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LESS THAN YOU THOUGHT: THE FISCAL AUTONOMY OF SUB-CENTRAL GOVERNMENTS

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INTRODUCTION

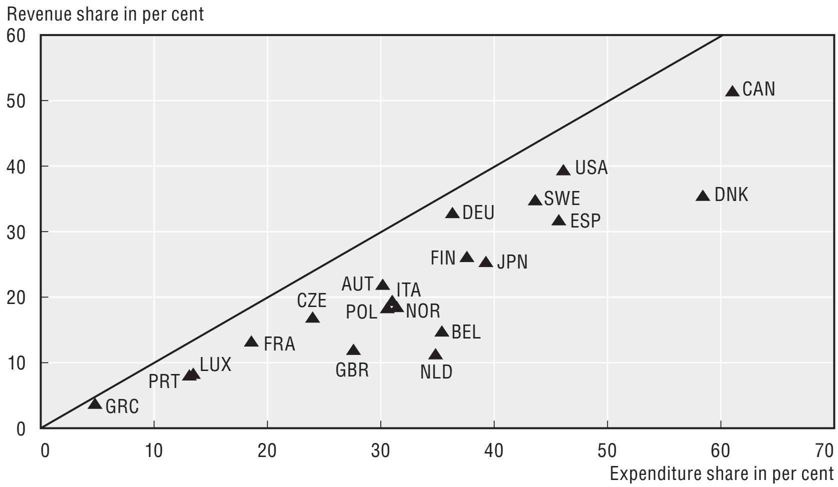
State and local governments in OECD countries have access to various fiscal resources. Discretion over them varies considerably, and so does sub-central governments' power to shape their budget and to determine outcomes like public sector efficiency, equity in access to public services or the long term fiscal stance. Data on the revenue structure of sub-central governments (SCG) would therefore be helpful. But indicators have long insufficiently reflected the way state and local budgets are funded. The most frequently used indicator is the ratio of SCG to total tax revenue, which is a poor measure for assessing the true autonomy SCGs enjoy. Since the power over fiscal revenue is a critical determinant for government finance, a set of more refined indicators for assessing fiscal autonomy should be established.

This article provides data and interpretation on the fiscal resources of sub-central governments in a majority of OECD countries. The article is organised as follows: The first section gives an overview on revenue and expenditure assignment using the "standard" decentralisation indicator. The second section describes the indicator set for sub-central tax revenue autonomy. The third section develops the indicator set for intergovernmental grants and the different conditions attached to them. The fourth section assesses overall sub-central fiscal autonomy and analyses the relationship between various autonomy indicators. The fifth and final section summarises the findings and shows how the new dataset can help assess the impact of fiscal federal design on policy outcomes.

DECENTRALISATION RATIOS

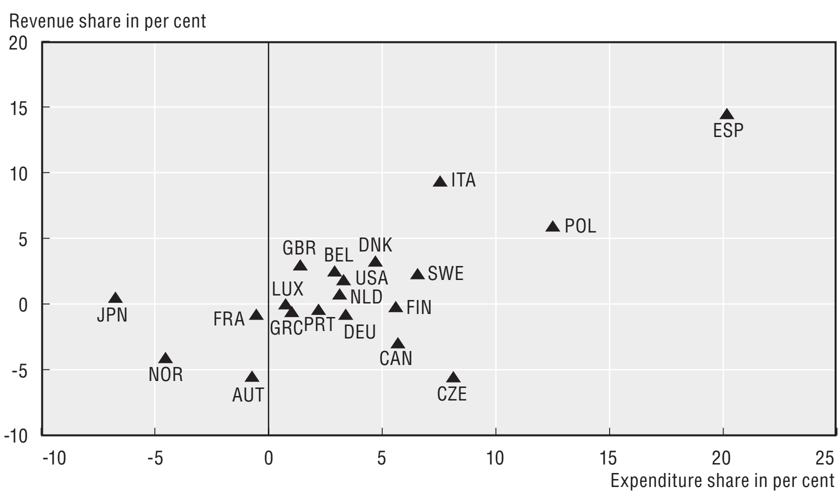
The common measure to compare and assess fiscal autonomy is the share of resources and responsibilities assigned to local and regional governments. SCG tax and expenditure indicators (or "decentralisation ratios") drawn from National Accounts can help gauge fiscal decentralisation and its evolution over time. While these indicators can hardly capture the complexity of fiscal arrangements, they can give a first impression of how much fiscal power regional and local jurisdictions enjoy. The following figures show the current state of financial decentralisation as measured by sub-central government shares of total tax revenue and expenditure in OECD countries (Figure 1) and the evolution of these indicators over the last decade (Figure 2).

Figure 1. **Decentralisation ratios in OECD countries**
Share in general government revenues and expenditure, 2004



Source: *National Accounts of OECD Countries, 2005*.

Figure 2. **Decentralisation ratios, evolution**
Changes expressed in percentage points, 1995-2004



Source: *National Accounts of OECD countries, 2005*.

The stylised facts shown in these figures can be summarised as follows:

- The degree of decentralisation varies greatly across OECD countries. While the sub-central share of total government expenditures varies between less than 6% and more than 60%, the sub central tax share stretches from 3 to 50%. The constitutional background of a country – whether it is federal or unitary – says little about actual fiscal autonomy. Local governments in some unitary countries have a higher share in public spending than local and regional governments together in federal countries.
- The sub-central tax share and the sub-central expenditure share have diverged over the last ten years. While the share of sub-national expenditures generally increased, the sub-central tax share – with a few notable exceptions – remained almost stable. The rising expenditure share partly reflects new responsibilities assigned to sub-central governments such as health care and/or non-university education in Italy, Mexico and Spain, or active labour market policies in Canada. On the other hand, local taxing power was reduced in many countries, such as in France or Japan, where local taxes were replaced by intergovernmental transfers.
- In all countries, sub-central government expenditures by far exceed tax revenue and this "fiscal gap" has widened in the last decade. The difference between responsibilities and resources points to large intergovernmental transfer schemes. The fiscal gap tends to be larger in countries with high sub-central fiscal autonomy (Canada, Denmark and – not shown in Figure 1 – Switzerland); somewhat paradoxically, more decentralisation can go hand in hand with more dependency on central government resources. Size and structure of intergovernmental grants thus become a crucial policy issue for decentralizing countries.

A serious problem with these simple ratios, however, is that they only poorly measure the true discretion that SCG enjoy in practice. On the revenue side, limits to set tax bases, rates and relief reduce the extent to which sub-central governments can determine the size of their budget. On the expenditure side, local spending may be strongly influenced by upper level government regulation, thereby reducing discretion over various expenditure items. In some countries, the transfer of financial responsibility for education or health care was hardly more than a change in accounting procedures, while essential regulatory power remained with the central level. Moreover, the various conditions attached to intergovernmental transfers may further influence the spending pattern of sub-central governments. To have a more accurate picture of sub-central fiscal autonomy, a more detailed indicator set is required.

TAXING POWER OF SUB-CENTRAL GOVERNMENTS

A *taxonomy of tax autonomy*

The term "tax autonomy" captures various aspects of freedom sub-central governments have over their own taxes. It encompasses features such as sub-central government's right to introduce or to abolish a tax, to set tax rates, to define the tax base, or to grant tax relief to individuals and firms. In a number of countries taxes are not assigned to one specific government level but shared between the central and sub-central governments. Such arrangements deny a single SCG any control on tax rates and bases, but collectively SCGs may have the power to negotiate the sharing formula with central government. The wealth of explicit and implicit, statutory and common, institutional arrangements has to be encompassed by a set of indicators that are simultaneously appropriate (they capture the relevant aspects of tax autonomy), accurate (they measure those aspects correctly) and reliable (the indicator set remains stable over time).

The indicator set comprises five main categories of autonomy and several sub-categories (Table 1). Categories are ranked in decreasing order from highest to lowest taxing power. Category "a" represents full power over tax rates and bases, "b" power over tax rates (essentially representing the "piggy-backing" type of tax), "c" power over the tax base, "d" tax-sharing arrangements and "e" no power on rates and bases at all. Category "f" represents non-allocable taxes. Special atten-

Table 1. **Taxonomy of taxing power**

a.1	The recipient SCG sets the tax rate and any tax relief without needing to consult a higher level government
a.2	The recipient SCG sets the rate and any relief after consulting a higher level of government
b.1	The recipient SCG sets the tax rate and a higher level government does not set upper or lower limits on the rate chosen
b.2	The recipient SCG sets the tax rate and a higher level government does set upper and/or lower limits on the rate chosen
c.1	The recipient SCG sets tax relief – but it sets tax allowances only
c.2	The recipient SCG sets tax relief – but it sets tax credits only
c.3	The recipient SCG sets tax relief – and it sets both tax allowances and tax credits
d.1	There is a tax-sharing arrangement in which the SCGs determine the revenue split
d.2	There is a tax-sharing arrangement in which the revenue split can be changed only with the consent of SCGs
d.3	There is a tax-sharing arrangement in which the revenue split is determined in legislation, and where it may be changed unilaterally by a higher level government, but less frequently than once a year
d.4	There is a tax-sharing arrangement in which the revenue split is determined annually by a higher level government
e	Other cases in which the central government sets the rate and base of the SCG tax
f	None of the above categories (a, b, c, d or e) applies

Source: OECD (1999).

tion was paid to tax sharing arrangements, where the four "d" subcategories should capture the various rules for determining the sharing formula. Altogether 13 categories were established to encompass the various tax autonomy arrangements in OECD countries. Where applicable, countries were asked to send separate data for both the state/regional and the local level. Since category six "non allocable" was hardly used, the taxonomy seems to reflect well the taxing power universe.

Taxing power in 2002

Although there is wide variation across countries, the stylised facts on taxing power of state and local governments in 2002 can be summarised as follows (Table 2):[1]

- First, only a part of sub-central tax revenue is under effective control of sub-central governments. At the average, the tax revenue share with full or partial discretion (categories a, b and c) amounts to around 60% for state and 70% for local government. In many countries (not shown in the table), permitted maximum tax rates often double minimum rate.
- Second, state and regional governments have less discretion over their tax revenue than local governments, since tax revenue of the former is often governed by tax sharing arrangements. On the other hand, with 51% of SCG tax revenue, the state level has a higher share in high-powered autonomous taxes (category "a"), while local governments are often allowed to levy a supplement on selected regional or central taxes only (category "b" or "piggy-backing" tax).
- Third, the "c" category (representing control over the tax base but not the tax rate) plays a negligible role in OECD countries. It appears that countries are gradually banning tax relief and abatements as local and regional economic development incentives, particularly in the European Union.

In some countries, SCG have the right to vary tax rates but actually set the same rate across the country. Such "unused taxing power" invites a deeper look into fiscal institutions and the incentives they generate for tax competition.

Tax sharing agreements account for a large part of sub central tax revenue in most constitutionally federal countries (Austria, Belgium, Germany, Mexico and Italy), in constitutionally non-federal Spain, in the Czech Republic and in Poland. Tax sharing is often considered as providing a balance between granting local/regional fiscal autonomy and keeping the overall fiscal framework stable. The collective power for sub-central governments to negotiate their tax share varies considerably across countries, from arrangements where sub-central governments are in full control over their share, to arrangements where the share is unilaterally set and modified by the central government. In some countries the distribution formula is

Table 2. **Taxing power of sub-central governments, 2002**

As share of sub-central tax revenue

	Sub-central tax revenue as % of total tax revenues	Discretion on rates and relief (a)	Discretion on rates (b)		Discretion on relief (c)	Tax sharing arrangements (d)				Rates and relief set by CG (e)	Other (f)	Total
			Full	Restricted		Revenue split set by SCG	Revenue split set with SCG consent	Revenue split set by CG, pluri-annual	Revenue split set by CG, annual			
Australia	**31.4**											
States	28.4	54.4	–	–	–	–	45.6	–	–	–	–	100.0
Local	3.0	100.0	–	–	–	–	–	–	–	–	–	100.0
Austria	**18.4**											
States	8.8	7.0	–	–	–	–	82.7	–	–	9.6	0.8	100.0
Local	9.6	2.7	–	5.4	–	–	66.5	–	–	20.0	5.5	100.0
Belgium	**27.8**											
States	22.8	63.8	–	–	–	–	36.2	–	–	–	–	100.0
Local	5.0	10.0	–	86.4	–	–	–	–	–	3.6	–	100.0
Canada	**44.1**											
Provinces	35.5	98.4	–	–	–	–	1.6	–	–	–	–	100.0
Local	8.6	1.8	95.6	–	–	–	–	–	–	2.3	0.3	100.0
Czech Republic	**12.5**											
Local	12.5	5.5	–	4.1	–	–	–	88.8	–	1.5	0.1	100.0
Denmark	**35.6**											
Local	35.6	–	86.0	4.7	–	–	–	2.9	–	6.4	–	100.0
Finland	**21.5**											
Local	21.5	–	85.3	4.6	–	–	–	–	9.9	–	0.1	100.0
France	**10.0**											
Local	10.0	72.1	–	8.5	9.1	–	–	–	–	3.6	6.6	100.0
Germany	**28.7**											
Länder	21.8	–	–	2.4	–	–	86.3	–	–	11.2	–	100.0
Local	7.0	17.6	–	33.6	–	–	47.6	–	–	1.1	0.2	100.0
Greece	**0.9**											
Local	0.9	–	–	64.6	–	35.4	–	–	–	–	–	100.0
Iceland	**25.2**											
Local	25.2	–	–	91.2	–	–	–	–	–	–	8.8	100.0
Italy	**16.4**											
Regional	11.3	–	–	58.8	–	–	23.7	17.6	–	–	–	100.0
Local	5.2	27.1	–	50.4	–	–	–	13.1	–	9.3	–	100.0
Japan	**26.0**											
Local	26.0	0.1	79.7	–	–	–	–	–	–	20.2	–	100.0
Korea	**18.9**											
Local	18.9	–	–	64.3	–	–	–	–	–	35.7	–	100.0
Mexico	**3.4**											
States	2.4	100.0	–	–	–	–	–	–	–	–	–	100.0
Local	1.0	100.0	–	–	–	–	–	–	–	–	–	100.0
Netherlands	**3.6**											
Local	3.6	–	99.2	–	–	–	–	–	–	–	0.8	100.0
Norway	**12.9**											
Local	12.9	3.3	–	96.7	–	–	–	–	–	–	–	100.0
Poland	**17.5**											
Local	17.5	–	–	23.2	–	–	–	76.4	–	0.4	–	100.0
Portugal	**6.0**											
Local	6.0	–	–	44.0	–	–	–	18.5	–	37.3	0.2	100.0
Spain	**26.6**											
Regions	18.1	58.3	–	0.1	–	–	41.6	–	–	–	0.0	100.0
Local	8.5	27.2	–	51.4	–	–	21.4	–	–	–	0.0	100.0
Sweden	**32.1**											
Local	32.1	–	100.0	–	–	–	–	–	–	–	–	100.0

Table 2. **Taxing power of sub-central governments, 2002** (*cont.*)

As share of sub-central tax revenue

	Sub-central tax revenue as % of total tax revenues	Discretion on rates and relief (a)	Discretion on rates (b)		Discretion on relief (c)	Tax sharing arrangements (d)				Rates and relief set by CG (e)	Other (f)	Total
			Full	Restricted		Revenue split set by SCG	Revenue split set with SCG consent	Revenue split set by CG, pluri-annual	Revenue split set by CG, annual			
Switzerland	**43.1**											
States	27.0	90.4	–	–	–	–	9.6	–	–	–	–	100.0
Local	16.2	2.9	–	97.1	–	–	–	–	–	–	–	100.0
Turkey	**6.5**											
Local	6.5	–	–	–	–	–	–	–	–	–	100.0	100.0
United Kingdom	**4.5**											
Local	4.5	–	–	100.0	–	–	–	–	–	–	–	100.0
Unweighted Average												
States	19.6	52.5	–	6.8	–	–	36.4	2.0	–	2.3	0.1	100.0
Local	12.4	15.4	22.7	34.6	0.4	1.5	5.6	8.3	0.4	5.9	5.1	100.0

Source: National source and OECD Revenue Statistics 1965-2004, 2005 Edition.

enshrined in the constitution and can only be changed with the consent of all or a majority of sub-central governments. Tax sharing is discussed in the section on "tax sharing arrangements" in more detail.

Evolution of taxing power 1995-2002

Taxing power increased from 1995 to 2002, albeit unevenly across countries (Table 3). The share of taxes over which sub-central governments have full or partial control rose by 25 percentage points for states and 8 percentage points for local governments, mostly to the detriment of tax sharing arrangements. Such agreements lost significance in countries such as Austria, Belgium, Germany, Mexico or Spain. In Norway, local governments gained more autonomy over income taxes, while in Austria and Germany, they lost revenue from autonomous local business taxes. In some countries (*e.g.* France and Sweden) the central government is required to compensate the loss of sub-central tax revenue through additional transfers; this effect is not shown in Table 3.

The forces shaping the evolution of SCG tax revenue and tax autonomy are political, fiscal and economic in nature.

- First and probably most important are policy reforms such as a reassignment of taxes to another government level, a change in tax autonomy or a swap between local/regional taxes and intergovernmental grants. Constitutional and legislative amendments largely account for the rapid change in countries such as Belgium or Spain involved in a secular decentralisation process.

Table 3. **Evolution of taxing power of sub-central governments**
Change in 1995-2002

	Sub-central tax revenues as % of total tax revenues	As a share of sub-central tax revenues									
		Discretion on rates and relief (a)	Discretion on rates (b)		Discretion on relief (c)	Tax-sharing arrangements (d)				Rates and relief set by CG (e)	Other (f)
			Full	restricted		Revenue split set by SCG	Revenue split set with SCG consent	Revenue split set by CG, pluri-annual	Revenue split set by CG, annual		
Austria	**–0.1**										
Länder	–1.2	5.0	–		–	–	–15.3	–	–	9.6	0.8
Local	1.1	–5.8	–5.9		–	–	–14.0	–	–	20.0	5.5
Belgium	**–0.2**										
States	0.3	59.8	–47.5		–	–	–12.3	–	–	–	–
Local	–0.5	–2.5	2.4		–	–	–	–2.5	–1.0	3.6	–
Czech Republic	**–0.5**										
Local	–0.5	3.5	–0.9		–3.0	–	–	–1.2	–	1.5	0.1
Denmark	**4.6**										
Local	4.6	–	–3.8		–	–	–	0.9	–	2.9	–
Finland	**–0.5**										
Local	–0.5	–	0.9		–	–	–	–11.0	9.9	–	0.1
Germany	**–0.3**										
Länder	–0.2	–	2.4		–	–	–13.7	–	–	11.2	–
Local	0.0	16.6	–18.4		–	–	0.6	–	–	1.1	0.2
Iceland	**5.2**										
Local	5.2	–8.0	–0.8		–	–	–	–	–	–	8.8
Japan	**–12.7**										
Local	–12.7	27.1	–38.1		–	–	–	13.1	–	–2.2	–
Mexico	**–16.6**										
States	–13.6	86.0	–		–	–	–86.0	–	–	–	–
Local	–3.0	100.0	–		–	–	–	–74.0	–	–26.0	–
Netherlands	**1.1**										
Local	1.1	–	–0.8		–	–	–	–	–	–	0.8
Norway	**–7.1**										
Local	–7.1	3.3	94.2		–	–	–	–0.5	–	–97.0	–
Poland	**10.5**										
Local	10.5	–	–21.8		–1.0	–	–	22.4	–	0.4	–
Portugal	**0.8**										
Local	0.8	–	0.2		–	–	–	–4.3	–	3.8	0.2
Spain	**13.3**										
Regions	13.3	44.0	–0.5		–	–	31.7	–	–	–	–75.2
Local	0.0	–1.5	–2.8		–	–	6.1	–	–	–	–1.8
Sweden	**0.1**										
Local	0.1	–2.0	2.0		–	–	–	–	–	–	–
Switzerland	**5.1**										
States	5.0	1.4	–		–	–	3.6	–5.0	–	–	–
Local	0.2	2.9	0.1		–	–	–	–3.0	–	–	–
United Kingdom	**0.5**										
Local	0.5	–	–		–	–	–	–	–	–	–
Unweighted Average											
States	0.6	32.7	–7.6		–	–	–15.3	–0.8	–	3.5	–12.4
Local	0.0	7.9	0.4		–0.2	–	–0.4	–3.5	0.5	–5.4	0.8

Source: National source and OECD, Taxing Powers of State and Local government, Tax Policy Studies No. 1 and Revenue Statistics 1965-2004, 2005 Edition.

- Second, fiscal reasons such as a relative change in tax rates or bases can also affect the pattern of taxing power, *e.g.* if one government level changes its tax rate or base while another government level does not. In many countries rates and base of local property taxes remain unchanged over long periods of time, while the bases of central government income taxes or goods and services taxes are regularly updated.
- Third, different taxes react differently to the business cycle or to structural change and this may affect tax revenue of different government levels. A local profit tax reacts more swiftly to an economic downturn than a central government income tax, and a local sales tax on goods reacts more slowly to the rise of the service sector than a central value added tax.

Altogether, the net effect of the three forces slightly favoured sub-central governments between 1995 and 2002. Although the share of tax revenue going to the sub-central level hardly changed, the power attached to those taxes rose. For most countries no tax erosion could be detected, either in terms of the revenue share or in terms of autonomy. However, the tax share must be set against the expenditure share, which increased considerably in about the same period (Figure 2).

Tax autonomy across tax category

The data on tax autonomy by tax type defy the beliefs on optimal local taxation (Table 4). While fiscal federalism theory asserts that mobile taxes should be allocated to higher levels of government, in practice the largest single tax assigned to local and regional governments is the highly mobile income tax on individuals, with more than 36% of total SCG tax revenue. If local corporate taxes are added, the share rises to more than 41%. Taxes on goods and services account for 21% of total SCG tax revenue. Taxes on immovable property account for 19% only. Although most OECD countries apply some sub-central property taxation, its yield is often limited and supplemented or even replaced by other taxes such as a local income tax. In more decentralised countries, local income tax revenue largely exceeds local property tax revenue.

A closer look at tax autonomy may alleviate the fears of inappropriate tax assignment. Some mobile sub-central taxes go with little power only. Especially the personal income tax is often built into tax sharing arrangements that limit tax competition and potential tax erosion. Moreover, fiscal equalization – a set of fiscal transfers that aims at reducing differences in sub-central fiscal capacity – may partially offset losses in the revenue of mobile taxes.[2] Even when sub-central governments have the right to set tax rates and bases and could hence enter tax competition, they often do not make use of this right for fear of losing other revenue sources. Put together, it appears that countries succeed in containing the drawbacks of mobile sub-central taxes, but it would be useful to have a closer look into the functioning of respective arrangements.

Table 4. **Taxing power of sub-central governments by type of tax**

As a percentage of sub-central tax revenue[1]

	Discretion on rates and relief	Discretion on rates		Discretion on relief	Tax sharing arrangements				Rates and relief set by CG	Other	Total
		Full	Restricted		Revenue split set by SCG	Revenue split set with SCG consent	Revenue split set by CG, pluri-annual	Revenue split set by CG, annual			
1000 Taxes on income, profits and capital gains	5.9	9.9	10.3	2.8	–	0.8	9.9	0.3	1.5	0.3	41.7
1100 Of individuals	5.2	9.3	8.1	2.8	–	0.8	8.2	–	1.1	–	35.5
1200 Corporate	0.7	0.6	2.2	–	–	–	1.4	0.3	0.4	0.3	5.9
1300 Unallocable between 1100 and 1200	–	–	–	–	–	–	0.3	–	–	0.0	0.3
2000 Social security contributions	0.1	–	–	–	–	–	–	–	0.0	0.1	0.3
2100 Employees	0.1	–	–	–	–	–	–	–	–	0.1	0.2
2200 Employers	–	–	–	–	–	–	–	–	–	0.0	0.0
2300 Self-employed or non-employed	–	–	–	–	–	–	–	–	–	–	
2400 Unallocable between 2100, 2200 and 2300	–	–	–	–	–	–	–	–	–	–	
3000 Taxes on payroll and workforce	2.4	–	0.2	–	–	–	–	–	0.7	–	3.3
4000 Taxes on property	11.5	5.5	9.0	0.3	0.2	–	0.2	–	0.8	–	27.3
4100 Recurrent taxes on immovable property	6.4	5.3	6.4	–	–	–	0.0	–	0.5	–	18.6
4200 Recurrent taxes on net wealth	0.4	–	1.1	–	–	–	–	–	0.0	–	1.5
4300 Estate, inheritance and gift taxes	0.3	–	0.0	–	–	–	0.0	–	0.1	–	0.4
4400 Taxes on financial and capital transactions	2.5	0.0	1.3	0.3	0.2	–	0.1	–	0.2	–	4.6
4500 Non-recurrent taxes	0.1	0.2	0.2	–	–	–	–	–	–	–	0.5
4600 Other recurrent taxes on property	–	–	–	–	–	–	–	–	–	–	
5000 Taxes on goods and services	3.4	1.5	1.3	0.0	0.9	4.2	5.2	–	4.5	0.3	21.4
5100 Taxes on production, sale, transfer, etc.	2.2	0.1	0.2	0.0	0.9	2.8	5.0	–	3.4	0.3	14.9
5200 Taxes on use of goods and perform activities	1.2	1.5	1.2	–	–	–	0.1	–	1.1	–	5.1
5300 Unallocable between 5100 and 5200	–	–	–	–	–	–	–	–	–	0.0	0.0
6000 Other taxes	2.1	0.1	1.4	–	–	–	0.4	–	1.2	0.6	5.9
6100 Paid solely by business	0.9	0.1	1.4	–	–	–	–	–	0.0	0.2	2.7
6200 Other	1.2	–	–	–	–	–	0.4	–	1.1	–	2.8
Total	25.5	17.1	22.3	3.0	1.1	5.0	15.6	0.3	8.7	1.4	100.0

1. Unweighted average. Countries included are: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Italy, Japan, Korea, Mexico, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland and Turkey.

Source: National sources and OECD, Revenue Statistics 1965-2004, 2005 Edition.

Tax sharing arrangements

Tax sharing is an arrangement where tax revenue is divided vertically between the central and sub-central governments as well as horizontally across sub-central governments. Often tax sharing arrangements contain an element of horizontal fiscal equalization. Tax sharing has become a means to provide adequate resources to the sub-centrallevel while maintaining central control over fiscal aggregates. Tax sharing grants less autonomy to sub-central governments than autonomous taxes, and it may also change SCGs' fiscal behaviour. By turning SCG

Box 1. **Drawing a dividing line between tax sharing and intergovernmental grants**

Both tax sharing arrangements (category "d" of tax autonomy) and intergovernmental grants provide resources to sub-central governments. Drawing the dividing line between the two fiscal arrangements proves sometimes difficult. On one hand, many tax sharing formulae have become so complex that there is no link between what a SCG collects on its territory, what it sends into the common pool and what it finally gets back. On the other hand, policy reforms have made some intergovernmental grants more look like a share in the national tax yield. While the National Accounts and the Revenue Statistics provide some guidelines, in practice what counts as tax sharing in one country may count as intergovernmental grant in another; within some countries even, different central government bodies have adopted different views on how to classify fiscal resources (*e.g.* Australia or Belgium). Such lack of clarity jeopardises the coherence of SCG revenue statistics and reduces strength and utility of fiscal design analysis. In order to ensure that fiscal arrangements are recorded properly and on a comparative basis, a set of distinctive criteria is required.

For future statistical work a guideline is proposed that enables a dividing line to be drawn between the two fiscal arrangements. The guideline consists of four criteria. The criteria relate to the revenue risk that sub-central governments are exposed to, the freedom of use of the revenue obtained, the rules and formulas that define the distribution of financial revenue and the institutional decision mechanisms defining each SCG's annual share. In order to be considered a tax sharing, an arrangement must cumulatively fulfil all four criteria. A fiscal arrangement between levels of government can hence be called tax sharing if the amount going to each government level is a strict share of total tax revenue, if this share is predefined and cannot be changed in the course of the fiscal year, if the revenue for SCG is not earmarked and if the revenue allocated to a single SCG either corresponds to the revenue it has collected, or is distributed across jurisdictions according to population, employees, or inversely related to tax raising capacity. Once agreed upon, the criteria can be used for collecting National Accounts and Revenue Statistics data.

tax revenue into a common pool resource for all government levels, tax sharing may change fiscal incentives and the resulting fiscal outcomes. For both statistical and analytical reasons, it is necessary to distinguish carefully tax sharing from intergovernmental grants (see Box 1).

Tax sharing arrangements can be analyzed on various grounds: the type of tax that is shared, the legal procedures involved in changing the formula, the frequency of an adjustment to the formula and whether the sharing formula contributes to an equalizing objective (Table 5).

Most tax sharing arrangements cover major taxes such as personal income taxes, corporate income taxes or value-added taxes. Their high yield makes them attractive for the sub-central level, and the pooling tackles potential drawbacks of purely local taxation. The procedure for changing the sharing formula is mostly laid down in laws on tax sharing, fiscal equalisation or the like. For the countries under scrutiny, decisions on the tax sharing arrangements seem to be taken at the parliamentary level; in some countries the share is defined in the constitution and adjustments require a qualified majority in parliament. Consultation of SCG is quite frequent, but their explicit consent for adjustments is needed in some federal countries only. The frequency and regularity of formula adjustment varies across countries, from irregular to never, but it appears that tax sharing arrangements are a rather stable item in national fiscal policy. Finally, some countries combine tax sharing and fiscal equalization in one single arrangement.

Table 5. **Tax sharing arrangements**

	Tax type shared	Procedure for formula changes	Frequency of formula changes	Horizontal equalisation objective
Austria	PIT, CIT, property tax, VAT	Parliament, Law on Fiscal Equalisation	Every four years	Yes
Czech Republic	PIT, CIT, VAT	Government, Law of Tax Assignment	Irregularly	Yes
Denmark	PIT, CIT	Government, Law on Tax Sharing	Very rarely	No
Finland	CIT	Government, Law on Tax Sharing		No
Germany	PIT, CIT, VAT	Both Parliaments (*Bundestag* and *Bundesrat*)	13 changes Since 1970	Yes
Greece	Transaction and specific service taxes	Central government	Rarely	No
Spain	VAT, excise duties	Parliament	Rarely	No
Switzerland	PIT	Parliament, Law on Fiscal Equalisation	Never since 1959	Yes

Note: PIT=Personal Income Tax, CIT=Corporate Income Tax, VAT=Value Added Tax.
Source: National Sources.

INTERGOVERNMENTAL GRANTS

Intergovernmental transfers (or grants) provide sub-central governments with additional financial resources, thus filling the gap between own tax revenue and expenditure needs. The main objectives for intergovernmental grants can be roughly divided into subsidization of SCG services and the equalisation of fiscal disparities; often these reasons overlap. A flowering garden of intergovernmental grants has evolved, with grants having different purposes and different effects on sub-central governments' behaviour. Rules and conditions attached to intergovernmental grants vary widely, ranging from transfers that grant full autonomy and come close to tax sharing, to grants where central government retains tight control. The following paragraphs give an overview on grants from a donors' perspective, a classification of the various strings attached to grants, and the policy areas for which grants are used.

Donors and recipients of grants

Table 6 shows a simplified version of the National Accounts donor/recipient matrix of intergovernmental grants, with five donor levels (central, state, local, international and social security) and – depending on the country type – one or two recipient levels (local, or state and local). The category "international" displays

Table 6. **Grants by donor and recipient sub-sector, 2004**
As a percentage of total grant revenue

Country	As a percentage of total tax revenue	Central level	State level	Local level	International level	Social Security	Total
Australia[1]	**11.0**						
State	9.8	100.0	–	–	–	–	100.0
Local	1.3	61.8	38.2	–	–	–	100.0
Austria	**15.2**						
State	11.5	69.4	5.1	3.8	0.6	21.1	100.0
Local	3.8	49.2	16.1	12.7	0.3	21.7	100.0
Belgium	**11.1**						
State	3.9	81.3	13.9	3.6	1.0	0.1	100.0
Local	7.1	26.4	73.3	–	–	0.3	100.0
Canada	**17.5**						
State	9.0	99.8	–	0.2	–	–	100.0
Local	8.5	0.4	99.6	–	–	–	100.0
Czech Republic	**12.4**						
Local	12.4	99.1	–	–	0.9	–	100.0
Denmark	**13.4**						
Local	13.4	99.5	–	–	0.5	–	100.0

Table 6. **Grants by donor and recipient sub-sector, 2004** (*cont.*)
As a percentage of total grant revenue

Country	As a percentage of total tax revenue	Central level	State level	Local level	International level	Social Security	Total
Finland	**12.1**						
Local	12.1	98.5	–	–	1.5	–	100.0
France	**8.6**						
Local	8.6	97.0	–	–	3.0	–	100.0
Germany	**12.8**						
Länder	5.9	79.0	–	14.7	6.4	–	100.0
Local	7.0	1.4	98.4	–	–	0.2	100.0
Greece[1]	**4.1**						
Local	4.1	100.0	–	–	–	–	100.0
Hungary	**16.7**						
Local	16.7	67.2	–	3.0	0.5	29.4	100.0
Iceland	**1.9**						
Local	1.9	100.0	–	–	–	–	100.0
Italy[2]	**19.1**						
Regional	12.7	94.8	–	–	5.2	–	100.0
Local	6.4	54.3	45.7	–	–	–	100.0
Korea	**34.4**						
Local	34.4	82.6	–	17.4	–	–	100.0
Mexico	**43.4**						
State[3]	43.4	100.0	–	–	–	–	100.0
Local							
Netherlands[1]	**27.8**						
Local	27.8	100.0	–	–	–	–	100.0
Norway	**11.3**						
Local	11.3	100.0	–	–	–	–	100.0
Poland[1]	**37.9**						
Local	37.9	99.6	–	0.4	–	–	100.0
Portugal	**7.8**						
Local	7.8	86.5	–	–	12.9	0.6	100.0
Spain	**19.4**						
Regional	14.0	77.7	–	16.7	–	5.6	100.0
Local	5.5	66.6	31.2	–	–	2.2	100.0
Sweden	**9.4**						
Local	9.4	100.0	–	–	–	–	100.0
Switzerland	**23.4**						
State	16.1	73.7	5.6	20.7	–	–	100.0
Local	7.2	0.2	77.6	22.3	–	–	100.0
Turkey	**15.8**						
Local	15.8	100.0	–	–	–	–	100.0
Unweighted average							
State	14.0	86.2	2.7	6.6	1.5	3.0	100.0
Local	11.8	72.3	21.8	2.5	0.9	2.5	100.0

1. 2003 figures.
2. 2002 figures.
3. Including grants to local government.

Source: National sources and OECD Revenue Statistics 1965-2004, 2005 Edition.

funds directly allocated to SCG in some countries.[3] On the average, grants account for around a quarter of total tax revenue,[4] with Mexico having the largest grant system and Iceland the smallest in relative terms. With 72% central government provides the overwhelming part of grants to local governments in both federal and unitary countries, although in most federal countries (Belgium, Canada, Germany and Switzerland) are states the main source for local governments. Around 3% of all grants flow across states/regions and 2% across local governments. However, such horizontal arrangements not always being recorded properly may be underestimated.

In the period 2000 to 2004, the share of grants to total tax revenue remained almost stable (Table 7). However, average figures conceal that almost three quarters of countries experienced an above-average growth of transfers. In a majority of countries, transfer growth laid above total government expenditure growth (not shown in Table 8). Grants from the central government, by far the most significant donor, rose by an annual 6% for states and 8% for local governments, exceeding the growth rate of total tax revenue. The international level emerges as a source for regional government finance, reflecting development assistance from the European Union to the regions. While some transfer growth reflects institutional reforms such as responsibility reassignment or a swap between tax revenue and grants, some transfer growth could be the result of creeping demand increases from sub-central governments and hint at growing pressure on the central budget.

Taxonomy of grants

The design of grants should be captured with a taxonomy that reflects their variety (Figure 3).[5] The main dividing line separates earmarked from non-earmarked grants; a distinction crucial for assessing sub-central fiscal autonomy. Both types of grants can be divided further into mandatory and discretionary transfers, reflecting the legal background that governs their allocation. Earmarked grants may be further subdivided into matching and non-matching grants, *i.e.* whether the transfer is linked to SCG own expenditure or not. A final subdivision is between grants for capital expenditure and grants for current expenditure. On the non-earmarked side grants may be further subdivided into block and general purpose grants, where the latter provide more freedom of use; since both forms are unconditional, the distinction often collapses. The taxonomy is consistent with the one established by the Council of Europe.

With roughly 60%, non-earmarked grants account for a larger part of total grant revenue, but the remaining 40% give the central level a strong stake in SCG budgets (Table 8). It is slightly surprising to see that earmarked grants, and hence central control, are more important for state and regional governments than for local governments. Around a third of earmarked grants is matching, *i.e.* linked to SCG own expenditure. Through lowering the price of sub-central public services matching

Table 7. **Evolution of grants by donor and recipient sub-sector**

Annual growth rates 2000-2004

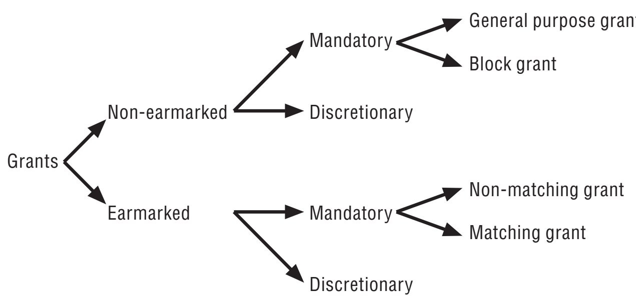
Country	Change in total tax revenue	Central level	State level	Local level	International	Social Security
Australia[1]	**–0.8**					
State	–0.7	1.2	–	–	–	–
Local	–0.1	9.3	–7.2	–	–	–
Austria	**–0.7**					
State	–0.3	3.9	–8.6	0.9	1.8	1.7
Local	–0.5	–0.2	9.8	–7.9	19.4	–0.1
Belgium	**1.4**					
State	0.8	11.1	1.9	13.6	45.0	–18.4
Local	0.6	14.9	3.0	–	–	–5.3
Canada	**1.4**					
State	0.9	5.7	–	–31.3	–	–
Local	0.5	–3.9	4.0	–	–	–
Czech Republic	**6.8**					
Local	6.8	30.8	–	–	–	–
Denmark	**2.5**					
Local	2.5	8.3	–	–	–	–
Finland	**3.9**					
Local	3.9	12.1	–	–	6.0	–
France	**1.3**					
Local	1.3	6.5	–	–	–	–
Germany	**–0.1**					
Länder	0.0	–0.2	–	0.7	0.8	–
Local	–0.1	4.5	–0.4	–	–	–2.4
Greece[1]	**0.8**					
Local	0.8	13.4	–	–	–	–
Hungary	**1.7**					
Local	1.7	13.9	–	6.5	–	12.9
Iceland	**0.4**					
Local	0.4	14.6	–	–	–	–
Korea	**1.3**					
Local	1.3	9.6	–	11.6	–	–
Mexico	**3.6**					
State[2]	3.6	11.1	–	–	–	–
Local						
Netherlands[1]	**3.6**					
Local	3.6	7.2	–	–	–	–
Norway	**–3.5**					
Local	–3.5	–2.3	–	–	–	–
Poland[1]	**2.1**					
Local	2.1	8.0	–	–12.4	–	–
Portugal	**0.7**					
Local	0.7	7.3	–	–	5.0	17.6
Spain	**–7.1**					
Regional	–6.6	9.7	–	15.3	–	–40.6
Local	–0.5	4.5	10.8	–	–	–17.0
Switzerland	**1.5**					
State	1.0	2.5	13.8	–0.4	–	–
Local	0.5	–3.1	1.9	6.4	–	–

Table 7. **Evolution of grants by donor and recipient sub-sector** (*cont.*)
Annual growth rates 2000-2004

Country	Change in total tax revenue	Central level	State level	Local level	International	Social Security
Turkey	**–19.2**					
Local	–19.2	10.6	–	–	–	–
Unweighted average						
State	–0.2	6.4	1.0	–0.3	6.7	–8.2
Local	0.2	8.3	1.1	0.2	1.5	0.3

1. 2003 figures.
2. Including grants to local government.
Source: National sources and OECD Revenue Statistics 1965-2004, 2005 Edition.

Figure 3. **A taxonomy of grants**



grants are thought to foster spending, but by doing this may put some pressure on both central and sub-central budgets. Around three-quarters of all earmarked grants are mandatory, giving SCG more revenue security but leaving less scope for central governments to adjust expenditures rapidly to overall fiscal conditions. Only one-quarter of earmarked transfers can be – at least from a legal, if not political, point of view – adjusted within short notice. Whether discretionary transfers fluctuate more than mandatory grants remain to be analyzed once data for a longer time period are available.

Grant design has little evolved between 2000 and 2004, except for the strong increase in the share of earmarked matching grants, at the expense of almost any other transfer type (Table 9). This evolution could mean that matching grants indeed exert some pressure on central – and also sub-central – budgets. The share of non earmarked grants has slightly increased, pointing at more fiscal leeway for SCG, whereby the local level has benefited more than the state and

Table 8. **Grant revenue by type of grant, 2004**

As a percentage of total grant revenue

	Earmarked grants						Non earmarked grants			Total
	Mandatory				Discretionary		Mandatory		Discretionary	
	Matching		Non-Matching				General purpose grants	Block grants		
	Current	Capital	Current	Capital	Current	Capital				
Australia										
State	–	–	–	–	81.6	11.3	2.9	–	4.1	100.0
Local	–	–	–	–	16.7	–	83.3	–	–	100.0
Austria										
State	57.0	1.8	2.0	18.4	0.6		12.5	0.2	7.5	100.0
Local	39.3	3.5	7.4	34.8	1.2		13.7	0.1	0.0	100.0
Belgium										
State	67.2	10.9	14.7		1.0	0.1	6.0	–	–	100.0
Local	71.6		0.1		0.5	23.8	4.0	–	–	100.0
Canada										
State	–	–	18.6		–	–	81.4	–	–	100.0
Local	–	–	91.4	4.3	–	–	4.3	–	–	100.0
Czech Republic										
Local	12.4		–	–	74.1	13.6	–	–	–	100.0
Denmark										
Local	37.9		0.8		4.9	0.1	56.2	–	0.0	100.0
Finland										
Local	5.7		–	–	1.8	1.6	16.3	74.0	0.6	100.0
France										
Local	6.5		0.1		1.3	3.8	81.9	6.4	–	100.0
Greece										
Local	61.3	38.7	–	–	–	–	–	–	–	100.0
Hungary										
Local	40.1	7.4	–	–	3.8	5.6	41.9	–	1.1	100.0
Iceland										
Local	3.0		8.4		6.5	3.1	79.0	–	–	100.0
Italy[1]										
Regional		4.7		4.7	10.6	8.7	71.4	–	–	100.0
Local	–		–		39.4	36.1	24.5	–	–	100.0
Korea										
Local	6.4		–	–	11.2	10.2	69.9	–	2.4	100.0
Mexico										
State[2]	53.9		–	–	5.3		40.8	–	–	100.0
Local										
Netherlands[3]										
Local	73.6		–	–	–	–	26.4		–	100.0
Norway										
Local	12.2		9.4		19.4	3.9	–	55.1	–	100.0
Poland										
Local	24.1	5.4	–	–	–	–	70.5	–	–	100.0
Portugal										
Local	–	–	–	–	11.4		85.0	–	3.6	100.0

Table 8. **Grant revenue by type of grant, 2004** (*cont.*)

As a percentage of total grant revenue

	Earmarked grants						Non earmarked grants			Total
	Mandatory				Discretionary		Mandatory		Discretio-nary	
	Matching		Non-Matching				General purpose grants	Block grants		
	Current	Capital	Current	Capital	Current	Capital				
Spain										
Regional	8.1	5.4	–	–	0.9	0.5	85.2	–	–	100.0
Local	14.3	16.4	3.1		–	–	66.2	–	–	100.0
Sweden										
Local	–	–	–	–	0.7	28.1	71.3	–	–	100.0
Switzerland										
State	64.8	12.9	–	–	–	–	22.2	–	–	100.0
Local	71.7	8.7	–	–	–	–	19.6	–	–	100.0
Turkey										
Local	–	–	–	–	77.3		–	–	22.7	100.0
Unweighted average										
State	31.4	4.5	4.4	2.9	12.5	2.6	40.3	0.0	1.5	100.0
Local	22.9	3.8	5.7	1.9	9.2	9.9	38.8	6.5	1.5	100.0

1. 2002 figures.
2. Including grants to local government.
3. 2003 figures.

Source: National sources.

regional level. Again structural change varies widely across countries, pointing at some path-dependency of the intergovernmental transfer system.

Grants by government function

Grants are used for different policy areas or government functions (Table 10). The National Accounts divide government activities into ten functions in the so-called Classification of Functions of Government (COFOG), and this division is also applied to intergovernmental grants. Data are available only for earmarked grants because unconditional grants are not tied to specific government functions. While National Accounts data are available for eight countries, the questionnaire asked all countries to provide data with the same precision as provided by the National Accounts. In the end the data of 11 countries could be used to assess and compare the functional structure of intergovernmental grants.

The category "general public services" accounts for the largest, rather unspecific share of intergovernmental transfers. Education is the second largest category, pointing at the weight of local and regional governments in providing primary and secondary education, with central government retaining considerable

Table 9. **Evolution of grant revenue by type of grant**
Change in 2000-2004, percentage points

	Earmarked grants						Non earmarked grants		
	Mandatory				Discretionary		Mandatory		Discretion-ary
	Matching		Non-Matching				General purpose grants	Block grants	
	Current	Capital	Current	Capital	Current	Capital			
Australia									
State	–	–	–	–	12.0	–0.2	–13.6	–	1.8
Local	–	–	–	–	9.6	–0.5	–9.1	–	–
Austria									
State	2.3	–0.7	–0.9	–1.2	0.0		0.8	0.0	–0.2
Local	0.7	–5.5	2.5	–0.2	–0.3		2.8	0.0	0.0
Belgium									
State	–6.9	9.7	–2.1		1.0	–0.3	–1.3		–
Local	–15.5	–3.2	0.0		–2.0	23.1	–2.4		–
Canada									
State	–	–	–0.6		–	–	0.6	–	–
Local	–	–	–0.4	–0.2	–	–	0.6	–	–
Czech Republic									
Local	–16.8		–	–	33.7	–16.9	–	–	–
Denmark									
Local	–1.9		0.2		0.8	0.0	0.9	–	0.0
Finland									
Local	–4.1		–	–	0.2	–1.5	16.3	–10.1	–0.8
France									
Local	–1.2		0.0		–1.1	–1.1	6.7	–3.3	–
Greece									
Local	7.7	–7.7	–	–	–	–	–	–	–
Hungary									
Local	–0.5	–1.7	–	–	–1.3	0.6	6.0	–	–3.1
Iceland									
Local	–15.4		1.2		–11.3	0.7	24.8	–	–
Korea									
Local	–2.9		–	–	0.7	–1.3	3.2	–	0.3
Mexico									
State[2]	3.8		–	–	–0.4	–3.4	–	–	
Local									
Netherlands[1]									
Local	5.0		–	–	–	–	–5.0		–
Norway									
Local	–8.7		8.4		2.2	0.7	–	–2.6	–
Poland									
Local	–8.4	–1.0	–	–	–	–	9.4	–	–
Portugal									
Local	–	–	–	–	–5.1	1.5	–	3.6	
Spain									
Regional	–35.3	0.9	–	–	0.0	0.1	34.3	–	–
Local	–1.5	3.0	0.6		–	–	–2.1	–	–

Table 9. **Evolution of grant revenue by type of grant** (*cont.*)
Change in 2000-2004, percentage points

	Earmarked grants						Non earmarked grants		
	Mandatory				Discretionary		Mandatory		Discretion-ary
	Matching		Non-Matching				General purpose grants	Block grants	
	Current	Capital	Current	Capital	Current	Capital			
Switzerland									
State	1.4	–1.9	–	–	–	–	0.5	–	–
Local	–1.9	–2.1	–	–	–	–	3.9	–	–
Turkey									
Local	–	–	–	–	12.4		–	–	–12.4
Unweighted average									
State	–5.0	1.1	–0.5	–0.2	1.8	–0.1	2.6	0.0	0.2
Local	–3.6	–1.0	0.7	0.0	1.4	0.2	3.2	–0.9	0.0

1. 2003 figures.
2. Including grants to local government.
Source: National sources.

control over funding and regulation. "Economic affairs" is the third largest category, largely reflecting the weight of shared responsibilities in local and regional development policy. Again the grant structure varies widely, reflecting the different responsibility assignments and funding arrangements in countries. In general, except for "defence" and "public order and safety", some degree of responsibility sharing and overlapping characterises most government functions. However, the low number of country responses does not yet allow for stringent conclusions.

FISCAL AUTONOMY OF SUB-CENTRAL GOVERNMENTS

Revenue structure

Sub-central governments rely on own tax revenue, shared taxes and intergovernmental grants. In Table 11 the three main categories of fiscal revenue are put together, to allow for an overall assessment and comparison across SCGs. In order to facilitate the reading of the table, a number of tax autonomy and intergovernmental grant categories are aggregated. Finally nine categories encompass the different revenue sources available to state and local governments. As for all statistics in this article, borrowing and fees are not included due to the lack of comparable data.

With an un-weighted average of roughly 60% against 40%, tax revenue accounts for a larger share of SCG revenue than intergovernmental grants (Table 11). With 38% autonomous taxes are the single largest category. Earmarked

Table 10. **Grants by government function, 2004**

In per cent of total earmarked grants

	General public services	Defence	Public order and safety	Economic affairs	Environ-ment protection	Housing and community amenities	Health	Recreation, culture, religion	Education	Social protection	Others	Total
	01	02	03	04	05	06	07	08	09	10		
Australia	–	–	0.2	9.0	–	4.9	39.6	0.1	37.5	8.4	0.3	100.0
Austria												
Belgium	–	–	24.3	21.4	–	–	0.1	–	25.3	28.9	–	100.0
Canada												
Czech Republic	9.3	0.0	0.5	6.0	0.3	7.5	2.2	0.7	54.3	17.7	1.4	100.0
Denmark												
Finland	5.5	–	0.6	17.2	1.8	0.4	12.0	16.9	27.0	18.7	–	100.0
France	16.9	1.7	8.0	13.0	2.3	22.4	–	30.8	5.0	–	–	100.0
Germany												
Greece	56.6	–	–	18.9	5.6	5.6	–	7.2	–	6.1	–	100.0
Hungary												
Iceland												
Italy[1]	16.9	–	–	40.6	3.8	–	31.7	–	7.0	–	–	100.0
Korea												
Mexico												
Netherlands	0.0	–	0.6	1.4	1.1	8.6	5.3	0.5	22.4	50.2	9.9	100
Norway	79.3	0.2	0.1	–	0.0	0.1	14.0	–	4.7	1.7	–	100.0
Poland	3.1	3.5	16.2	4.4	8.9	5.5	10.8	5.2	17.9	24.6	–	100.0
Portugal	3.2	26.0	–		61.3	9.5	100.0					
Spain	42.4	–	0.2	35.4	0.6	3.2	4.7	0.9	2.5	10.0	–	100.0
Sweden	3.5	1.1	0.0	6.2	3.8	–	56.3	–	29.1	–	–	100.0
Switzerland												
Turkey	43.2	–	–	14.2	19.1	22.2	–	0.9	–	0.5	–	100.0
Unweighted average	20.0	0.5	3.6	15.3	3.4	5.7	17.0	4.5	16.6	11.9	1.5	100.0

1. 2002.

Source: National sources.

Table 11. **Revenue structure of sub-central governments**
Percentages of total sub-central revenue, 2002

	Autonomous taxes			Tax sharing				Other taxes	Grants		Total
	Discretion on rates and relief	Discretion on rates	Discretion on relief	Revenue split set by SCG	Revenue split set with SCG consent	Revenue split set by CG, pluri-annual	Revenue split set by CG, annual		Earmarked	Non earmarked	
Australia											
States	41.1	–	–	–	34.4	–	–	–	21.9	2.7	100.0
Local	80.6	–	–	–	–	–	–	–	3.1	16.2	100.0
Austria											
States	3.7	–	–	–	43.5	–	–	5.5	37.4	10.0	100.0
Local	2.3	4.5	–	–	55.4	–	–	21.2	14.3	2.3	100.0
Belgium											
States	57.1	–	–	–	32.4	–	–	–	9.7	0.8	100.0
Local	7.5	65.0	–	–	–	–	–	2.7	23.8	0.9	100.0
Canada											
Provinces	76.0	–	–	–	5.5	–	–	–	3.0	15.5	100.0
Local[1]	0.9	47.7	–	–	–	–	–	1.3	48.0	2.2	100.0
Czech Republic											
Local	3.2	2.4	–	–	–	51.8	–	0.9	41.7	–	100.0
Denmark											
Local	–	67.9	–	–	–	2.2	–	4.8	12.5	12.6	100.0
Finland											
Local	–	60.4	–	–	–	–	6.7	0.1	3.4	29.4	100.0
France											
Local	39.3	4.6	5.0	–	–	–	–	5.6	5.7	39.8	100.0
Germany											
Länder	–	1.9	–	–	68.2	–	–	8.9	21.0		100.0
Local	8.7	16.7	–	–	23.7	–	–	0.6	50.3		100.0
Greece											
Local	–	11.6	–	6.3	–	–	–	–	82.1	–	100.0
Italy											
Regional	–	28.4	–	–	11.4	8.5	–	–	14.8	36.9	100.0
Local	12.1	22.6	–	–	–	5.9	–	4.2	41.7	13.5	100.0
Korea											
Local	–	24.9	–	–	–	–	–	12.8	18.0	44.3	100.0
Mexico											
States[3]	5.0	–	–	–	–	–	–	–	54.4	40.6	100.0
Local											
Netherlands											
Local	–	11.8	–	–	–	–	–	0.1	61.7	26.5	100.0
Norway											
Local	1.6	–	45.3	–	–	–	–	–	24.2	29.0	100.0
Poland											
Local	–	11.7	–	–	–	38.6	–	0.2	17.9	31.6	100.0
Portugal											
Local	–	21.2	–	–	–	8.9	–	18.1	5.7	46.0	100.0
Spain											
Regions	32.6	0.1	–	–	23.3	–	–	0.0	7.0	37.1	100
Local	16.1	30.4	–	–	12.7	–	–	0.0	13.1	27.8	100
Sweden[2]											
Local	–	74.0	–	–	–	–	–	–	7.5	18.5	100.0
Switzerland											
States	57.4	–	–	–	6.1	–	–	–	28.0	8.5	100.0
Local	2.0	66.9	–	–	–	–	–	–	25.2	5.9	100.0

Table 11. **Revenue structure of sub-central governments** (*cont.*)
Percentages of total sub-central revenue, 2002

	Autonomous taxes			Tax sharing				Other taxes	Grants		Total
	Discretion on rates and relief	Discretion on rates	Discretion on relief	Revenue split set by SCG	Revenue split set with SCG consent	Revenue split set by CG, pluri-annual	Revenue split set by CG, annual		Earmarked	Non earmarked	
Unweighted average											
States	30.3	3.4	–	–	25.0	0.9	–	1.6	21.9	16.9	100.0
Local	9.2	28.6	2.6	0.3	4.8	5.6	0.4	3.8	26.3	18.2	100.0

1. Local figures with Quebec tax autonomy.
2. 2004.
3. Including grants to local government.

Source: National sources and OECD Revenue statistics 1965-2004, 2005 Edition.

grants follow as the second largest category with 22%, indicating that more than one-fifth of total revenue is largely outside the discretion of SCG. Non-earmarked grants account for 19%, while tax sharing arrangements – widely used in constitutionally federal countries – account for 16%. Countries with tax sharing arrangements have a smaller grant system and *vice versa*, suggesting some substitutability between the two fiscal arrangements. Again there is wide variation across countries; while for some tiers own tax revenue accounts for the overwhelming part (Canada states, Switzerland states), for others it is tax sharing (Australia states, Austria local, Germany states, Czech Republic), for others again it is either earmarked or non-earmarked grants (Greece, Mexico, Netherlands).

Fiscal autonomy indicator set

Fiscal autonomy of sub-central governments is multi-faceted and must be assessed using several indicators. Table 12 provides a summary of fiscal autonomy indicators developed in this article, including the share of tax revenue allocated to sub-central governments, the discretion over those taxes, the share of transfers allocated to sub-central governments and the percentage of earmarked transfers. Although not treated in this article, two indicators for fiscal rules are added, reflecting, respectively, the right to run deficits and the right to borrow (Box 2).

Altogether, the table comprises six indicators capturing fiscal autonomy from different angles. The seventh indicator "share of autonomous SCG tax revenue" is the product of the sub-central tax revenue share and the autonomy over those taxes; this product comes closest to what one could call a composite indicator of fiscal autonomy. Correlation between indicators is weak, and statistical concepts like factor analysis fail to produce a single "summary indicator of sub-central fiscal autonomy".[6]

Table 12. **Summary of fiscal autonomy indicators**
In percentages

	SGG tax revenue/Total tax revenue	Discretion on rates and relief/Total SCG tax revenue	Total grants/ Total tax revenue	Non earmarked grants/Total grants	Budget and deficit autonomy	Borrowing autonomy	SCG autonomous tax revenue/ Total tax revenue
Australia	31.4	58.8	11.0	13.1			18.5
States	28.4	54.4	9.8	7.1	10.0	62.5	15.4
Local	3.0	100.0	1.3	83.3	10.0	62.5	3.0
Austria	18.4	7.6	15.2	19.0			1.4
States	8.8	7.0	11.5	20.2	40.0	100.0	0.6
Local	9.6	8.1	3.8	13.9	40.0	100.0	0.8
Belgium	27.8	69.7	11.1	5.3			19.4
States	22.8	63.8	3.9	6.0			14.6
Local	5.0	96.4	7.1	4.0			4.8
Canada	44.1	94.1	17.5	43.9			41.5
Provinces	35.5	93.3	9.0	81.4			33.1
Local	8.6	97.4	8.5	4.3			8.4
Czech Republic	12.5	9.6	12.4	0.0			1.2
Local	12.5	9.6	12.4	0.0	70.0	62.5	1.2
Denmark	35.6	90.7	13.4	56.3			32.3
Local	35.6	90.7	13.4	56.3	0.0	25.0	32.3
Finland	21.5	89.9	12.1	90.8			19.3
Local	21.5	89.9	12.1	90.8	60.0	75.0	19.3
France	10.0	89.8	8.6	88.3			8.1
Local	10.0	89.8	8.6	88.3	60.0	37.5	8.1
Germany	28.7	14.2	12.8	43.4			4.1
Länder	21.8	2.4	5.9	42.5	70.0	87.5	0.5
Local	7.0	51.1	7.0	44.4	0.0	62.5	3.6
Greece	0.9	64.6	4.1	0.0			0.6
Local	0.9	64.6	4.1	0.0			0.6
Hungary			16.7	43.1			
Local			16.7	43.1			
Iceland	25.2	91.2	1.9	79.0			23.0
Local	25.2	91.2	1.9	79.0	100.0	62.5	23.0
Italy	16.4	64.7	19.1	55.1			10.6
Regional	11.3	58.8	12.7	71.4			6.6
Local	5.2	77.6	6.4	24.5			4.0
Japan	26.0	79.8					20.8
Local	26.0	79.8			70.0	50.0	20.8
Korea	18.9	64.3	34.4	72.3			12.1
Local	18.9	64.3	34.4	72.3	60.0	12.5	12.1
Mexico	3.4	100.0	43.4	40.8			3.4
States	2.4	100.0	43.4	40.8			2.4
Local	1.0	100.0	0.0				1.0
Netherlands	3.6	99.2	27.8	26.4			3.6
Local	3.6	99.2	27.8	26.4	0.0	75.0	3.6
Norway	12.9	100.0	11.3	55.1			12.9
Local	12.9	100.0	11.3	55.1	40.0	50.0	12.9
Poland	17.5	23.2	37.9	70.5			4.1
Local	17.5	23.2	37.9	70.5	80.0	37.5	4.1

Table 12. **Summary of fiscal autonomy indicators** (*cont.*)
In percentages

	SGG tax revenue/Total tax revenue	Discretion on rates and relief/Total SCG tax revenue	Total grants/ Total tax revenue	Non earmarked grants/Total grants	Budget and deficit autonomy	Borrowing autonomy	SCG autonomous tax revenue/ Total tax revenue
Portugal	6.0	44.0	7.9	88.6			2.6
Local	6.0	44.0	7.9	88.6	60.0	37.5	2.6
Spain	26.6	64.8	19.4	79.9			17.3
Regions	18.1	58.4	14.0	85.2	0.0	25.0	10.6
Local	8.5	78.6	5.5	66.2	0.0	37.5	6.7
Sweden	32.1	100.0	9.4				32.1
Local	32.1	100.0	9.4		40.0	100.0	32.1
Switzerland	43.1	94.0	23.4	21.4			40.6
States	27.0	90.4	16.1	22.2	70.0	75.0	24.4
Local	16.2	100.0	7.2	19.6	60.0	37.5	16.2
Turkey	6.5	0.0	15.8	22.7			0.0
Local	6.5	0.0	15.8	22.7	70.0	25.0	0.0
United Kingdom	4.5	100.0					4.5
Local	4.5	100.0					4.5
Unweighted Average							
States	19.6	58.7	14.0	41.9	38.0	70.0	12.0
Local	12.4	73.1	11.3	45.4	45.6	52.8	9.4

Source: National sources and OECD, Revenue Statistics 1965-2004, 2005 Edition.

A *few* (*non*) *correlations among fiscal autonomy indicators*

As described above, the various indicators for fiscal autonomy are not or only weakly correlated, pointing at the multidimensionality of fiscal autonomy and the great diversity of fiscal institutions in OECD countries. Some of these non-correlations are interesting from a policy perspective since they may either support or contradict a number of beliefs in the area of decentralised public finance. The following scatter diagrams show a number of simple two-dimensional relationships.

- The first scatter diagram shows the relationship between the share of sub-central tax revenue and the degree of autonomy over these taxes. The share of sub-central government's own tax revenue is hardly related to their autonomy over those taxes. While in some countries SCGs have wide discretion over a small tax base, in some other countries SCGs have very little autonomy over a large tax base, especially in tax sharing arrangements.The picture again supports the view that a simple share of tax revenue is a poor measure to assess true fiscal autonomy of sub-central governments and that for analytical purposes, *e.g.* assessing the impact of decentralisation on aggregate finance, more sophisticated indicators should be used.

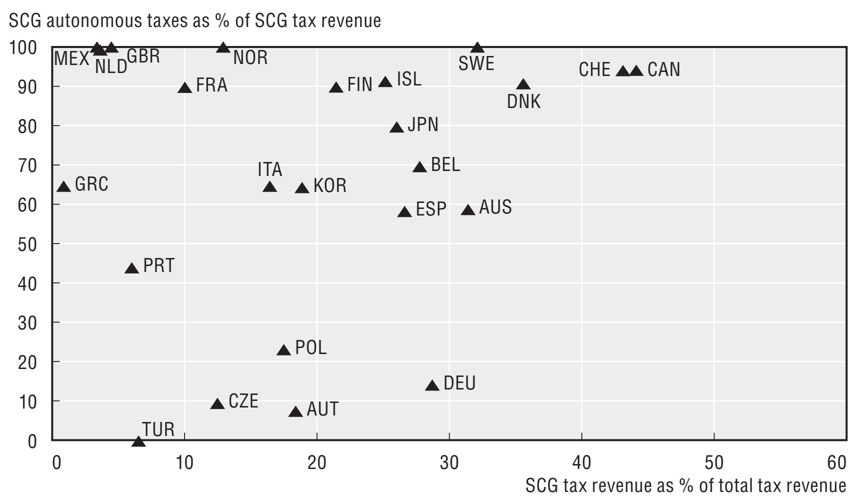
Box 2. **Fiscal rules and their impact on sub-central government autonomy**

Rules constraining the discretionary power of sub-central budget policymakers have become quite widespread among OECD economies. While fiscal rules for sub-central governments can be a means to achieve sustainable long-term aggregate finance, they reduce the power governments have over their own budget. The same fiscal rules can therefore be viewed from both a "stringency" and an "autonomy" perspective; with a more stringent rule assumed to reduce the discretion a SCG has over its budget or selected budget items.

In order to assess the extent SCG fiscal autonomy is constrained by fiscal rules, two indicators for fiscal rules stringency were calculated based on Sutherland, Price and Joumard (2006). A simple linear transformation of these indicators yields "fiscal rule autonomy" indicators. The "fiscal rule autonomy" indicators have the same dimensions as the other fiscal autonomy indicators shown in Table 12 and the same meaning, *i.e.* the higher the value, the more lenient the respective rule and the higher sub-central budget autonomy.

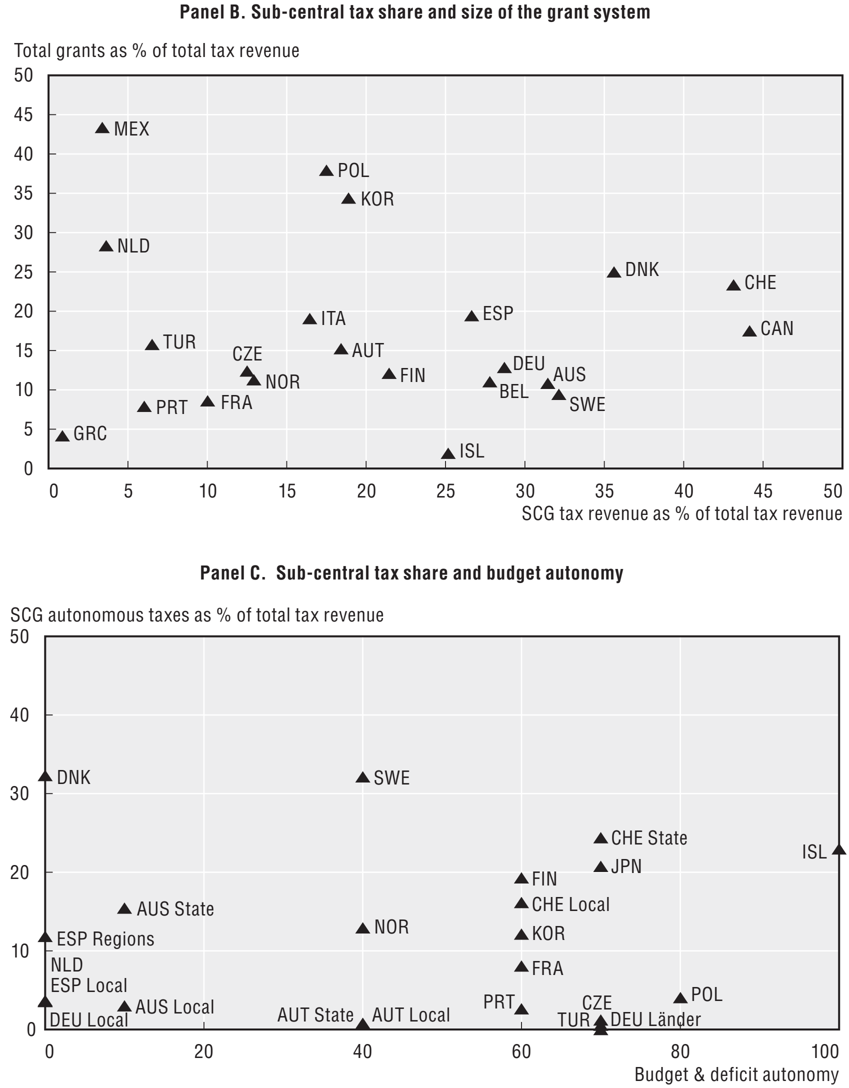
Figure 4. **Relationship between fiscal autonomy indicators**

Panel A. Sub-central tax share and sub-central taxing power



Source: National sources and OECD *Revenue Statistics 1965-2004*.

Figure 4. **Relationship between fiscal autonomy indicators** *(cont.)*



Source: National sources and *OECD Revenue Statistics 1965-2004*.

- The second scatter diagram shows the relationship between the share of sub-central tax revenue and the size of the grant system. While fiscal policy could substitute own tax revenue for intergovernmental grants and *vice versa*, there is actually no relationship between the two fiscal arrangements. While in some countries small local tax revenue meets with a small grant system, others combine large local tax revenue with a large fiscal gap and an extended transfer system to cover it. Only unconditional grants (not shown in the figure) and own tax revenue seem to be substitutes, which points to the close relationship between tax sharing and grants arrangements. Policy makers might be interested to know whether increased sub-central tax autonomy can reduce the need for intergovernmental transfers.

- The third scatter diagram shows the relationship between the share of sub-central tax revenue and the extent to which SCG are allowed to run deficits. This figure actually assesses whether countries with high sub-central taxing power apply stricter rules on fiscal behaviour. The lack of a close relationship suggests that in practice fiscal rules are neither a substitute nor a complement for SCG autonomy. Some countries grant SCG large tax autonomy but impose strict fiscal rules, others are likely to do the reverse, while some countries restrict both forms of fiscal autonomy. Large local and regional tax autonomy is neither coupled to strict nor to lenient fiscal rules.

Any conclusion with respect to the relationship between different fiscal autonomy indicators must be taken with great care since those indicators represent only one point in time. To assess the dynamics between different autonomy indicators one needs to observe fiscal design and its outcome over several time periods. What those indicators say after all is that fiscal federal design is partially country-specific and its evolution likely to be path-dependent.

SUMMARY AND OUTLOOK FOR POLICY ANALYSIS

This article assessed the power of sub-central governments over their revenue sources. For that purpose, a detailed set of indicators was developed encompassing both tax autonomy and autonomy over revenue from intergovernmental grants. Tax revenue was divided into categories ranging from full autonomy over tax bases and rates to no autonomy at all, while revenue from intergovernmental grants was divided into earmarked and non-earmarked grants. The resulting indicators are supposed to give a more accurate picture of the true fiscal power that sub-central governments enjoy.

Results suggest that state and local discretion over fiscal resources is limited and that the simple share of sub-central to total revenue overestimates SCG fiscal power. In particular:

- T*he taxing power of sub-central governments is limited*. Sub-central governments command 60% of their own tax revenue only, while the remaining 40% are part of tax sharing arrangements or under entire control of the central government. Taxing power is lower for state than for local governments. With

31%, the share of sub-central to total tax revenue remained stable over the period 1995-2002, but the autonomy over this share has slightly increased.

- *Sub-central taxation relies strongly on mobile taxes*. With more than 40%, the highly mobile personal and corporate income tax revenue accounts for the largest part of sub-central tax revenue. Taxes on immovable property account for 19% only. Many taxes potentially prone to spatial mobility are part of tax sharing arrangements or fiscal equalisation arrangements that limit the danger of sub-central tax erosion, though.
- A *large part of intergovernmental grants is earmarked*. With roughly 60%, non-earmarked grants account for a large part of total grant revenue, but the remaining 40% give central governments still a strong stake in SCG budgets. Earmarked grants are more important for state and regional governments than for local governments. On average, expenditures on grants have increased more than total government expenditure, pointing to a certain pressure on the central budget.
- *Taxes are more important a revenue source than grants*. Tax revenue accounts for 60% of sub-central revenue, while grants account for 40%. Autonomous taxes are the single largest category with 38%, but earmarked grants follow as the second largest category with 22%. Tax sharing arrangements account for 16%. Countries with tax sharing arrangements have a smaller grant system and *vice versa*, suggesting some substitutability between the two fiscal arrangements.
- *Fiscal autonomy indicators are largely uncorrelated*. There is no single pattern of sub-central fiscal design, and fiscal federal design is at least partially country specific and path-dependent. If set against each other, the various indicators used reveal that there is no relationship between the share of sub-central tax revenue and tax autonomy, nor between the amount of sub-central tax revenue and the size of the grants system, nor between the extent of fiscal autonomy and the stringency of fiscal rules.

Although a part of fiscal federal design is utterly country specific and its evolution path-dependent, some policy issues are common to all or most countries. The new database can open the way for a more focused analysis of fiscal federalism issues:

- *Fiscal autonomy and fiscal stability*. A key policy issue in fiscal federalism is how sub-central autonomy affects fiscal stability. Evidence on this is scant and inconclusive. While some policy research suggests that fiscal autonomy leads to a deficit bias (*e.g.* de Mello, 2000) or has pro-cyclical effects (*e.g.* Wibbels and Rodden, 2005), others come to opposite findings (*e.g.* Neyapti, 2003 or Ebel and Yilmaz, 2002). One of the main reasons for inconclusive results is the poor data used for defining fiscal autonomy. The refined dataset developed in this article allows better assessing the link between fiscal federal arrangements and fiscal outcomes and may give more precise guidance on whether autonomy is compatible with stability.

- *Autonomy and efficient public service delivery*. Another policy issue is whether ceding more fiscal autonomy to the sub-central level will increase or decrease public service efficiency. Although higher autonomy is thought to be associated with higher efficiency, governments are often hesitant to increase sub-central taxing power or to substitute earmarked for general grants, fearing that without proper central regulation sub-central jurisdictions are either unable or unwilling to deliver an efficient and equitable access to public services. Linked to outcome variables the new database can help evaluate the effect of different budget rules and funding arrangements on sub-central spending efficiency.
- *Sub-central taxes versus intergovernmental grants*. Countries have adopted different approaches towards funding sub-central public services. While some give taxing power to sub-central governments, others use intergovernmental grants. The substitutability between both arrangements raises policy questions such as: Which arrangement allows for higher public service efficiency? Which arrangement leads to more equity across jurisdictions? Which arrangement puts more pressure on central and sub-central budgets, and what role can fiscal rules play? The new dataset can be used to assess the relationship between the two fiscal federal arrangements and their interaction with the various policy objectives.
- *Which taxes at the sub central level*? Contrary to the allegations of fiscal federalism theory, highly mobile income taxation makes up for more than 40% of average sub-central tax revenue. While this arrangement functions well in a number of countries – since mobile taxes are often built into tax sharing or fiscal equalisation schemes – in some others sub-central jurisdictions appear to struggle with tax erosion. A country-wise analysis of the new database can help identify tax arrangements that help maintain fiscal autonomy of the sub-central level while containing the potential drawbacks of tax mobility.

In the coming years, the OECD Network on Fiscal Relations across Government Levels is poised to work on this policy agenda.

Notes

1. Since for some categories no or very small numbers were reported, some sub-categories were merged and their number reduced from 13 to 10.
2. Fiscal equalisation also limits tax competition, see Blöchliger *et al.* (2007).
3. The central government figures for Greece include EU grants. In other countries, grants are directly paid to the receiving sub-central government.
4. Intergovernmental grants are an expenditure item and they should be set in relation to total expenditure. However, National Accounts data on government expenditure are lacking for a number of countries, so total tax revenue was used as a proxy, which was taken from the *Revenue Statistics*.
5. Details on how block grants are distinguished from general purpose grants can be found in Bergvall, Charbit and Kraan (2006).
6. This supports the findings of Sutherland, Price and Joumard who found very little correlation between indicators for fiscal rules (Sutherland, Price and Joumard, 2005).

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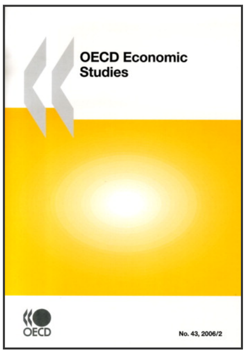
This paper examines whether regulation that is more conducive to competitive and efficient financial systems has a significant positive impact on sectoral output and productivity growth in a sample of 25 OECD countries. More specifically, following a methodology used by Rajan and Zingales (1998), the paper tests whether industries that depend more heavily on external sources of funding tend to grow faster in countries that have more competition-friendly regulation in markets for banking services and financial instruments. The regulatory indicators are assembled from surveys conducted by the World Bank on regulations in banking and securities markets. They point to substantial variations in the stance of regulation across countries, in particular with respect to the broad rules underpinning securities market transactions. The empirical analysis indicates that financial system regulation matters for output growth both in a statistical and economic sense.

This paper proposes a framework for projecting public health and long-term care expenditures. It considers demographic and other (non-demographic) drivers of expenditures. The paper extends demographic drivers by incorporating death-related costs and the health status of the population. Concerning health care, the projections incorporate income and the effects of technology cum relative prices. For long-term care, the effects of increased labour participation, reduction of informal care and Baumol's cost disease are taken into account. Using this integrated approach, public health and long-term care expenditures are projected for all OECD countries. Alternative scenarios are simulated, together with sensitivity analysis. Depending on the scenarios, total OECD health and long-term care spending is projected to increase in the range of 3.5 to 6 percentage points of GDP for the period 2005-50.

The common indicator to assess fiscal power of sub-central governments is the share of sub-central to total tax revenue. But this indicator says nothing about the true discretion sub-central jurisdictions have over tax rates and the tax base, and it skips revenue from intergovernmental grants entirely. The main purpose of this paper is to develop and analyse a set of more refined indicators that assess the true autonomy sub-central governments have over fiscal resources. In sum, fiscal autonomy is considerably lower than the simple ratio suggests. About 60% only of own tax revenue is under full or partial control of sub-central governments, and again 60% only of transfer revenue is unconditional. Moreover, contrary to the allegations of fiscal federalism theory, much sub-central tax revenue comes from mobile income taxes and is prone to tax erosion. The new database can help assess how fiscal autonomy affects policy outcomes such as public sector efficiency, equity in access to public services or the long-term fiscal stance.



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