They translate into differences in tax-raising capacity, which makes it difficult for some jurisdictions to provide adequate service levels. Disparities differ considerably across countries (Figure 5.1). Those with only slight disparities and little geographical concentration of economic wealth include Sweden and Japan, while countries like Turkey and the Slovak Republic show wide disparities. Between 1995 and 2010, disparities widened in most countries. While the figures yield a rough impression of how economic activity is distributed and has evolved, the use of GDP to measure

Figure 5.1. **Inter-jurisdictional GDP disparities vary across the OECD**

Sub-central GDP per capita dispersion, Gini coefficients



Source: OECD (2011), *OECD Regions at a Glance 2011*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/reg_glance-2011-en*.

StatLink http://dx.doi.org/10.1787/888932911841

state/regional and (in particular) local government disparities can be misleading. For instance, GDP per capita values may be distorted when people live and work in different jurisdictions. Geography and the number and size of sub-national jurisdictions complicate the picture, too, as countries with more and smaller SCGs generally show wider disparities.

While differences in GDP are the main reason for unequal public service provision between jurisdictions, the cost of public services, too, is also a factor for two reasons:

- The composition of the population is not the same from one jurisdiction to another, and the cost of public services targeted at special groups (children, elderly, ill, disabled, the unemployed, etc.) are higher.
- The cost per service unit changes with geography – e.g. infrastructure in the mountains is more expensive than in the plains.

An important parameter in the cost of services is a jurisdiction's size and density of population. Densely populated jurisdictions tend to benefit from economies of scale and agglomeration. Certain services (hospitals, motorways, specialised healthcare, etc.) can be supplied efficiently only above a minimum scale, while their provision in scarcely populated or remote areas tends to be relatively more expensive or insufficient. Geographical patterns in population may affect service costs, too, as the share of the population living in rural and remote areas varies widely across countries (OECD, 2011). Overall, disparities are much narrower in service costs than in tax-raising capacity, hence the widespread preference for equalising the latter.

How does fiscal equalisation work?

Snapshot of equalisation systems

To correct imbalances between sub-central governments, fiscal equalisation explicitly provides greater per capita transfers to SCGs with below-average tax-raising capacity or above-average public service costs.[1] Equalisation arrangements can hence be broken down into two dimensions:

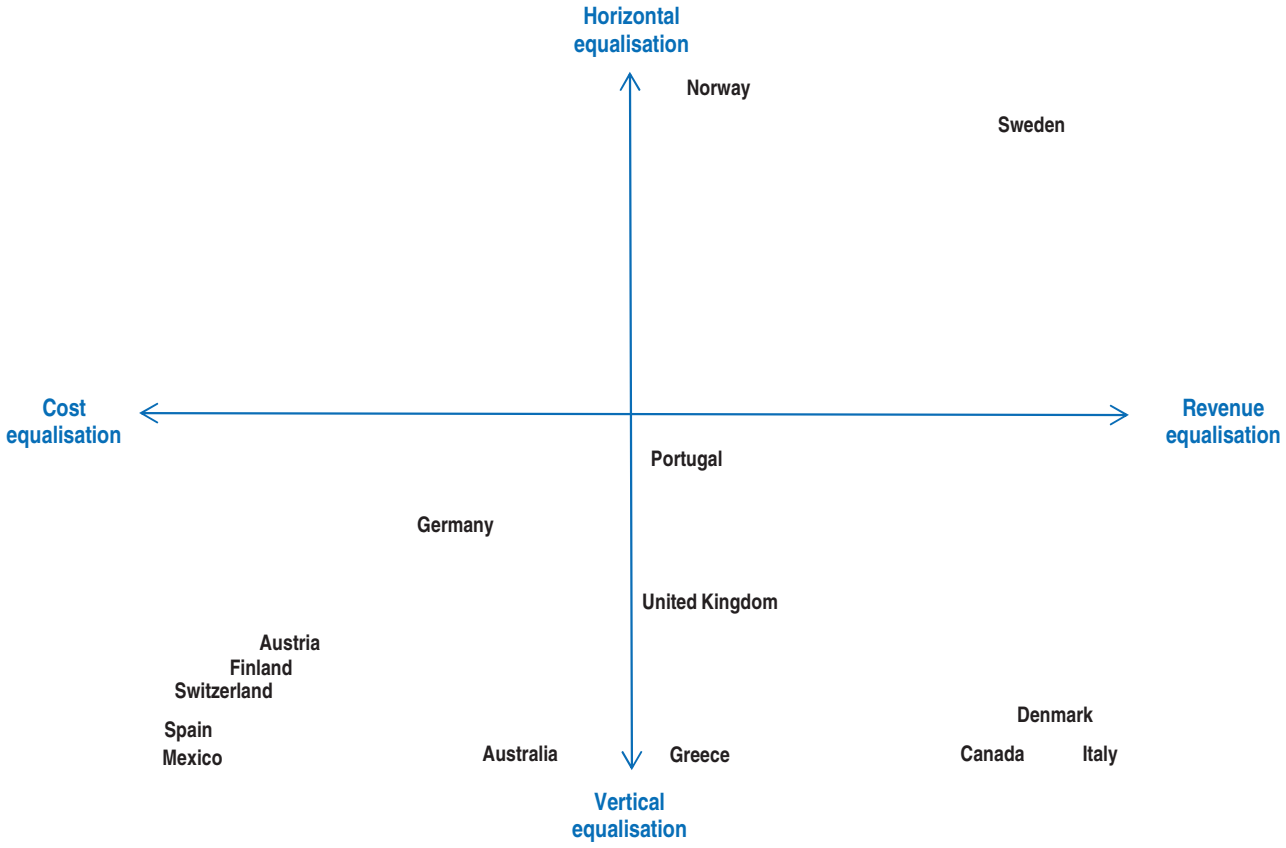
1. Revenue versus cost equalisation: whether equalisation aims mainly to reduce differences in tax-raising capacity or in the cost of providing public services.
2. Horizontal versus vertical equalisation: whether wealthy jurisdictions directly provide resources to poor ones (Robin Hood principle), or whether central government does so (gap-filling principle).

Most OECD countries apply various equalisation arrangements, although the combination of vertical and cost equalisation tends to be prevalent (Figure 5.2). Redistributive tax-sharing systems are not included in the figure, which detracts somewhat from the significance of horizontal equalisation. It is also difficult to distinguish equalisation from other grants, which many countries merge into joint arrangements.

Revenue and cost equalisation

A sub-central government's needs are determined by its fiscal capacity, i.e. its ability to raise revenue and the cost of its services. SCGs fiscal capacities vary. To enable SCGs to provide similar services at similar tax levels, most countries equalise both revenue-raising capacities and expenditure needs, while some only have revenue equalisation arrangements. The choice is determined mainly by the system of government. Federal

Figure 5.2. **Comparison of equalisation systems**
Revenue versus cost-based and horizontal versus vertical systems,
as % of total transfer flows



Note: Fiscal equalisation systems can be divided into vertical versus horizontal systems and systems that equalise revenue differences versus systems that equalise cost differences. For example, the systems of Mexico and Spain are vertical (from central to sub-central governments) and rely mostly on cost equalisation, while the system of Sweden leans towards horizontal (between SCGs) revenue equalisation. Most systems are a mix of horizontal and vertical, revenue and cost equalisation.

Source: OECD Secretariat calculations based on Network questionnaire responses.

countries generally practice revenue equalisation, while unitary countries – where central government funds SCGs directly – tend to pursue both revenue and cost equalisation, owing to the much sharper cost disparities at municipal than at state/regional level. Although revenue disparities are between four and six times larger than cost disparities, revenue and cost equalisation systems are roughly the same size (Kim and Lotz, 2008).

Measuring tax-raising capacity

Tax-raising capacity is the per capita tax revenue a jurisdiction could raise if it applied a standard tax rate to a standard set of own-source taxes. One way of measuring it is the representative tax system (RTS). A few main taxes and their tax base are usually sufficient to reflect the overall tax-raising capacity of a jurisdiction. Canada, for instance, in the 2007 reform of its equalisation system, reduced the number of taxes in its RTS from 34 to 5.

Different countries consider different approaches as representative of tax-raising capacity. Some of the most common practices are:

- taking only one or two sub-national taxes or a locally collected national tax;
- using actual tax revenues, although this may provide SCGs with an incentive to reduce their tax effort in order to secure higher equalisation payments;
- artificially inflating population figures for large cities in order to account for their higher living cost (e.g. Austria and Germany) or explicitly refraining from doing so (e.g. Canada), which is likely to penalise large urban areas (Albouy, 2010);
- using state/regional GDP or household income as a proxy for tax-raising capacity (the so-called "macro-approach" applied to some transfers in the United States), although such indicators may give an imprecise, sometimes distorted picture of true SCG funding capacity.

Measuring cost

Ideally, cost is measured in the form of representative expenditure systems (RES) that are based on a set of standard costs per public service delivered. While there is really no such thing as a pure RES, countries have made headway in establishing standard unit costs for individual services – e.g. the cost of educating one pupil in primary school, or the cost of building one road kilometre. These unit costs are then adjusted to account for variations: for example, a pupil in an economically distressed area requires extra help and a mountain road costs more than one in the plains. The unit cost is then multiplied by the number of necessary service units.

A more sophisticated analysis is based on cost functions. It involves relating cost to a number of determinants using actual data from a large number of sub-national governments. However, such regression analyses often deliver unreliable, unstable results and are difficult to convey to policy makers (Kim and Lotz, 2008). Historical cost is a simpler means of assessing SCG needs, although countries are gradually abandoning it as it no longer reflects true sub-national needs. Italy and Spain, for example, have moved from historical to standard cost assessments in recent years. Finally, cost equalisation can be based on actual sub-national spending, although such an approach tempts SCGs to overspend and has become largely obsolete in OECD countries.

Horizontal and vertical equalisation

Most countries combine horizontal and vertical equalisation. Questionnaire responses suggest that horizontal arrangements are more effective as they have higher equalisation effects per monetary unit (Blöchliger and Charbit, 2008). They are also generally more transparent in that they provide greater information on financial flows between donors and recipient jurisdictions.

From a political economy perspective, both systems have their advantages and disadvantages. Vertical equalisation may give raise to a soft budget constraint syndrome, as SCGs may band together and ask central government for ever-increasing transfers. This, however, is strongly dependent on the negotiating power of central government, itself a function of the wider institutional set-up and how strongly SCGs are represented in national parliaments. In horizontal equalisation systems the debate shifts to the sub-national level – i.e. between rich and poor SCGs – as the central government is no longer involved financially.

The equalisation effect

Disparities before and after equalisation

Because fiscal equalisation seeks to reduce fiscal disparities, it should be evaluated on how it achieves that aim. In that regard, Table 5.1 shows the tax-raising capacities of sub-central governments in OECD countries before and after equalisation. In most instances the effect of equalisation is substantial. As measured by the Gini coefficient of tax-raising capacity before and after equalisation, disparities shrink by an average of almost two-thirds, while the ratio between the highest and the lowest tax-raising capacities averages less than 2:1. In some countries – such as Australia, Germany and Sweden – revenue-raising disparities are virtually eliminated. Horizontal systems exert a slightly stronger equalisation effect per monetary unit spent than vertical ones (not shown). Post-equalisation fiscal disparities are clearly narrower than economic disparities as measured by regional GDP – in other words, the capacity to provide public services is more equally distributed across jurisdictions than economic activity.

Table 5.1. **Fiscal disparities before and after equalisation**
Gini coefficients and ratio of the wealthiest to the poorest jurisdiction

	Gini coefficient				Ratio of highest to lowest tax-raising capacity			
	Before equalisation		After equalisation		Before equalisation		After equalisation	
	2005	2012	2005	2012	2005	2012	2005	2012
Federal/regional countries								
Australia	0.05	0.07	0.00	0.00	4.8	7.5	1.0	1
Austria			0.02	0.05			1.1	1.5
Canada	0.10	0.11	0.07	0.08	2.4	2.4	1.7	1.8
China (2010)	0.33	0.31	0.25	0.18	14.4	10.3	9.5	5.3
Germany (2005)	0.06	0.06	0.02	0.02	1.7	1.7	1.2	1.1
Italy	0.21	0.19	0.10	0.04	6.1	4.5	1.3	1.3
Spain	0.15	0.13	0.04	0.05	2.1	3.0	1.4	1.4
Switzerland	0.15	0.17	0.11	0.11	3.8	4.3	2.5	2.6
Unitary countries								
Chile (2010)		0.49		0.14		20.6		2.3
Denmark	0.08	0.06	0.04	0.03	2.2	1.4	2.0	1.2
Finland	0.11	0.12	0.03	0.05	1.8	1.8	1.1	1.4
Japan	0.20				3.2			
Norway	0.13	0.13	0.05	0.04	2.2	2.1	1.3	1.2
Portugal	0.34		0.14		12.7		2.1	
Sweden	0.06	0.07	0.01	0.01	1.4	1.5	1.1	1.1
Turkey	0.22		0.06		65.0		1.7	
Average	0.16	0.16	0.07	0.06	8.8	5.1	2.1	1.8

Sources:

OECD Secretariat calculations based on Network questionnaire responses (2006, updated 2011).

Data for China: Wang, X. and R. Herd (2013), "The System of Revenue Sharing and Fiscal Transfers in China", *OECD Economics Department Working Papers*, No. 1030, OECD Publishing, Paris. *http://dx.doi.org/10.1787/5k4bwnwtmx0r-en*.

Data for Chile: Brandt, N. (2012), "Reducing Poverty in Chile: Cash Transfers and Better Jobs", *OECD Economics Department Working Papers*, No. 951, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eco_surveys-chl-2012-4-en*.

Values for state/regional indicators, which include every single jurisdiction, are not comparable with results at local level. Local governments are grouped into deciles (or "tenths") ranked in ascending order of tax-raising capacity prior to equalisation. The effect of cost equalisation is not shown, as only a few countries supplied data on the cost of providing services. (For further details refer to Blöchliger and Charbit [2008].)

Redistributive effects and equalisation design

The redistributive pattern of fiscal equalisation across types of jurisdictions depends on sub-central revenue sources, the nature of decentralised public services, and the design of the equalisation formula. Revenue equalisation leads to redistribution from urban to rural areas because of the latter's lower revenue-raising capacity. Cost equalisation based on geographical need indicators usually reinforces redistribution to rural areas where infrastructure costs tend to be higher. In contrast, the use of socio-economic need indicators like social welfare weakens redistribution because socio-economic costs are generally higher in urban areas. Still, urbanised areas in most countries remain net contributors to fiscal equalisation systems since higher revenue-raising capacity and lower geographical needs outweigh socio-economic need, as the equalisation experience in Sweden, Finland, Norway, Japan, Korea and Italy attests. Nevertheless, there are a few countries (e.g. the Netherlands and the United Kingdom) where equalisation, if firmly directed at socio-economic needs, does benefit urban areas, especially those with few own resources. Some equalisation arrangements appear bi-polar: they tend to favour the top and bottom ends of the fiscal capacity scale at the expense of intermediate jurisdictions like in Germany and Switzerland.

Equalisation systems do not always adequately address fiscal disparities and, in some cases, may even exacerbate them. There are two main reasons:

1. Some equalisation formulae leave substantial revenue sources out of their fiscal capacity definitions, portraying jurisdictions as much "poorer" than they actually are. In Canada and Norway, the non-inclusion of natural resource income is likely to have undesirable effects on equity.
2. Second, a number of equalisation arrangements (in Japan, Turkey and, until recently, Switzerland) factor in a tax effort indicator, so giving equalisation grants a matching character. Consequently, if a sub-central government raises its taxes, it may get relatively more of the equalisation grant.[2] Political economy forces may thus nudge fiscal equalisation systems into favouring certain types of jurisdictions independently of their needs.

Trade-offs and side effects of equalisation

Revenue equalisation affects tax base development

Revenue equalisation "taxes" the fiscal resources of a jurisdiction. In other words, the greater the economic activity and tax base within its boundaries, the greater the amount that a jurisdiction has to contribute to an equalisation fund. The rate at which a jurisdiction's additional own revenue is taxed away or cancelled out by lower grants is the marginal equalisation tax rate – also known as "tax back" or "compensation rate". It is one of the most hotly debated issues in fiscal equalisation. Whereas sub-national governments devote an average of just over 70% of their additional tax revenue to equalisation, the marginal equalisation rate is close to 100% in some countries (Table 5.2).[3]

Table 5.2. **Revenue equalisation levies a large burden on own-tax revenue**

	Direction	Revenue base	Marginal equalisation rate
Federal/regional countries			
Australia	Vertical	Potential tax-raising capacity, taxes on payroll, property sales, land values, mining activities	n.a.
Austria	Vertical	Tax sharing system, actual tax revenue collected	0% for *Länder* above average fiscal capacity, 88% for *Länder* below
Canada	Vertical	Representative tax system with 33 different taxes	0% per cent for provinces above average fiscal capacity, 70-100% for provinces below
Germany	Horizontal and vertical	Tax sharing system, actual tax revenue collected	15%-85% for *Länder* above average fiscal capacity (progressive scale), 100% for *Länder* below 99.5% of the average
Italy	Vertical	Representative tax system	Between 2% (richest region) and 7% (poorest region)
Mexico		(No revenue equalisation)	
Spain	Vertical	Representative tax system	n.a.
Switzerland	Both	Income tax, wealth tax, vehicle tax	40 to 60%
Unitary countries			
Denmark	Horizontal	n.a.	85% for metropolitan municipalities, 90% for poor municipalities, 58% for others
Finland	Horizontal	Representative tax system based on personal income tax, corporate income tax and property tax	40% for municipalities above 90% of average fiscal capacity, 100% for municipalities below
Greece	Vertical	Actual tax revenue	n.a.
Norway	Horizontal	Actual tax revenue	55% for municipalities above 90% of average fiscal capacity, 90% for municipalities below
Poland	Vertical	Representative tax system based on personal income tax and corporate income tax, actual tax revenue	n.a.
Portugal	Vertical	Actual tax revenue	0% for municipalities above average fiscal capacity, 100% for municipalities below
Sweden	Horizontal	Actual tax revenue	85% for municipalities and counties above 115% of average fiscal capacity, 95% for municipalities and counties below
Turkey	Vertical	Per capita	n.a.
United Kingdom	Vertical	Actual tax revenue	0-100% according to property tax brackets

Source: OECD Secretariat calculations based on Network questionnaire responses, 2005.

High equalisation rates can create moral hazard by undermining sub-central governments' efforts to increase their own tax bases and boost regional growth (OECD, 2006). Sub-central governments may also increase tax rates in order to narrow the tax base and obtain higher equalisation grants, which results in strategic tax-rate setting and an overall increase in taxation levels (see Dahlby and Warren [2003] on Australia, Smart [2007] on Canada, and Büttner [2006] on Germany). Since many fiscal equalisation formulas capture sub-national taxes partially or not at all, SCGs are tempted to avoid taxes that are part of a formula and select those which are not, so distorting sub-central tax structures. A lenient tax collection effort, especially if tax administration is under sub-central control, may also be the consequence of high equalisation rates.

Trade-offs between equity objectives and negative incentive effects may be mitigated if equalisation is designed properly. Many countries have moved towards comprehensive RTSs or central/federal tax bases as indicators of sub-national revenue-raising capacity, thereby leaving jurisdictions less leeway to game the tax base. Including all major sub-national revenues has curbed strategic behaviour and helped achieve a given equity objective with lower equalisation rates – a principle known from tax policy as "tax base

broadening". Imposing ceilings and floors on sub-national tax-rate setting has also helped contain strategic behaviour.

Finally, the overall effects of equalisation on taxation and development efforts depend on the wider economic framework within which sub-national governments operate. Depending on their power to shape economic policy, SCGs may opt for growth even if additional tax revenue is entirely equalised away, and accept a fiscal zero-sum game on the condition that firms grow, that people get jobs, and that their communities thrive (Schneider, 2002).

Cost equalisation can increase spending

Cost equalisation is designed to reduce differences in the per capita cost of SCGs' public services. The main challenge is therefore to address pertinent differences in needs while avoiding wasteful spending and resisting pressure for higher grant entitlements. Cost equalisation gives jurisdictions considerable leeway for influencing spending needs: while some countries operate with only a few broad-based needs indicators, others use relatively complex ones to assess equalisation needs.[4] The criteria for determining equalisation payments are thus frequently rendered prone to sub-national manipulation, thereby leading to inflated equalisation payments. As a result, and although disparities in cost are four to six times smaller than in revenue, cost equalisation systems are often larger than those that address revenue imbalances. Finally, there is evidence that in many countries political interests tweak the equalisation formulae and/or individual entitlements (Box 5.1).

The extent to which cost equalisation can withstand spurious demands while addressing true expenditure needs depends on design. When it relies on actual spending sub-central governments have a strong incentive to inflate their budgets. If based on past (historical) expenditure it reduces budget drift but perpetuates public service spending patterns.

Today most countries are moving towards standard cost approaches, applying objective criteria to help assess true spending needs. Cost equalisation arrangements should be based on only a few indicators encompassing a broad set of needs, and they should be resistant to sub-national manipulation. For instance, the number of teachers is an inept indicator, since it is a number which jurisdictions can tweak. The number of schoolchildren, by contrast, is a suitable indicator – there is little way that SCGs can bend the number of children. Cost equalisation systems that rely on few indicators are more transparent as well. And they trigger fewer statistical headaches when annual equalisation entitlements have to be estimated (Kim and Lotz, 2008).

Cost equalisation and (dis)economies of scale and scope

Public service spending depends not only on need factors, but on production function characteristics such as (dis)economies of scale and scope, too. As noted above, population densities and settlement structures may affect the unit costs of service delivery. Smaller, scattered jurisdictions are more expensive to run since schools, hospitals and other public facilities exhibit fixed costs. Infrastructure and capital-intensive network industries – such as energy or transport systems – exhibit strong economies of scale and scope, and unit costs fall considerably if a large population is served. On the other hand, services such as security or fire protection bring about higher per capita expenditure in densely populated areas. Since per capita cost rise with SCG size for some services while they decline for others, per capita expenditure is U-shaped with respect to municipal size – very small

and very large municipalities show higher per capita expenditure than those in between. Although this U-shape occurs in almost all countries, it is unclear to what extent factors other than scale and scope (dis)economies contribute to it.

Box 5.1. **The political economy of grant allocation**

Grants and tax sharing are affected by political factors that distort equalisation policy. A growing body of literature on fiscal federalism argues that political interests are key in explaining the allocation of intergovernmental grants (Khemani, 2007). Political bias is particularly strong if grants are not formula-determined.

In the United States, party affiliation between federal and state politicians increases the dollar per capita amount of grants made to a state, as does the size of its bureaucracy and union membership (Grossman, 1994). In Mexico transfers allocated in 1992 favoured states that had remained loyal to the dominant party during the previous presidential election in 1988 (Kraemer, 1997). Germany allocates more intergovernmental grants to the regions with higher numbers of electoral districts (Pitlik, Schneider and Strotman, 2006). In Portugal, grants increase in election years. And the longer a mayor has been in office, the more funds are transferred to his or her municipality (Gonçalves and Pinho, 2005). In Spain, more intergovernmental grants are allocated to regions where election outcomes are uncertain (Simon-Cosano, Lago-Penas and Vaquero, 2013). In Sweden, municipalities with many swing voters receive larger grants (Johansson, 2003). In Norway there are persistent disparities in local government grants that cannot be accounted for by regional policy or equity objectives (Sorensen, 2003). In France, the municipal equalisation scheme reduces fiscal disparities by one-third only. High complexity and rent seeking at the local government level dilute the equalisation effect of the French transfer system (Gilbert and Guengant, 2003).

A number of countries have developed various measures to limit the undue influence of special interests. Denmark and Australia, for example, have put in place agencies and other arms' length independent bodies to help contain and channel transfer increases. Independent agencies are less prone to political bargaining and perceive the allocation of equalisation money as a technical rather than political exercise. Research indeed confirms that independent agencies are less prone to political influence than ministries (Khemani, 2007). Norway is one of a number of countries to have introduced a two-stage budget procedure which successfully limits rent-seeking pressures: the overall budget for equalisation is determined before the distribution formula is negotiated among sub-central governments. The process of adjusting equalisation formulae can also be organised to reduce rent-seeking pressures. Many countries not only take into account the opinion of local governments, but also involve civil servants, politicians, and experts.

The most promising way to limit rent seeking and political bias is a simple, transparent, and easy-to-understand equalisation formula with few indicators covering a country's main fiscal disparities.

Many countries run equalisation policies that take the industrial organisation of public services into account and adjust need indicators to municipal size or population density. Such policies bear risk, though, as they may preserve both inefficient public services and an excessively dispersed settlement structure across a country. Equalisation payments favouring small municipalities could prevent them from merging or from finding other forms of joint provision that would help increase service quality or reduce cost. In the long run, scale-adjusted payments may also curtail service providers' search for cost-saving technologies. Finally, agglomeration economies – the productivity advantages of large and densely populated areas over small and sparsely populated ones – may not yield their full

benefits. In some cases, equalisation formulae that adjust for jurisdictional size and related factors deliver awkward outcomes.[5]

Earmarking equalisation transfers

Some countries earmark equalisation transfers and sub-central governments deliver public services under central government's explicit financial control. Such arrangements raise considerable efficiency concerns. Earmarking is a strategy related to input rather than to output or outcome. It creates a considerable administrative burden and high compliance costs for both central and sub-central governments. It reduces sub-central choice and can lead to distorted sub-central budget allocations, especially if grants cover many small budget items. Moreover, if earmarked grants match sub-central spending – so-called "matching grants" – their equalising effect is likely to be weak or even negligible (Box 5.2).

Box 5.2. **Earmarked matching grants in the United States and Switzerland**

Both the Unites States and Switzerland have long used earmarked matching grants to reduce fiscal disparities across states and *cantons*. Such a grant is Medicaid, the medical insurance scheme for low-income people and by far the largest intergovernmental programme in the United States. Federal government's matching rates are inversely related to state per capita income and vary between 50% and 77% of states' expenditure (Laubach, 2005). Most US states also use earmarked grants to finance local school districts with a matching rate that is inversely related to a district's tax-raising capacity. Until 2005, Switzerland's cost equalisation system comprised around 350 earmarked grants. Matching rates ranged from 40% to 95%, again in inverse proportion to the tax-raising abilities and tax efforts of the *cantons*.

The experience after decades of earmarked equalisation is mixed, at best. While state and local governments indeed tend to spend more on subsidised services, the disparity-reducing effect is limited. The US Medicaid programme does little to reduce disparities precisely because poor states tend to spend less on healthcare (Levitt and Poterba, 1994). States' educational grants are estimated to have reduced the large fiscal inequalities among school districts only by between 19% to 34% (Evans, Murray and Schwab, 1997), while cutting expenditure in high-spending districts rather than increasing it in low-spending ones (Hoxby, 2001). At around 3%, Switzerland's earmarked equalising grants had an even lower disparity-reducing effect (Frey et al., 1994).

Both the US and Swiss experiences show that, although poorer regions benefit from higher matching rates, they are also less willing or able to provide own-source funds, so that the overall equalising effect is meagre. The disappointing outcomes of earmarked matching grants led the Swiss government to abandon this type of equalisation in 2006 (Frey and Wettstein, 2008).

If central government is to retain control over the proper use of equalisation funds, it can do so more effectively through appropriate public service regulation – by, for example, setting minimum standards or using output and performance indicators. It should leave the operation and management of fiscal resources to the discretion of local and regional governments (Bergvall et al., 2006).

Equalisation and macroeconomic outcomes

Disparities, equalisation, and convergence

Equalisation may in fact be self-defeating in that it slows down regional convergence. Most arrangements apply higher equalisation rates to poor than to wealthy jurisdictions, mainly by guaranteeing every jurisdiction a minimum fiscal capacity. However, the more generous equalisation is, the less incentive there is for poor regions to catch up or for households and firms to migrate to more prosperous jurisdictions. As a result, disparities may widen rather than narrow. There is some country evidence as to there being a negative relationship between the size of equalising transfers and regional growth performance (Garnaut and FitzGerald, 2002; Baretti, Huber and Lichtblau, 2000). Nevertheless, it is not clear in which direction causality works – whether greater equalisation leads to wider disparities, or whether wider disparities require more equalisation. A comparative investigation into regions in the European Union (EU) suggests that there is a cause-effect relationship whereby large transfer systems appear to slow down regional convergence in certain categories of regions (Kessler and Lehman, 2011).

Are equalisation and stabilisation conflicting policy objectives?

Equalisation is traditionally regarded as a means of redistributing tax revenues among states with different revenue-raising capacities or expenditure needs. It can also be viewed as a device for stabilising local and regional business cycles and for smoothing household income and consumption across a country. Diverging business cycles can become a pressing issue in large, heterogeneous countries. From this perspective, equalisation should both channel income from prosperous to poor regions and from regions experiencing a boom to ones going through recession. Smoothing cyclical fluctuations has long been an issue for European Union member countries (Wyplosz, 1991). Accordingly, the EU institutions recently proposed a stabilisation mechanism explicitly to attenuate the business cycle at country – not sub-national – level across the Union (Van Rompuy et al., 2012).

Unfortunately, most equalisation systems do not stabilise. Equalisation works across jurisdictions but not over time and, rather than ease fluctuations in regional economic activity, it exacerbates them. The Canadian system is disparity-reducing, yet it heightens fluctuations of provincial tax revenues (Boadway and Hayashi, 2003). In Germany vertical equalisation (grants from the federal to the *Länder* level) is also pro-cyclical, while the system's horizontal component generally smoothes regional cycles (von Hagen and Hepp, 2000). A model calculation using EU data finds that a Union-wide fiscal equalisation system would (by definition) redistribute revenues from high- to low-income countries, but that its stabilisation properties would, at best, be neutral and probably pro-cyclical (Bargain et al., 2013).

To some extent, an appropriate design can help address pro-cyclicality. Some countries link intergovernmental grants to lagged fiscal capacity indicators or apply moving averages, thereby smoothing sub-central revenue volatility. Also, horizontal equalisation tends to be less prone to the cycle than vertical equalisation, probably because regional shocks are better absorbed in a horizontal (interregional) arrangement (Büttner, 2009). As a general rule, however, damping cyclical fluctuations and reducing inter-jurisdictional disparities are clearly two different objectives which should be addressed through separate transfer systems.

Sustainability of public finances

Equalisation can weaken sub-national fiscal discipline and put pressure on central government budgets. There is some empirical evidence that a large equalisation system can create a soft budget constraint, blunt sub-national governments' fiscal responsibility, and invite rent seeking. Many countries ensure that their sub-national governments have a minimum fiscal capacity or fully cover expenditure needs, but without putting a ceiling on total equalisation payments. An analysis of 13 OECD countries provides some evidence that intergovernmental grants, which encompasses equalisation, may trigger budget drift (de Mello, 2007). Similarly, research covering Germany suggests that net recipients of equalisation payments hardly reduce their spending when deficits grow, but rely on grants being increased (Stehn and Fedelino, 2009). However, the German transfer system does keep sub-national debt at sustainable levels (Potrafke and Reischmann, 2012). By contrast, analysis of Mexico and Switzerland suggests that central government does – at least partially – give in to sub-central pressure for transfer increases (OECD, 2002). Doing so may not only bias central government's fiscal stance, but may also reduce the overall effectiveness of disparity reduction.

Institutional constraints on budget drift vary from country to country. In itself, horizontal equalisation is less prone to budget drift than vertical equalisation since central government is not financially involved. Some countries, like Canada, cap transfers irrespective of sub-central financial needs. Others, such as Japan, Korea and Portugal, set equalisation payments as a share of total tax revenue or expenditure. This practice limits increases in expenditure, although occasional rises in sub-central governments' share undermine its credibility.

One neat way to curb budget drift is to concatenate vertical and horizontal equalisation. Switzerland, for example, determines vertical equalisation – within a certain range – as a percentage of horizontal equalisation, thereby forging political coalitions between the federal government and some *cantons* against expenditure increases. Finally, countries like Denmark and Australia have established agencies and other arms' length independent bodies to help contain transfer increases (see Box 5.1).

An adequate set of rules on how budgets are drafted, approved, and implemented can also help better align equalisation needs with the available budget. There is some evidence that improved budget management leads to greater fiscal discipline (Ahmad, Albino-War and Singh, 2006). Several countries (e.g. Canada and Denmark) present detailed, binding, medium-term budget projections for equalisation payments and their growth. In a number of countries fiscal equalisation is tied to other transfer mechanisms and scattered over several budget lines, so reducing transparency and complicating the overall picture of the true benefits and costs of equalisation. That said, most central budgets today report a few broad equalisation line items only and some, like Canada, even report equalisation as a single distinct transfer. To limit rent-seeking pressure, Norway is one country to have introduced a two-stage budget procedure, whereby the overall budget for equalisation is negotiated *separately* from the distribution formula (see Box 5.1).

Policy considerations

Fiscal equalisation is a core component of decentralised public finances: it seeks to enable all jurisdictions to deliver similar service levels at similar tax rates even if their tax-raising capacities or service costs differ. The devolution of new powers to sub-central

governments, together with persisting inter-regional differences in economic activity and household income, require equalisation systems to adapt. Reforms of equalisation must target rising inequality, while ensuring that growth in the more productive regions is not held back or jurisdictions' development incentives undermined.

Equalisation is deeply country-specific. Reform considerations and political economy experiences may therefore not be transferable from one country to another. However, it is possible to state a few general rules on the reform of equalisation.

- Equalisation should rely on only a few core indicators that reflect inter-jurisdictional differences in tax-raising capacity and/or spending needs. These indicators should be immune to any manipulation by sub-national governments in order to pre-empt any unfair allocations to jurisdictions or spending excesses by either SCGs or central government. Equalisation should cover the main sub-national taxes and public service responsibilities in order to prevent jurisdictions from setting taxes strategically or core services from remaining structurally underfunded.
- The institutional set-up should help underpin the efficiency of equalisation while keeping equity objectives intact. Horizontal equalisation tends to be more efficient than vertical equalisation in terms of redistribution achieved per monetary unit spent. In all countries, disparities in revenue-raising capacity across jurisdictions are much greater than those in service cost. They should therefore be the first priority of equalisation. The size of a jurisdiction should not enter the equalisation formula, the possible exception being large agglomerations where living costs are high.
- In order to improve transparency, equalisation should be clearly separated from tax sharing and other intergovernmental grants whose purpose is not redistribution. Equalisation should, ideally, be a single transfer that offsets differences in tax-raising capacity and/or one or more transfers that meet differences in spending needs in the main policy areas devolved to sub-national governments – education, healthcare, and infrastructure. Donors and recipients should be clearly visible.
- The impact of equalisation should be regularly monitored. Periodical reviews of the system should assess to what extent equalisation helps reduce inter-jurisdictional inequality and how it affects the efficiency of the public sector, development incentives, overall spending, and tax levels. Equalisation should, in particular, come under scrutiny to ascertain whether it provides insurance against asymmetric shocks. If it does not, equalisation and stabilisation should be addressed by two separate transfer systems.

Notes

1. Tax raising capacity is defined as the tax revenue which a jurisdiction could raise if it applied a standard tax rate to a standard tax base. Tax-raising capacity is either expressed in per capita terms (tax revenue per head) or as a percentage of the national average, which is set at 100.
2. Specific forms of tax sharing can undermine equalisation. For example, metropolitan municipalities in Turkey are allowed to keep 5% of the general tax revenues collected within their boundaries, in addition to general grants inversely related to a jurisdiction's needs. Tax sharing thereby largely cancels out the equalisation effect of general grants.
3. Marginal equalisation rates are extremely difficult to calculate and values should be considered with care. Statutory and effective equalisation rates may differ considerably because tax bases interact and because equalisation formulas fully or partially omit some tax bases. Often the effective rate is endogenously defined, as the total amount to be disbursed is decided first, followed by a calculation of the equalisation rate for each jurisdiction. The marginal equalisation rate must

also be carefully distinguished from the average long-run reduction in SCG fiscal disparity. Both indicators may vary considerably. In Germany, around 50% of the long-run differences in state tax revenue are offset by equalisation (Von Hagen and Hepp, 2000), while in the United States less than 50% of differences in education spending are eliminated (Evans, Murray and Schwab, 1997). In France, national grants reduce inequality among municipalities by 30% (Gilbert and Guengant, 2003).

4. Denmark and Norway each use around 15 socio-economic indicators to assess expenditure needs. Switzerland uses 4 indicators for geographic and 6 indicators for socioeconomic needs. The Netherlands uses 24 indicators to assess needs. Sweden uses 10 different formulas for cost equalisation. On the other hand, the Australian system operates with more than 40, while the Korean system has around 50, which is still less than in the United Kingdom. The French equalisation system consists of seven programmes with dozens of indicators.

5. Australia, Denmark, the Netherlands, Norway, Sweden, and the UK operate arrangements that explicitly take the cost of "density" and "dispersion" into account. Cost equalisation in Austria and the Czech Republic favours smaller municipalities. This could explain the resistance of Czech municipalities to merging and the increase in the number of municipalities in Austria in the 1990s. In Korea, the number of administrative districts and government officials is factored into the local tax share formula, causing the public sector to grow. Until 2006, the Portuguese equalisation system used the number of *freguesias* (parishes or municipal sub-units) as an indicator of a municipality's entitlements, prompting municipalities to divide themselves up still further. The local finance reform of 2007 provides *freguesias* with incentives to merge.

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Chapter 6

Reforming fiscal relations

This chapter explores federal fiscal reforms from the perspective of the political economy of reform. It draws on ten country studies to consider how political, economic and institutional factors shape the design, adoption, and implementation of changes to intergovernmental fiscal frameworks. The chapter first discusses the external conditions most conducive to fiscal federalism reforms. It then goes on to discuss the timing and the scope of reforms. Finally, it assesses the reform process itself and how closely intertwined with policy design it is. The chapter illustrates its observations with the outcomes and examples drawn from the ten case studies and a few other reform episodes. The final section succinctly concludes.

Introduction

The obstacles to fiscal federalism reform

Over the past two decades policy reforms have changed intergovernmental fiscal frameworks in many countries. Reforms such as further decentralisation of tax and spending powers, the tightening of fiscal rules, the territorial re-organisation of public service delivery are shaping the institutional setting within which state and local governments operate. Some countries have embarked on a path of wide-ranging decentralisation reform, while others have adapted existing frameworks to new policy challenges (Box 6.1). Many, however, have encountered difficulties. Reforms have stalled or been implemented only partially, and that after several unsuccessful attempts. The technical and political obstacles to far-reaching fiscal reform are formidable. How, then, may they be overcome and the benefits of decentralised policy making be fully reaped?

Box 6.1. **Why reform fiscal federalism?**

In most OECD countries, the reform of fiscal federalism is driven by a multitude of factors, whether structural, macroeconomic, or political. Sub-central governments are integrated into interregional and international trade and factor flows and vulnerable to the pressures of globalisation. They require changes to sub-central taxation, more productive public spending, and better intergovernmental transfer systems. Responsibilities across levels of government are often blurred, prompting demands for a more efficient division of tasks. Technical progress changes the way public services are provided and consumed, and calls for the administrative reorganisation of service delivery. Demographic change, spatial mobility, and widening interregional disparities – often the consequence of economic agglomeration and the pull of metropolitan areas – all increase pressure to introduce or amend fiscal equalisation systems. Deficit bias and the need for fiscal adjustments call for amended sub-central fiscal rules or other forms of enhanced fiscal co-ordination. In some cases, the need for reform is a consequence of earlier reforms: new spending assignment has sometimes led to unfunded mandates, while other revenue-side imbalances now require improvements to sub-central tax systems or intergovernmental grants. Finally, political movements like communitarianism sometimes demand more local and regional empowerment.

In an effort to help governments understand the obstacles to reform and the best ways to overcome them, the OECD Fiscal Federalism Network has put a set of reform episodes under the lens of "political economy of reform". This concept refers to how political, economic, and institutional factors influence the design, adoption, and implementation of policy changes, and how policy design and the reform process are intertwined. The reform impacts are not evaluated.

Given the idiosyncrasies of fiscal federal institutions, such reforms appear very country-specific and yield little scope for cross-country comparisons. However, policy makers throughout the OECD area face similar challenges and opportunities in making fiscal relations more efficient, more equitable, and more stable. Hence, lessons learned

abroad may be useful. For example, policy makers may be able to influence the timing, the scope, and the sequencing of the reform process, thereby righting the balance between winners and losers and between short- and long-term effects. By adapting the design of reform, they may be able to overcome opposition and secure a majority in favour of reform. This study shows that, despite wide differences in institutional backgrounds, the challenges are similar.

This chapter is related to an OECD-wide project on the political economy of reform (OECD, 2010). The work has covered policy areas such as structural reform, fiscal consolidation, fundamental tax reform, and public administration reform. In this context, intergovernmental institutional frameworks – e.g. the extent to which sub-central governments can influence policy making at the national level – also play a role, as they may shape structural reforms in many policy areas such as product and labour markets (Tompson, 2009).

What is at stake in the reform of fiscal relations?

The problem for policy makers seeking to reform fiscal federalism and local government is that benefits do not accrue to all citizens and jurisdictions alike. While reforms are usually supposed to benefit the economy and society as a whole, their costs and benefits are unevenly distributed – some individuals and groups are bound to be net losers, particularly in the short run. Losers, whose numbers may not be large, often have well identified stakes and interests, which they tend to defend vigorously. As for the beneficiaries of reform, they are often a large, scattered, and thinly spread group who may be unaware of the potential gains. Moreover, the cost of reform is immediately apparent, while the full extent of benefits only emerges later.

The asymmetry between winners and losers in the reform process and uncertainty as to the scale of benefits and how they will be distributed may weaken support for reform. The result may be a bias toward the *status quo* and resistance to reform, even if winners are likely to outnumber losers in the long run. Under certain circumstances, however, can uncertainty about the outcome draw a "veil of ignorance" over reform, whereby stakeholders – unaware of how they will be affected individually – may be ready to agree to social contracts that increase the overall effectiveness of fiscal federalism arrangements.[1]

Fiscal federalism and local government reform can be seen as a blend of structural changes – including taxation and public administration – and may be analysed using the appropriate political economy framework. Fiscal relations reform has its peculiarities, however:

- The main actors and interests are levels of government and individual governments, rather than interest groups outside the public sphere. The fact that governments deal mainly with each other is likely to shape both reform design and the reform process.
- The impact of fiscal relations reform is highly visible, especially in the short run. Administrations are often obliged to quantify short-term effects with great accuracy, leaving both winners and losers with a precise idea of how reforms to the tax system, intergovernmental grants, or fiscal rules affect them individually.
- Fiscal federalism reforms tend to be a zero-sum game in the short run, where one government level or group of sub-central governments (SCGs) stands to lose what another government level or group of SCGs stands to gain. As a result, such reforms are plagued by a strong bias towards the *status quo*. The political discussion revolves around

short-term distributional effects, and stakeholders concentrate their efforts on ending up on the "right" side.

Methodology

This chapter essentially builds on a set of country-case studies in Blöchliger and Vammalle (2012) and applies the method of "focused comparison" (Table 6.1 and Box 6.2). It describes and discusses issues such as the main outcomes and the context of reform, the history of the issues at stake, the actors and interests involved, the design and process of reform, and finally its adoption and implementation in the various countries. A few reforms not specified in Table 6.1. underpin the analysis.

Table 6.1. **The ten case studies**

	Name of the reform, year of adoption	Main thrust of the reform
Australia	Intergovernmental Agreement on Federal Financial Relations, 2008	The system of intergovernmental grants is thoroughly revamped and simplified; grant funding to states is increased; performance-related funding is introduced
Austria	Reform of the Financial Equalisation Law, 2007	Some intergovernmental grants are transformed into tax sharing; grant funding to states is increased; sub-central tax legislation is harmonised
Belgium	Lambermont Agreement on Tax Autonomy and Community Refinancing, 2001	Regions receive more tax autonomy; grant funding to the regions for education is increased; regions get more regulatory power
Canada	Equalisation Reform, 2007	The national equalisation standard is redefined; the representative tax system is simplified; caps on equalisation payments are abandoned; natural resource revenue is partially taken into account
Denmark	Local Government Reform, 2007	Municipalities are merged; the county level is abolished; a regional level for health care is created; a new funding and equalisation system is set up
Finland	Restructuring of Local Government and Services, 2008	Financial incentives for municipalities to merge or to co-operate are created
Italy	Law 42 on Fiscal Federalism, 2009	Framework law: spending obligations must be covered by own taxes; equalisation should be based on tax-raising capacity and standard cost; sub-national accounting should be harmonised
Portugal	Local Finance Reform, 2007	The grant system to municipalities is reformed and simplified; horizontal equalisation is introduced; municipal fiscal rules are tightened; municipal accounting is reformed
Spain	Reform of the Autonomous Community Funding System, 2009	The share of the Autonomous Communities in shared taxes is raised; equalisation is reformed; new intergovernmental grants are created and new criteria for grant allocation established
Switzerland	Reform of Fiscal Equalisation and of Responsibility Assignment, 2004	Reassignment of several policy areas to either the federal or cantonal level; redesign of equalisation; rules for inter-cantonal collaboration

Source: Blöchliger, H. and C. Vammalle (2012), *Reforming Fiscal Federalism and Local Government: Beyond the Zero-sum Game*, OECD Publishing, Paris. *http://dx.doi.org/10.1787/5k4bwnwtmx0r-en*.

The reforms studied were adopted between 2001 and 2009, so mostly before the onset of the 2008-09 crisis. They are listed below, although a single reform generally covered more than one policy field:

- fiscal equalisation programmes introduced or amended;
- (non-equalising) intergovernmental grant systems upgraded, with the switch from earmarked to non-earmarked grants being particularly important;

Box 6.2. **The method of "focused comparison"**

The "focused comparison" method entails asking the same questions across a large number of cases in order to discern similarities among them (Tompson, 2009). Findings generated in this way do not enjoy the level of formal verification that may be achieved via quantitative analyses of a very large number of cases. However, focused comparison does offer significant advantages, chiefly by facilitating a more detailed study of the context-dependent nature of the relationships between certain variables. In particular, it permits a greater degree of "process-tracing" – i.e. tracking the links between possible causes and observed outcomes in order to assess whether the causal relationships implied by a hypothesis are evident in the sequence of events as they unfold.

Because it examines specific cases in depth, rather than simply comparing data across cases, a focused case-study approach is better able to explore the policy process, to take account of institutional and political complexities, and to explore more complex causal relationships, such as path dependence or the issues that arise when, for example, a given factor may favour the adoption of a reform but hinder its implementation. A case-study approach also permits the exploration of variables that can be extremely difficult to quantify or code for inclusion in regression analyses.

Source: Tompson, W. (2009), *The Political Economy of Reform. Lessons from Pensions, Product Markets and Labour Markets in Ten OECD Countries*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264073111-en*.

- sub-central fiscal rules introduced or tightened;
- sub-central tax systems reformed;
- the territorial organisation of public service delivery restructured, which included the merging of municipalities;
- inter-jurisdictional co-operation enhanced and a new layer of regional government introduced;
- fiscal relations powers and competencies reorganised across ministries.

While the ten reform cases might give a comprehensive picture of the reforms recently on the agenda in OECD member countries, the case studies suffer from selection bias in the sense that all reforms under scrutiny were adopted and can therefore be considered "successful". Moreover, all countries have implemented their reforms sustainably: since they were adopted, they have not been reversed or watered down. The sole exception is Canada's Equalisation Reform, some elements of which were rendered untenable by the 2008 crisis.

The country case studies do not cover reforms that eventually stalled or analyse the factors behind them. Nor do they cover situations where the government considered reforms urgent but has so far made no serious attempt to carry them out. In the light of this selection bias, it is clear that the present study has more to say on the factors that promote comprehensive fiscal federalism reform than on the obstacles that impede them.

The reform context

This section describes the factors which, although they shaped and influenced the reforms and the reform processes in the ten case studies, were largely outside the control of policy makers.

Sound economic and fiscal conditions favour successful reform

One of the most salient conclusions of the country studies is that a sound economic and fiscal position is closely linked to the success of a reform. While some reforms were initiated during times of economic slack or driven by the need to consolidate, they were literally all implemented when central and, to a lesser extent, sub-central public finances were in good shape.[2] Good economic conditions and sound fiscal positions help central governments "buy" reforms and grant a reform dividend on the spot, such as in Australia and Belgium, where spending on grants for education was considerably increased. Swiss policy makers acknowledge that their reform would have failed had economic conditions not been particularly benevolent. The role of a sound fiscal position is most obvious in equalisation reforms, where explicit distributional objectives inevitably play out in a zero-sum game of short-term winners and losers among SCGs. In Canada, annual economic growth of 4% and buoyant revenues allowed the federal government to increase equalisation payments considerably.

The prospect of sustained growth may also have convinced SCGs to accept higher volatility or uncertainty of their revenues. For example, in the 2007 Austrian reform, buoyant tax revenues made it easier for the states to switch from a (stable) intergovernmental grant to (cyclically fluctuating) shared taxes. In Portugal, higher municipal property taxes, and growth prospects during the reform period, reduced opposition from potential losers from the transfer reform. In contrast, the 2008-09 crisis severely scaled down a planned grant reform in Finland.

The 2008 crisis and its fiscal implications are likely to alter the economic and fiscal environment for reform for some time to come. Most of the reforms studied were adopted before central governments had embarked on fiscal consolidation. Few were adopted during the crisis, although Canada's tax harmonisation was influenced by the downturn and by the need to ease the economy out of recession. The implementation of Germany's new constitutional fiscal rule still benefits from relatively favourable economic conditions. Australia's intergovernmental agreement was implemented as part of a fiscal stimulus programme. Portugal's local government reform, part of a strategy of fiscal retrenchment, was the only reform studied that was fiscally "neutral", i.e. where central government did not put additional resources on the table.

Generally speaking, while good economic and fiscal conditions appear to favour reforms that increase equalisation and prompt more generous hand-outs to SCGs, economic and fiscal crises are likely to trigger reforms that improve sub-central government efficiency and ensure fiscal discipline. Recent instances of a tightening of fiscal rules can be attributed to the need for fiscal retrenchment (see Chapter 2 on fiscal rules and Chapter 1 on fiscal consolidation). Weak growth and a lack of financial resources now look set to curtail central government's role as paymaster. The coming years will show what type of reforms can be initiated, adopted, and sustained under conditions where central governments can no longer afford to pay.

Electoral mandates are useful but not crucial for success

Electoral mandates were an important driver in the instances of fiscal federalism reform under study, although intergovernmental fiscal relations seldom featured as a high priority in election campaigns. Once a new government was elected on a platform that included fiscal relations reform, it tended to act quickly, as Australia, Belgium, Denmark and

Portugal demonstrated. By contrast, governments without a mandate were wont to engage in small, often piecemeal, reform attempts. Compulsory mandates – e.g. the obligation to amend fiscal relations every four years as is the case in Austria – may create a positive climate for reform although, once again, scope and outcome depend on the electoral mandate. The more convincing the mandate, the more comprehensive the result of the reform tends to be. Before the onset of the global downturn in 2008, electoral mandates to increase the efficiency of public services, reduce fiscal disparities, or increase sub-central fiscal autonomy were stronger than those for sub-central fiscal consolidation and tighter sub-central fiscal rules. And reforms themselves also tended to be bolder.

Electoral mandates are not always necessary, however. Fiscal federalism itself is a technical topic that arouses few political emotions, except when voters are strongly attached to "their" jurisdiction or "their" local service provision. Interest in which government level provides a public service is slight. Voters are usually keener that it be tailored to their needs and delivered at a reasonable cost. In the reforms under scrutiny, electoral campaigns tended to focus more on generic objectives such as "more autonomy", "better public services", and "fair regional distribution" than on the intergovernmental mechanisms that were necessary to achieve them. Only with time did governments become aware that fiscal relations played a pivotal role in their endeavour to reform their public sectors, public finances, and tax systems. Moreover, it was generally experts or administrators rather than politicians who drove reform, so keeping discussions at the technical level and below the radar of party politics. Since fiscal relations are rarely viewed through an ideological prism, governments have some scope for negotiating a reform that may not initially have been on the political agenda, as was the case in Finland's municipal grant reform.

Constitutional provisions may slow reform

Constitutions and electoral systems may give jurisdictions considerable power to shape reform or veto undesired outcomes. In a number of federal countries, both parliamentary chambers have to approve reforms, with the second chamber representing the states or regions, such as in Germany or Switzerland. In some unitary countries, especially the Nordic ones, municipalities enjoy fiscal and administrative self-governance that restricts central government's ability to change acquired rights against their will. Certain forms of collaborative federalism and comprehensive consultation across government levels and with other social groups strengthen SCGs' powers and further limit those of central government.

The SCGs' size and economic clout may also strongly influence the outcome of reform, often to the advantage of small and/or economically lagging SCGs.[3] A system of many small electoral districts is likely to favour redistribution and the interests of certain groups over considerations of efficiency (Rodden, 2009).[4] Finally, SCGs with strong regionalist ambitions and the ability to deliver crucial swing votes may also determine the fate of fiscal relations reform, as in Italy or Spain. In sum, an institutional bias towards the *status quo* can thwart radical reform efforts if they do not benefit a large majority of SCGs.

An added complication is that any reform of fiscal relations requires government departments at different levels to reform themselves. They must design and implement measures that may have an unwelcome effect on parts of their own constituencies (Charbit and Vammalle, 2010). While internal distribution of power between ministries may increase administrative efficiency, it may also spark resistance, particularly when the power to oversee fiscal relations is shifted from line ministries and concentrated in the hands of the

Ministry of Finance. The cases of Australia or Finland suggest that ministries with close ties to their constituencies, like education and healthcare, may sometimes slow down the process or tilt it towards their own interests. Generally speaking, some of the reforms under scrutiny, like the switch from earmarked to non-earmarked grants, encroached on special interests within and outside the public administration and met with tacit resistance that could often be only partly overcome.

Widening the scope of fiscal federalism reform can help surmount such a *status quo* bias. One way is through internal market reform, e.g. removing trade barriers between SCGs and incorporating the interests of the business sector. Even then, however, as reform in Australia showed, businesses in protected markets may be hostile.

Timing and scope

Reforms must be ripe

Reforms must be "ripe". There may be several aborted attempts or even reversals before a reform of fiscal relations is successful. The framework in which sub-central governments operate is often built into the founding principles of a country. A shared perception that fundamental institutions are failing is likely to evolve only slowly. Moreover, intergovernmental frameworks are very country-specific, so there is seldom an applicable blueprint or showcase to guide reform.

However, earlier piecemeal, or failed, attempts may well raise awareness of the shortcomings of the *status quo* and guide policy makers towards a fruitful approach to fundamental reform. In several of the cases examined, failed attempts had built up expectations and pressure for change, by which time the established system had become so inefficient or inequitable that governments were ready to act quickly and comprehensively. It took Denmark four attempts to reform its municipal system, and the German debt brake was only adopted after several Federal Court rulings had started to threaten fiscal sustainability at both the federal and state level. Ripeness for reform is to some extent endogenous, and policy makers can foster a propitious climate by pushing for reform even if initial attempts are likely to go nowhere.

Pilot programmes can help pave the way. Nordic countries successfully restructured their municipal systems because policy makers could point to successful experiments with local governments.[5] They demonstrated the feasibility of a new approach and helped to overcome resistance. In Canada, the tax accords between the federal government and three small provinces helped clear the way for sales tax harmonisation in the larger, more economically important provinces. In Australia, successful public sector reforms in individual states revealed the need for federal reform, especially in the funding and delivery of public services. In Switzerland in the mid-1990s, several federal-cantonal financial management pilot programmes were set up, showing both the desirability and feasibility of a wide-ranging reform. To put it in a nutshell, new management techniques can be tried out in selected policy areas before they become the rule for the rest of the intergovernmental framework.

A final consideration is that "asymmetric federalism" can also advance the cause of reform. It is an institutional setup in which one or more SCGs have greater prerogatives with respect to tax or spending powers than other SCGs – a common feature of OECD countries like Spain and Italy which are on a secular decentralisation momentum. Once a reform is implemented in a selected SCG, others may demand equal treatment, so broadening the

compass of the reform until it embraces all SCGs. In time, symmetrical fiscal relations, under which all SCGs are governed by the same rules, are restored.

Central government must often mediate between diverging SCG interests

Levels of government and individual jurisdictions were the main actors and interest groups in fiscal federalism reform. In the country cases under study, governments tried to improve efficiency and equal access to public services. In order to reduce sub-central deficit bias, most central governments also moved to harden sub-central budget constraints, usually by tightening sub-central fiscal rules or by granting more tax autonomy to SCGs. In most cases, the various rationales for reform overlapped, particularly in their mix of efficiency and equity objectives. SCGs rarely opposed such demands and, in some cases, even acted as early promoters, as shown by the Australian and Swiss cases. Indeed, several reform episodes saw central government passively reacting to sub-central demands rather than pushing through its own agenda.

There was often greater divergence over reform *between* SCGs than *across* tiers of government and central government had to balance conflicting SCG interests. SCGs with an efficient public sector preferred tax autonomy over grants and subsidies, while the less efficient ones opposed it, as in Austria, Belgium, or Italy. Poorer SCGs, often a majority, demanded greater equalisation, while their wealthy peers sought to curb redistribution, as in Canada or Switzerland. SCGs with high debt and deficit levels fought tighter fiscal rules, while those with robust fiscal positions took a more relaxed stance, as in Portugal. Poor SCGs tended to be in favour of mergers with better-off ones, while the wealthier ones lobbied hard against them, fearing that average service levels would suffer or tax rates go up, as shown by the Danish reform. There were cases of conflicts between SCGs being swept under the carpet so as not to weaken negotiations with central government, albeit at the expense of lengthy inter-jurisdictional negotiations. To sum up, then: most fiscal federalism reforms tend to entail greater conflict among SCGs than between the central and the sub-central levels, especially when, at an early stage of reform, central government sees eye-to-eye with a few reform-minded SCGs.

A final point is that the interests of individual jurisdictions or levels of government have a stronger impact on the outcome of a reform than party ideologies. There were several reform episodes where political party members took up different stances depending on whether they were acting at central or sub-central level. Conversely, parties of different ideological stripes joined forces across levels of government to pursue a reform. In some cases, particularly where reforms concerned tax autonomy or fiscal equalisation, members of the same party held different views across sub-central jurisdictions, although this was not explicitly acknowledged. The boldest reforms, however, were passed when the same parties or party coalitions enjoyed a majority at central and sub-central levels of government, as political doctrines were behind the most crucial elements of reform. In Australia, Belgium and Portugal, a single party or party coalition held a majority at both government levels at the time of reform adoption.

Bundling to forge majorities

Most fiscal federalism reforms shown in Table 6.1 consist of comprehensive bundles that offer benefits to a wide spectrum of actors and interests. Although the inertia of fiscal federalism frameworks points to the difficulties of engineering a wide-ranging reform,

a big-bang approach may prove easier to pursue than a gradual, sequential approach.[6] Sweeping reform may actually be necessary if there are many veto players whose support is crucial for success. In a number of the countries under scrutiny, separate individual reforms that met the demands of certain stakeholders, were bundled in a package in order to obtain the majority needed to pass the main fiscal federalism reforms. Bundling made it possible to distribute the benefits of reform more evenly across SCGs and stakeholders. It had the additional advantage of giving governments an opportunity to offer individual actors a "take-it or leave-it" package. It also locked in veto players, as shown in the Australian reform in particular: no single actor could expect to renegotiate reform proposals that were anchored in the package, because that would have compromised the positions of other actors and the outcome of the entire reform. Bundling also allowed pursuing long-term objectives. Indeed, wide-ranging packages attempted to strike a balance between efficiency and inter-jurisdictional equity, while small-scale reforms were largely perceived as short-term and distributional.

In the reform cases under scrutiny, amendments designed to improve efficiency and sustainability – greater tax autonomy, general-purpose grants instead of specific ones, mergers of small municipalities, and tighter sub-central fiscal rules – were often bundled together with distributional objectives, e.g. more grants for SCGs, stronger equalisation, tax credits for low-income earners, and service guarantees in remote areas. The Swiss fiscal equalisation reform, for example, incorporated provisions that met the demands of a range of SCGs – from poor rural ones with low public service costs to wealthy ones with high service costs. The Canadian province of Ontario offset the increase in the sales tax burden with a lower corporate income tax and cash payments for households. There were several instances of countries where grant reforms – especially those that instituted general-purpose grants – were met with increases in transfers from central government. Some territorial reforms benefitted rural and urban areas of different economic strength. One was the merger reform in Denmark that assigned the municipal level of government greater powers and responsibilities, in some instances at the expense of another tier of territorial government. A tighter sub-central fiscal rule was sometimes coupled with extra funding for highly indebted or poor jurisdictions, while in some cases, the scope of a reform was widened to include other policy areas. For example, Australia's fiscal federalism reform built in incentives to reduce interstate trade barriers, while Denmark's ushered in a healthcare reform.

One important drawback of bundling is that, if it goes too far and tries to satisfy too many stakeholders, it may render a reform inefficient and unsustainable. Bundling may turn into log-rolling – where special interests join forces to the cost of other, less well organised, groups.[7] Bundling often involves central government "buying" the support of opponents of reform. Although some additional transfers could be justified on the grounds that efficiency gains – such as internalised externalities or lower administrative cost – accrue to the country as a whole, the country studies suggest that fiscal relation reforms are often very costly for central government. And even strong bundling may not achieve all the desired objectives: further sub-central tax autonomy, which was on some countries' agendas when they initiated their reforms, was mostly scaled back or dropped completely during the actual reform process, most prominently in the case of Austria or Belgium. In several instances, neither central government, reluctant to lose central budget oversight, nor sub-central governments, which feared heightened uncertainty over revenue, showed sufficient interest in greater tax autonomy.

Sequencing: an alternative reform strategy?

Sequencing – i.e. adopting reforms in consecutive steps – may be an option if demands for institutional change and decentralisation are persistent and if decentralisation can be partitioned into steps. A sufficient majority must then be mustered at each step of the reform process without bundling. Countries on a secular decentralisation roll like Belgium, Italy and Spain follow such a practice.

Reforms started with the decentralisation of spending responsibilities, with SCGs being funded through earmarked grants. The following step was a move from earmarked to general-purpose grants, sometimes tied to more results-based regulation. At the next stage, grants gave way to tax-sharing systems and finally to autonomous taxes, thereby increasing sub-central tax autonomy. Such sequencing gave time to test the gains obtained by decentralisation, which, if considered satisfactory, created impetus for further reforms. However, each step had to be successful and was deemed so only if its efficiency gains outweighed the associated distributional conflicts (Rodrik, 1999). In this respect, spending decentralisation was easier to engineer than tax decentralisation which prompted fears of increased interregional disparities.[8] In some countries, distorting SCG autonomous taxes were superseded by tax-sharing systems or intergovernmental grants. Although they were supposed to increase the efficiency of the tax system, they also curtailed SCG tax autonomy.[9]

In designing fiscal relations reforms, policy makers may have to consider some trade-offs between bundling and sequencing, i.e. between adopting a comprehensive reform as opposed to pursuing an incremental strategy. As described above, most fiscal federalism reforms tended to follow the bundling approach as they were wide-ranging and bore little resemblance to previous reforms or those undertaken in adjacent policy domains. Exceptions were Italy and Switzerland which used a sequential process, implementing constitutional amendments before lower-level laws and decrees. Australia, by contrast, postponed certain problematic elements of its reform, such as the measurement of public sector performance.

Speed may help, but reforms take time

Speedily enacting a reform may demonstrate it is ripe, provide the momentum to bring it to fruition, and show that a newly elected government is taking its mandate seriously. Opposition parties may well be in disarray after losing the election and policy makers can tackle vested interests unprepared. And if a reform is adopted in the immediate aftermath of an election, its effects have time to unfold before the next one. Moreover, speed may briefly draw a veil of ignorance over a reform (see Note 1), affording stakeholders a general view but not leaving them time to assess how they will be affected individually. Reform speed in Australia was enormous after the new government had come to power.

Nevertheless, speed may discourage debate. The fact that fiscal relations reforms are often highly visible makes it difficult to maintain the veil of ignorance over them for long. They may call for lengthy consultation with potential veto powers and fine-tuning so that they are acceptable to a majority. Well prepared reform proposals that are considered impartial can sometimes even be implemented by a new government of a different political persuasion, as the Canadian equalisation reform demonstrates. The trade-off between speed and inclusion depends on the electoral mandate, the number of potential veto players, and the institutional framework to address them. In general, though, the special nature of fiscal relations reforms calls for the inclusion of a wide range of stakeholders.

Designing the reform process

Political leadership accelerates reform

Political leadership is a significant driver of reform. Ultimately, it is politicians and political parties who must pass a reform and believe that it is in the wider interest. In some reform case studies, best exemplified by Australia, Belgium or Denmark, the involvement of ministers or even the prime minister helped reform through where earlier attempts had failed. In Finland, the personal commitment of the Minister of Regional and Municipal Affairs was all the more important, in that he was a member of a political party that traditionally opposed municipal mergers. Conversely, the lack of strong political leadership could explain the setbacks that blocked some reform attempts and the inability of stakeholders to reach consensus on controversial elements. The credibility of political leadership stood to gain if leading politicians or jurisdictions had no direct stakes in the reform and acted as honest brokers across government levels or between SCGs, as happened in the Austrian, Italian, and Swiss cases. In some countries, however, the government provided no initiative. Instead, it passively followed the advice of its civil servants and external experts while keeping a low political profile. Such "depoliticisation", a feature of the Canadian equalisation reform, can be an alternative route to reform and may help avoid reversals once a government of a different colour is elected.

External and independent expertise lends credibility to reforms

Experts and expert panels operating outside the direct influence of an administration played a significant role in a number of countries. In some countries, especially Australia, Canada, Portugal and Switzerland, they were actually a precondition for success. The fiscal federalism and tax reforms were often highly complex and required experts with the technical expertise to assess both the status quo and the impact of reform proposals. Moreover, impartial scrutiny from independent experts created and sustained a sense of political credibility among the public. Particularly in polarised political environments, where central government was at odds with the sub-central level, or where SCGs or political parties strongly disagreed among each other on the scope of a reform – or even the need for it – outside experts were able to break the deadlock.

In a number of instances, panels of experts set out the strategic reform issues, helped to consolidate and streamline the reform proposals, and designed and shaped the central pillars of the reform. Government research institutions in some countries, e.g. Finland, played a similar role. Their publications set reforms in motion or accompanied the process. Independent commissions, too, supplied additional input from outside the traditional realm of fiscal federalism. For example, the case for the Australian reform drew on former recommendations of the Productivity Commission. In general, a strong presence of trained economists underpins the consistency, simplicity, and political feasibility of reform proposals. Conversely, a lack of independent, credible experts was considered an impediment to a bold reform, as it happened in Austria.

Consultation should focus on a reform's long-term impacts

The largely institutional nature of fiscal federalism reforms made it critically important to consult and involve main stakeholders. Comprehensive consultation rose awareness of reform and helped build a majority in favour, so creating a sense of ownership. And when

stakeholders felt they had had a part in designing a reform, they were more likely to defend its outcome. Consultation and involvement helped to lock in each stage of the reform. Once stakeholders had agreed to a proposal, it became more difficult for them to contest the reform when its impacts became apparent. Italy was one example of this approach. Broadening the scope of consultation to stakeholders from outside the government sphere complicated matters, however, particularly when reform addressed sub-central tax systems or frameworks underlying the funding of earmarked grants.

While wide-ranging consultation is often considered necessary because it brings the main stakeholders on board, it can also jeopardise reform efforts. Too much consultation was thought to inflame opposition. From the various country studies, it appears that the most successful consultation and involvement processes were those where governments were generally parsimonious with figures, as happened in Australia, Canada or Switzerland: they shunned any precise assessment of a reform's short-run impact on individual SCGs and, instead, presented and discussed the overall objectives. In this way, governments sought to shift the focus away from distributional effects and onto long-term efficiency objectives. That said, it is difficult to maintain such a veil of ignorance in a policy environment where short-term distributional impacts are easier to quantify than long-term effects.

Transitional arrangements may be necessary

Transitional arrangements were a frequent expedient for surmounting opposition while maintaining the fundamentals of a reform. In many cases, they were brought in late in the day as the ultimate resort for securing a majority. Transitional "cohesion funds", as in the Swiss case, and other entitlements ensured that hardly any SCG lost out financially for long.[10] Job guarantees for civil servants for a limited period – as in the Danish case – lessened opposition from the public administration. Several countries – e.g. Austria or Australia – gradually phased in new arrangements that helped to ease disruptions and discontinuities in transfer flows. Grandfathering rights and similar compensation mechanisms – as in Portugal or Spain – minimised any short-term changes in SCG revenue rankings as measured in tax capacity or the size of transfer, for example. Transitional arrangements had benefits beyond securing the success of a reform: distinguishing between permanent and transitional arrangements helped ensure the overall consistency of a reform, since all messy political compromises were relegated to the transitional arrangement. They generally put a considerable burden on central government, however. As many of the observers interviewed during the study lamented: "Central government always pays."

When a small number of stakeholders with considerable veto power – especially certain SCGs – categorically reject a reform, they may be allowed to opt out. An opt-out clause now allows Danish municipalities to refuse to merge under very restrictive conditions. Case studies suggest that granting an opt-out right to a small number of SCGs can help reduce opposition for little cost – provided that the reform's principal economic and fiscal outcomes are not affected and that there is no resentment among other SCGs.

The administration should speak with one voice

A crucial factor in the success of the reforms under scrutiny was an efficient management and oversight process. In general, central government's ministry of finance or interior ministry – or a body that encompassed all tiers of government – managed and oversaw fiscal relations reforms. By their very nature, such reforms cut across several policy

areas. Various other ministries were therefore also involved, especially in those countries where the allocation of intergovernmental grants was traditionally shared across ministries. Reforms tended to advance more rapidly if the administration spoke with one voice, i.e. if one ministry took charge and the others headed working or project groups, as happened in Belgium or Switzerland. Lead ministries in some countries were aided by vertical and horizontal intergovernmental bodies created to help select and bundle reforms, as with the Council of Australian Governments (COAG) in Australia. Other countries – e.g. Canada – explicitly pulled back from creating additional bodies on the grounds that they would procrastinate and develop their own agenda.

If administrative leadership was weak or shared between ministries, reforms were more likely to stall. Inter-ministerial infighting weakened reform. It was for that reason that several fiscal federalism reforms were enacted in conjunction with a reform of inter-ministerial financial management or administrative powers and responsibilities. In a number of cases, tasks such as the responsibility for disbursing intergovernmental grants, previously carried out by different ministries, was concentrated in a single one, as most prominently shown by Australia and Finland. Indeed, many reforms may have shifted power from line ministries to the Ministry of Finance.

Communicate the policy behind the numbers

Most governments made considerable efforts to "sell" their reforms. Highlighting their long-term efficiency gains helped muster support from the winners, who were often scattered and not fully aware of what they stood to gain. Public relations campaigns also helped identify potential problems with individual elements of a reform. In several countries – e.g. in Australia and Canada –, reports from panels of experts were widely disseminated and discussed at public hearings in order to bring the main stakeholders on board. In other cases, special seminars were held to outline reforms to the media, as happened in Switzerland. "Stealth" reforms which escape the attention of the public may at first appear expedient, but they should be weighed against how such an approach could undermine a government's credibility. The case studies indicate that the most successful efforts at communication emphasised long-term benefits.

A strategy for presenting a reform to the public is equally important. Fiscal federalism issues are abstract, highly technical, and often accessible only to experts. Voters usually care little about who is responsible for a given public service or who taxes their income and property, but they are interested in decent services, low taxes, and sustainable public finances. Reformers thus conveyed the policy intentions behind the formulae and numbers. In the case studies, they used catchy slogans such as "better services" (Australia), "more autonomy" (Portugal), "save federalism" (Switzerland), "save the country" (Belgium) and, in some instances, "save the reform" (Austria). They communicated the importance of tighter sub-central fiscal rules as part of a fiscal consolidation strategy and the need for different government levels to co-ordinate their efforts in order to restore a sound fiscal position. Finally, in most cases, public relations campaigns stressed that the reform would bring both greater efficiency and a more equitable distribution of fiscal resources across SCGs, as happened in Switzerland.

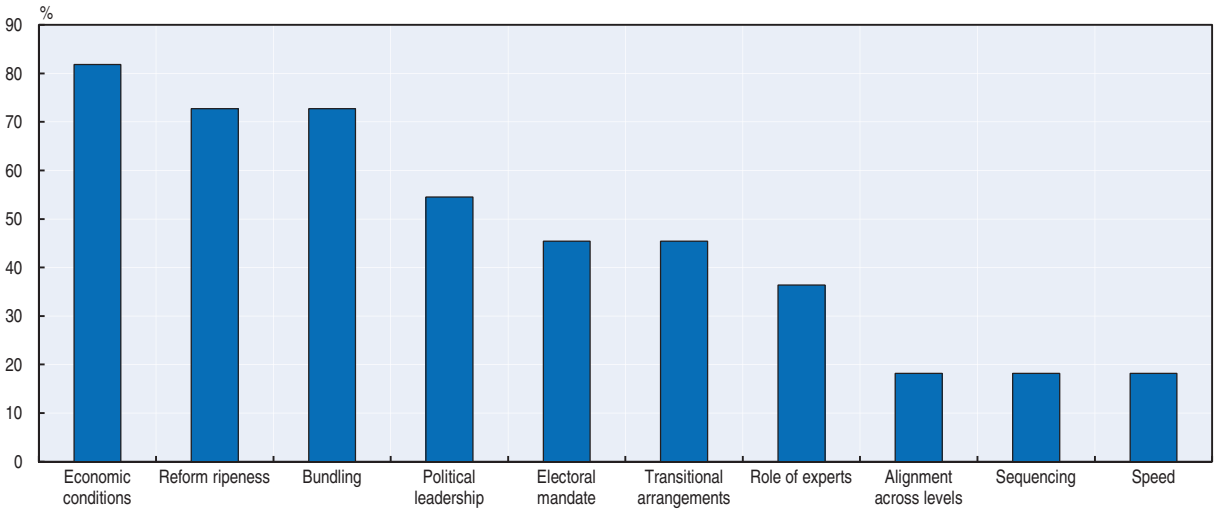
Policy considerations: What elements make for successful reform?

This chapter has reviewed the political economy drivers that make federal fiscal reforms happen – in other words, how a successful combination of political, economic and institutional factors shape the design, adoption, and implementation of changes to the intergovernmental fiscal framework. Although fiscal federalism is very country-specific, numerous drivers are common to reforms and reform processes in all countries. Policy-makers do not necessarily control factors like economic and fiscal conditions, the electoral mandate for reform, or a country's constitutional background. But they can groom a reform by carefully timing it, giving it the right scope, and designing an appropriate reform process.

Some factors weigh more heavily than others in the success of a reform (Figure 6.1). Experience from the eleven country cases suggests that good economic and fiscal conditions are particularly important, although that may no longer be wholly true given countries' weak economic and fiscal performance over the past few years. Reform ripeness is also crucial. Bundling reforms into a single package is an effective way of securing majority support. Some factors may be essential in one country but of minor importance in others, reflecting the idiosyncrasies of fiscal frameworks. Although steering a reform away from political pitfalls is still more art than science, a careful analysis of past experience might help increase the science in future reform management.

Figure 6.1. **Important factors in successful fiscal federalism reforms**

Percentage of reforms where a factor was considered important



Note: A factor is considered "important" if it is specified in the summary of each country study in Blöchliger and Vammalle (2012). Maximum importance is 100% or 11 specifications. "Alignment across levels" means that the same party or party coalition held a majority at the central and sub-central government level.

Source: Blöchliger, H. and C. Vammalle (2012), *Reforming Fiscal Federalism and Local Government: Beyond the Zero-sum Game*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5k4bwnwtmx0r-en*.

StatLink http://dx.doi.org/10.1787/888932911860

Notes

1. The "veil of ignorance" is a concept originating in political philosophy that explains how productive arrangements and social contracts evolve (Rawls, 2001). The "veil of ignorance" and the "*status quo* bias" are opposite outcomes of the same underlying fact, namely uncertainty. Somewhat simplified, the veil of ignorance assumes that overall efficiency gains will help to pass a reform because the average gains are assumed to be positive and nobody knows about individual outcomes. The *status quo* bias assumes that uncertainty about individual outcomes will block a reform because risk aversion puts a negative value on the stakeholders' expected average outcomes.
2. Indeed, one of the most robust findings to emerge from econometric work in the field of the political economy of structural reforms is that sound public finances are associated with more comprehensive reforms (Tompson, 2009).
3. The Canadian equalisation formula, with its strict reliance on tax-raising capacity, favours poorer and less urbanised provinces where the cost of living is lower (Albouy, 2010). The Austrian reform of 2007 has reduced the equalisation premium for large urban areas, while the new Swiss equalisation formula does not include such a factor at all.
4. It is for that reason that constitutional economists have suggested abandoning electoral districts (at least partially) and running elections at the national level. Given that members of a national parliament would need votes from the entire country, they would be more inclined to adopt a "national", aggregate view of reforms than defend special SCG interests.
5. The Finnish government did not, however, capitalise on the experiment it carried out in the northern part of the country. Instead it chose a different institutional solution to the problem of municipal fragmentation.
6. In this respect, the political economy of comprehensive fiscal federalism reforms tends to be akin to fundamental tax reforms (Brys, 2010).
7. Log-rolling is an exchange of votes in a legislative process whereby two parties, who each need a partner to push their priorities through, create a common platform. One group supports the demands of the other group with which it has little common ground, or that it mildly opposes, in exchange for obtaining the other group's support for its own aims. Log-rolling works if the interests of other parties are relatively weak and dispersed. The benefits of log-rolling are controversial in the economic literature: while some see it as enhancing the efficiency of a reform process, others see it as rent-extracting (Crombez, 2000).
8. Germany, whose Fiscal Federal Reforms I and II involved the reassignment of several policy areas, abandoned plans to devolve taxing powers to the Länder (states).
9. In 2000, the Australian Goods and Services Tax replaced a set of inefficient state consumption taxes. Although all tax proceeds are transferred to the states, the latter have no discretion over the tax base or tax rates. At the beginning of the 1980s, Mexico replaced a set of inefficient autonomous state taxes by a tax-sharing system that stripped the states of taxing power.
10. The Swiss reforms provide for a transition period of up to 28 years during which no canton (state) will lose in net terms. In Germany, the new sub-central fiscal rule forbidding the Länder from running structural deficits, which was inserted into the constitution in 2009, will be fully applicable only after 2020.

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