



OECD Working Papers on Fiscal Federalism No. 11

Explaining the Sub-National  
Tax-Grants Balance  
in OECD Countries

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<https://dx.doi.org/10.1787/5k97b10s1lq4-en>



COM/CTPA/ECO/GOV/WP(2009)11

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*OECD Network on Fiscal Relations Across Levels of Government*

**EXPLAINING THE SUB-NATIONAL TAX-GRANTS BALANCE  
IN OECD COUNTRIES**

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## TABLE OF CONTENTS

EXPLAINING THE SUB-NATIONAL TAX-GRANTS BALANCE IN OECD COUNTRIES .....	3
I. Introduction.....	3
II. What determines the taxes-grants balance?.....	6
A. Observed Tax-Grants Balance across OECD Countries.....	6
B. Reasons for Different Tax-Grant Systems .....	7
III. How has the Tax-Grants Balance Changed over Time? Country Reforms.....	13
A. Large reforms have mainly increased shared taxes .....	13
B. Smaller reforms can increase or decrease the tax-grant balance and are more varied.....	14
C. Changes in the Tax-Grants Balance and Political Systems .....	16
IV. Conclusion .....	17
REFERENCES .....	19
TABLES AND FIGURES .....	21

### Tables

Table 1. Tax-Grants Balance and SCG Health Spending .....	21
Table 2. Tax-Grants Balance and Fiscal Equalisations.....	21
Table 3. Local income tax revenue of OECD countries, 1975, 1985, 2005 .....	22
Table 4. SCG tax revenues as share of total SCG revenues .....	23
Table 5. Federations and Constitutional Rules .....	24
Table 6. Changes in SCG tax revenue (as percent of SCG revenue) 1995-2005.....	25

### Figures

Figure 1. OECD Subnational Government Revenue Shares (% of total SCG revenue, 2005).....	26
Figure 2. OECD Subnational Government Finance Patterns: Four Average Finance Types (average SCG revenue shares, by type, 2005) .....	27
Figure 3. SCG tax revenues as share of SCTG total revenues.....	28
Figure 4. Changes in SCG taxes (as % of total SCG revenue) by SNG Finance Type .....	32

### Boxes

Box 1. A review of normative tax-grants theory.....	5
Box 2. Decentralisation but central control of health and welfare services in Finland.....	8

# EXPLAINING THE SUB-NATIONAL TAX-GRANTS BALANCE IN OECD COUNTRIES<sup>1</sup>

## I. Introduction

1. Normative principles provide a relatively clear set of rules for the balance between grants and taxes (box 1 reviews the normative theory), but in practice a variety of types of tax-grant systems are observed in OECD countries, which do not all follow these rules. According to the theory, own-taxes should be the primary revenue source (technically for the last dollar of spending), while transfers should only be used as a supplementary revenue source to correct for externalities, act as an insurance buffer, or redistribute resources between regions (see OECD 2006a, 2006b). Besides, the theory wants tax bases for sub-national governments to be confined to immobile resources such as land and user fees. In practice, transfers often represent a large proportion of sub-national governments' revenues, and many countries use income taxes instead of property taxes at the sub-national level.

2. This paper documents the tax-grants balance in OECD countries, classifies countries as belonging to one of four different SCG finance types, investigates the main factors explaining differences in the tax-grants balance across countries, and investigates country reforms to understand the variation over time within countries. The paper is organised as follows. The first section documents the tax-grants balance and classifies countries as belonging to one of four SCG finance types. Documenting the tax-grants balance in OECD countries is harder than it first appears because countries differ along three dimensions: autonomous taxes, tax sharing, and transfers. Tax-sharing is very similar in economic terms to transfers in that tax-sharing typically does not allow free choice of the tax rate by each SCG, but in the past has been classified as tax revenue in OECD publications. Consequently, OECD statistics on sub-national government finance can be somewhat misleading. This paper uses the definition of tax-sharing developed by the Fiscal Network and the new data using that definition from OECD 2008a to describe the tax-grants balance in terms of these three dimensions of sub-national government finance. The paper observes that OECD countries fall into one of four main SCG finance types that span the tax-sharing – autonomous tax – transfer dimensions.

3. The second section of the paper then explores the reasons that countries occupy their observed SCG finance position using simple correlation and regression techniques, supplemented by examples from country questionnaire answers (see Annex 1a and 1b) and other sources. With respect to regression techniques, the number of observations is so small that the best way to proceed is to look at simple two-variable regressions.

4. The third section examines how countries' tax-grant balance has changed over time by examining reforms in countries. The methodology is slightly different in this section. First, the OECD 2008a data is unavailable for earlier years, so a comparison using this data cannot be done. Consequently, this section of the paper relies on changes in countries' SCG tax shares from 1995 to 2005. Second, this section primarily uses particular country reforms to explain the observed changes in SCG tax shares during the 1995 to 2005 period. This section also uses examples from countries to demonstrate how the political system can make changes in the tax-grant balance harder or easier.

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<sup>1</sup> Claire Charbit has coordinated this document produced by Professor Timothy J. Goodspeed on the basis of indications provided by Lee Mizell. Dirk Jan Kraan and Camila Vammalle also contributed with useful comments.

5. The main findings are:

- The tax-grant balance in OECD countries is defined along three dimensions: autonomous tax, tax-sharing, and transfers. OECD countries belong to one of four SCG finance types:
  - Type 1: Low autonomous tax, high tax-sharing, medium transfers
  - Type 2: Low autonomous tax, low tax-sharing, high transfers
  - Type 3: Medium autonomous tax, medium tax-sharing, medium transfers
  - Type 4: High autonomous tax, no/low tax-sharing, medium transfers
- The federal-unitary distinction does not explain observed SCG finance types. Federal countries lie across all SCG finance types except type 2. Rather, there is a very high correlation of the finance type and the share of autonomous taxes.
- The reasons that countries differ in their observed tax-grant balance are:
  - SCGs have different roles in the delivery of national public goods and services;
  - SCGs with higher autonomous taxes generally need higher equalisation grants. This can be because of an externality resulting from unequal tax bases or an ex-ante desire for equal service provision;
  - Externalities involving SCGs and approaches to internalising these externalities differ between countries;
  - Historical circumstances involving SCGs differ among countries leading to different initial values and customs.
  - Differing political concerns and institutions across countries.
- Large reforms in the tax-grants balance are infrequent and have tended to increased shared taxes (supported by National Accounts data). Smaller reforms are more common and varied, and can push the tax-grants balance in either direction, but by and large have tended to increase the tax share very slightly (less than one percent point and less than SCG expenditure increase).
- Political systems can influence the ease with which the tax-grants balance can change. Generally, federal countries require more SCG consent while the central government has more control in unitary countries.

### **Box 1. A review of normative tax-grants theory**

The normative theory of fiscal federalism suggests that funding (technically of the last dollar) of sub-national government spending should be by own taxes in which the sub-national government freely chooses the tax rate. In practice this implies that own taxes should be the primary revenue source for sub-national governments. Grants are viewed as a supplementary means of finance. This derives from

(i) the proposition that under certain conditions decentralised provision of public goods and services is at least as efficient in consumption as central government provision in that efficiency in consumption requires diversity of preferences for public services to be matched with diversity in provision; and

(ii) that sub-national financing of decentralised goods and services by free choice of its tax rate provides the proper incentives to induce efficient spending choices by sub-national governments.

The proposition that decentralised provision of goods and services is efficient was given the status of a theorem by Oates' Decentralisation Theorem (1972, p. 35). Given the Decentralisation Theorem, the next question is how decentralised goods should be financed in order for sub-national governments to have the incentives to spend in a manner consistent with the achievement of consumption efficiency. To achieve such efficiency, sub-national governments must equate the social marginal benefit and the social marginal cost of their decision. As the SCG is providing the good or service in question it should know the marginal benefit; indeed, it is often argued that the sub-national level of government knows better than the central government the marginal benefit of the public spending that it undertakes. In order for the sub-national government to pay the true social marginal cost of its decision (absent externalities), it must bear the full cost of the last dollar of its spending. Otherwise (except coincidentally) the sub-national government will not consider the true marginal cost of its spending decision and efficiency will not be achieved. If the SCG is allowed to freely choose a tax rate (technically for the last dollar of spending), it will incur the full marginal cost of that decision and consequently will choose a tax rate that equates the marginal cost and marginal benefit of spending.

The theorem and the corollary that own tax finance is efficient rest on certain assumptions. Primary among these is an assumption that there are no externalities. If externalities are involved, sub-national provision will generally not produce an efficient outcome, since private and social marginal cost (or benefit) will not coincide. Various types of externalities can arise such as a spillover benefit of public spending across jurisdictional lines, tax-exporting, and tax-competition. These can be positive or negative externalities and can lead to under- or over-provision of public goods and services by sub-national governments. Moreover, the tax revenue base used by the sub-national government should be an immobile resource such as land or a benefit tax which effectively confines sub-national tax revenue mainly to taxes on property and user fees.

Intergovernmental transfers are viewed as a supplementary means of finance to:

- internalise externalities in sub-national public service provision. For instance, a matching grant will lower the price faced by the sub-national government for one more dollar of spending and encourage spending. If the matching rate is chosen judiciously, the matching grant can be set to induce the efficient level of sub-national spending;
- redistribute across regional governments in a country. Several reasons are offered for such redistribution. First, such transfers can be thought of as a type of insurance. If a shock (that is not perfectly correlated across jurisdictions) hits, consumption can be smoothed through transfers from the region less impacted to the region more impacted by the shock. Second, SCGs are sometimes given responsibility for implementing national programs that are intended to be equally provided across all regions of a country.
- instigate development and growth in certain regions. This can be thought of as an attempt to correct for certain horizontal imbalances or inequities in economic opportunities across regions.
- take advantage of economies of scale in tax collection (by the central government).

## II. What determines the taxes-grants balance?

### A. Observed Tax-Grants Balance across OECD Countries

6. In reality, countries do not completely adhere to the normative principles reviewed in Box 1. As a first step towards understanding the constraints and other factors underlying the taxes-grants balance chosen by governments, this paper first considers the general character of the tax-grants nexus of OECD countries. This is harder to describe than it first appears because OECD countries rely on three pillars of sub-national government funding: autonomous taxes, tax-sharing, and transfers. The discussion presented here uses the definition of tax-sharing developed by the Fiscal Network and the new data using that definition presented in OECD 2008a to describe the tax-grants nexus in terms of autonomous taxes, tax-sharing, and transfers<sup>2</sup>.

**Figure 1. OECD Subnational Government Revenue Shares (% of total SCG revenue, 2005)**

7. Figure 1 shows the share of sub-national government revenue from the three main finance pillars. By studying the observations of Figure 1 and using cluster analysis, a pattern emerges. OECD countries fall into one of four broad categories<sup>3</sup>. Starting from the bottom of the figure, a first set of countries rely heavily on tax sharing with little or no reliance on autonomous taxes and a moderate reliance on grants. This set of countries will be referred to as “type 1” and is composed of Germany, Mexico, Austria, the Czech Republic, and Turkey. Moving up the figure, a second set of countries has low autonomous taxes, low or no tax sharing, and a high level of transfers. This set of countries will be referred to as “type 2” and is made up of Luxembourg, Korea, Hungary, UK, Netherlands, and Greece. Moving further up the chart we encounter a third set of countries with substantial reliance on all three revenue pillars, Australia, Spain, and Belgium. These will be referred to as “type 3” countries. Finally, the fourth set of countries at the top of the figure are those with high reliance on autonomous taxes, no or little tax sharing, and a medium reliance on transfers. These countries are Sweden, Switzerland, Finland, USA, Norway and France and will be referred to as “type 4” countries.

**Figure 2. OECD Subnational Government Finance Patterns:  
Figure 3. Four Average Finance Types (average SCG revenue shares, by type, 2005)**

8. While there are differences between countries within a type, each type constitutes a distinctly different model of sub-national government finance. The tax-grants trade-off between the four models of sub-national government finance is illustrated in Figure 2 by averaging the autonomous tax, tax-sharing, and transfer shares for the countries of a particular type. By construction, type 1 countries clearly have the least reliance on autonomous taxes. As one moves up the finance types, there are generally more autonomous taxes, less tax-sharing and less transfers (which can be confirmed in a statistical sense by simple univariate regressions). Due to the fact that the three shares add up to one, if “grants” is defined as tax sharing plus transfers, the relationship between the finance types and grants so defined is identical to the negative of the autonomous tax relationship. Thus, the four types of countries correspond to four distinct models of sub-national government finance that describe the tax-grants divide across OECD countries in terms of autonomous tax, tax-sharing, and transfer shares.

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<sup>2</sup> Different definitions of tax sharing may of course lead to different results (see OECD 2009 for an example). This study does not take into account other parameters such as social security funds that could receive further attention.

<sup>3</sup> The hierarchical cluster method used to generate the country allocations of Figure 2 is the weighted average linkage rule. It turns out that Turkey is somewhat of an outlier, and if Turkey is eliminated practically, any linkage rule yields the same country allocations as Figure 2. Including Turkey makes the results more sensitive to the linkage rule.

9. How tax-sharing should be classified (as grants or tax revenue) is the subject of some on-going debate and study by the OECD (see OECD 2008a). Since tax rates are usually not freely chosen by the SCG in a tax-sharing arrangement, this revenue source is very similar in economic terms to transfers, but is classified as tax revenue in OECD publications (see for instance any issue of OECD Revenue Statistics). Because of this, OECD statistics on sub-national government finance can be somewhat misleading, especially in comparison to other international data sources. For instance, the IMF's Government Finance Statistics classification requires autonomy over tax rates to qualify as own taxes. (In fact most other international data sources have such a requirement.) Figures 1 and 2 make clear that changing the OECD own tax definitions with respect to tax sharing would have some significant effects, particularly with respect to type 1 countries. Counting tax sharing as grants rather than own taxes pushes type 1 countries (Germany, Austria, Mexico, the Czech Republic, and Turkey) from one extreme on the tax-grants divide to the other.

10. Other classifications of tax-sharing and groupings along the tax-grants divide are also possible. For instance, one might group tax-sharing with general purpose grants and consider sub-national governments to be financed from (i) autonomous taxes, (ii) general purpose grants and tax-sharing, and (iii) block grants and earmarked grants.

11. It is rather interesting to note that federal countries are spread across three of the four sub-national finance types. Type 1 federal countries include Austria, Germany, and Mexico; type 3 federal countries are Belgium and Australia; and type 4 federal countries are the US and Switzerland. The only finance type to include only unitary countries is type 2, those with a low autonomous tax share, little or no tax sharing, and a high level of transfers. Except perhaps for this group, it does not appear that the federal-unitary distinction is particularly useful for describing the taxes-grants balance in general.

## ***B. Reasons for Different Tax-Grant Systems***

12. Having characterised the tax-grants nexus across OECD countries, this paper next considers reasons for the observed differences. The basic message from normative principles is that SCG should rely on own-tax finance on the margin, with grants playing an auxiliary role to correct for externalities and to smooth inequalities across sub-central jurisdictions. However, it is apparent that different countries arrive at different solutions to the multi-level governance problem. What are the trade-offs faced and how do countries come to embrace one sort of system or another?

### *1. Different SCG Roles in Delivery of National Public Goods and Services*

13. A first important reason for observed differences in the tax-grant balance is that sub-national governments in countries across the OECD differ with respect to their involvement in the delivery of national public goods and services. (See the OECD 2008b presentations for the Workshop on "Taxes and Grants"). For instance, Table 1 indicates that in many countries SCG spending in an important area of national concern – health - is high, while in others it is low. The measure used in Table 1 – the SCG share of health spending – is not a perfect measure of the SCG delivery of national public services in a country because health is only one kind of national public service, health services are delivered differently in different countries, and not all OECD countries consider health services to be a national public good. However, it is one of the few available measures and provides a reasonable approximation of SCG delivery of one national public service for most countries. Ongoing work by the OECD Network on Fiscal Relations (2007) on measuring spending power of sub-national governments is promising and could eventually provide alternative measures.



**Table 1. Tax-Grants Balance and SCG Health Spending**

14. High SCG health spending is particularly marked in the Nordic countries. Such countries tend to administer health policies that are developed at the national level and feel a tension between allowing sub-central control of resources for these nationally legislated programs and overall equity. National governments exercise a degree of control over the activities of SCGs in this area through legislation and the use of grants. Box 2 discusses the case of Finland and illustrates both the high degree of decentralisation of social services such as health and the extensive use of grants for these services in Finland.

**Box 2. Decentralisation but central control of health and welfare services in Finland**

In Finland, the municipalities produce and deliver most of the social welfare, health care, educational and cultural services. These services, which are stipulated by law, make up about 75 % of all municipal expenditures. In social welfare and health care the municipalities take care of health centres, specialist medical care, dental care and district hospitals, care for the elderly, care of the handicapped and the mentally ill. Child day care, welfare for the aged and the disabled and a wide range of other social services are among the other responsibilities of local authorities. Many of the services are provided jointly with other local authorities. For example, hospitals are run by joint municipal authorities. The municipalities can also provide services by using contracts with private service providers (public procurement). In this case, the quality of the services and the status of the client must be of the same level as when using public service providers. State grants are normally paid to the municipalities.

Source: Finland answers to OECD questionnaire

*2. SCGs with higher autonomous taxes need higher equalisation grants*

15. Countries are characterised by regional imbalances to differing degrees. These imbalances can be natural (high and low income regions) or can be intensified by local autonomy and differences in public good preferences across jurisdictions that lead to high and low public service provision as well. There are two reasons why countries with regional imbalances might need higher equalisation grants when autonomous taxes are higher. First, countries might simply desire national equality of a public service but are constrained in achieving this desire because of an institutional structure that embodies decentralised delivery of this public service. Such countries may attempt to rectify any imbalances through fiscal equalisation grants. (See the discussion in OECD, 2007b.) *Ceteris paribus*, countries that ex-ante desire equality of decentralised delivery of national public service levels and that have high tax autonomy might thus be observed to have greater fiscal equalisation grants. A second reason that a country with regional imbalances might need higher equalisation grants is that local autonomy and unequal tax bases can result in a misallocation of resources. This misallocation of resources can be corrected by the use of fiscal equalisation grants (Goodspeed, 1995). This efficiency reason for using fiscal equalisation grants has the same empirical implication as the first reason: higher local autonomy and fiscal equalisation grants would be positively correlated across countries. The second reason does not require a desire to equalise the decentralised delivery of national public goods, however. Multivariate regression (provided in OECD 2008c) also shows that higher taxes (both autonomous and shared) are associated with higher equalisation grants.

16. Fiscal equalisation transfers take many forms and can be a separate grant (as in Spain), part of a tax sharing system (such as in Germany), or part of a formula for funding a particular spending category (as in the US). This makes them particularly difficult to quantify and compare across countries, but OECD 2007b valiantly assesses the amount of fiscal equalisation as a percent of GDP and as a percent of total government spending.

17. Table 2 lists the data from OECD 2007b along with the SCG finance type of Figure 2 and there appears to be a positive relationship between the finance type and the level of fiscal equalisation grants. It

is evident from Table 2 that countries that operate systems with a high degree of sub-national revenue autonomy (the higher numbered finance types) also tend to operate substantial fiscal equalisation systems (and hence higher grants of this type). The only country classified as “Type 4” without any fiscal equalisation system listed in Table 3 is the US. In the US, fiscal equalisation is either implicit in the match in transfer formulas (as in the matching formula for Medicaid) or is carried out at the state level (as is the case for education for instance) according to individual state laws and constitutions. Norway is also an exception to the general rule; while it has a fiscal equalisation system, its level of fiscal equalisation is the smallest among the countries listed in Table 2. Thus the evidence indicates (with some exceptions) that a second reason for observed differences in the tax-grants balance is that countries with a high level of autonomous tax have higher fiscal equalisation grants either because of an externality caused by local autonomy and unequal tax bases or a desire to equalise decentralised delivery of national public services.

### *3. Different Externalities and Approaches to Internalising Externalities*

18. A third reason for observed differences in the taxes-grants balance observed in Figure 1 involves externalities. Differences across countries in the types of externalities a country confronts, their size and impact, and the solutions a country implements will impact the taxes-grants balance.

19. A first difference is in the type of externality that is prevalent in a country. Externalities can be of a variety of types, such as spillover benefits on the spending side and tax-competition on the revenue side. Different countries may suffer more acutely from different types of externalities, and this can lead to differences in the tax-grants balance across countries.

20. A second difference is that the same type of externality can have different impacts in different countries. Externalities of the same type can be larger in some countries than others, and welfare losses (which typically depend on price and income elasticities of sub-national public services) may differ as underlying price and income elasticities differ. To illustrate this further, consider the use of local income taxes. The use of a redistributive tax such as a local income tax is usually not recommended for SCGs because it creates an externality in location decisions and is unlikely to achieve any redistributive goals. Nevertheless, Goodspeed (1989) finds in a general equilibrium model that local income taxes cause moderate inefficiencies and lead to some redistribution. Key parameters in the analysis are price and income elasticities in the housing market: local income taxes are capitalised into the price of housing which deters inefficient migration and leads to some moderate redistribution. To the extent that these key parameters differ across countries, one might see differing levels of this tax and the tax-grants balance. Even taxes that are normally considered efficient (such as the property tax) can be inefficient depending on its effects. For instance, Wildasin (1989) finds that when the property tax is viewed as a tax on mobile capital and governments act strategically, a subsidy (or matching rate) of 40% for sub-national governments may be needed to achieve efficiency. Thus the extent to which a local property tax is similar to a tax on mobile capital in a country can influence the tax-grants balance.

21. To take another example, depending on the circumstances, tax-competition might or might not be efficiency-enhancing. Tax competition tends to be efficiency-enhancing when benefit taxes (taxes that are commensurate with the benefit the tax-payer receives from public services) are used and jurisdictions are numerous (as in perfect competition from the theory of the firm). (Oates and Schwab, 1988.) However, when non-benefit taxes (taxes that are not equal to the benefits received by the tax-payer) are used, when there is governmental market power (such as in the case of oligopoly), or when taxes are used to impede trade between regions, tax competition becomes inefficient. (Mintz and Tulkens, 1986.) Countries in which tax-competition tends to promote efficiency may be more likely to rely on taxes than grants.

22. A third reason for tax-grant differences due to externalities is that institutional structures can influence the damage resulting from an externality. While a growing empirical literature examines

whether SCGs within a particular country act strategically in the tax-competition setting (see the survey by Brueckner, 2003), few papers examine the factors that influence the damage done by externalities or the institutional factors that can limit the damage, and very few examine these questions for OECD SCGs. Goodspeed (2002) fills this void. He observes that the use of income tax by SCGs in OECD countries varies significantly both between countries and over time. (See Table 3) Particularly significant is the Nordic countries' use of income tax, with the SCG income tax share in Sweden being over 15% of GNP in 1984. Goodspeed (2002) hypothesises that differences in the size of a horizontal tax externality (in which changes in an SCGs tax rate changes the tax revenues of other SCGs) and a vertical tax externality (in which a change in the central government's tax rate changes the tax revenues of a SCG) can explain the observed variation of SCG income tax revenue in OECD countries. He also hypothesises that an institutional structure that uses equalising grants will lower the impact of the horizontal externality, thereby allowing increased reliance on SCG income tax in some OECD countries. Regression analysis using panel data on SCGs in OECD countries from 1975 to 1984 supports these hypotheses.

**Table 2. Local income tax revenue of OECD countries, 1975, 1985, 2005.**

23. The historical evolution of the Mexican system we see today is an interesting case in which damaging tax-competition led to an institutional change in the tax-grants balance (Courchene, Diaz-Cayeros, and Webb (2000)). At the beginning of the 20<sup>th</sup> century, sub-national governments in Mexico had a great deal of fiscal autonomy, so much so that unregulated and simultaneous taxation of bases by the states and federal government created an untenable situation. Economic tax competition wars were rampant and the multiplicity of taxes was such that it impeded the free flow of goods and services within Mexico. This resulted in a series of politicised National Tax Conventions that attempted to rationalise the system. The result after several decades was a political compromise that effectively transferred tax power to the federal government in exchange for the large transfers that we see today. In order to give up its taxing power, Mexican state governments were compensated through transfers, some more than others depending on their previous tax revenues and the political bargaining of the state. Thus, Mexico found the effect of tax competition to be so damaging in terms of tax "wars" that it felt an institutional change away from tax autonomy and toward grant finance to be warranted.

24. Interestingly, in 2000, Australia also significantly reformed its federal financial relations in a trade-off of taxing powers of state governments through the Intergovernmental Agreement on the Reform of Commonwealth-State Financial Relations. (See Australia's answers to the OECD questionnaire.) This Agreement introduced a General Sales Tax (GST) with all revenue going the States and Territories. In return, the States and Territories agreed to abolish several inefficient State taxes. The GST is collected by the Commonwealth and redistributed to the States with a view towards horizontal fiscal equalisation. Evidently Australia also found a move away from tax autonomy to be beneficial.

25. Externalities are thus likely to alter the tax-grants landscape, though differently for different externalities and in different contexts. There is evidence that vertical and horizontal tax externalities explain in part variation in taxation by SCGs for OECD countries, and also that grants lower the impact of horizontal tax externalities between SCGs in some OECD countries, possibly explaining some of the differences observed in Figures 1 and 2. Countries have reacted differently to the presence of externalities, with some (such as the Nordic countries) using grants as a corrective mechanism (but leaving large amounts of tax autonomy at the SCG level) and others (such as Mexico) substituting grant for tax finance (and leaving little tax autonomy at the SCG level). Thus the way in which countries correct an externality has an important impact on the resulting tax-grant balance.

#### *4. Different Historical Circumstances*

26. A fourth reason for observed differences in the tax-grants nexus of Figure 1 is that historical circumstance plays a role in the currently observed taxes-grants balance. In addition to the example of

Mexico outlined above, examples of this are found in the Nordic countries. While they have undergone many revisions, grants in the Nordic countries have a history dating back nearly one hundred years, as pointed out in Soderstrom (1998) and Lotz (1998). Sweden introduced a set of equalising grants in 1917. Finland had a system of municipal grants in 1891 and Denmark has had grants for specific purposes for over a century. While there are differences between them, Table 2 above shows that Finland, Sweden, and Norway all have systems that combine large doses of autonomy in taxes and equalising grants. Historical tradition appears to be partly responsible for the Nordic countries balance of high autonomous taxes and high grants (Switzerland has moved in that direction recently). Table 1 above indicates that the sub-central governments of the Nordic countries are heavily involved in the provision of the important public service of health, and they are also heavily involved in education and social protection. Reforms in these countries tend to center around improving the equalisation system and trade-offs between efficient incentives for sub-national governments and equality in provision of services across jurisdictions.

27. Long traditions have also played a role in shaping the Spanish system of intergovernmental finance. For example, the Spanish Constitution enshrined the “fuero” tradition in the Basque and Navarra regions (see OECD report on the Basque Country, 2004). Under this tradition, which dates back many hundreds of years in these regions, the regional government collects all revenue and returns a portion to the higher authority. In modern times this translates to the regional government returning a portion of tax collections to the central government. The portion returned is negotiated, but the idea is that it should pay for central government provision of goods and services. The “fuero” tradition is unique to the Basque and Navarra regions, which can create tension between the central government and other regions.

28. Long traditions that lead to asymmetric treatment of taxes and grants can have disadvantages in the modern world. For instance, in Finland there is a perceived risk that permitting flexibility (i.e. exemptions from statutory obligations) in one municipality will put pressure on the central government to provide the same flexibility to another municipality, and eventually to a large number of municipalities. In Hungary, according to the Act of local governments, SCGs have the same duties and responsibilities; as such provision of flexibilities to individual SCGs is seen as objectionable. In spite of these possible problems, some countries are introducing asymmetries. In Korea, for instance, Je-ju island, the smallest regional government, has acquired the legal status of “special autonomy region” from 2007.

29. As these examples illustrate, a fourth reason for differences in tax-grant combinations across countries is thus historical circumstance. Such differences give countries different initial values, customs, and institutions and hence different tax-grant contours.

##### *5. Different Political Concerns and Institutions*

30. A fifth reason for differences in the taxes-grants nexus are differing political concerns and institutions. Several political dimensions can be identified that differ across OECD countries.

31. A first political dimension is the use of decentralised tax and grant policy as a political means of appeasing or countering different regional factions in order to hold a country together. Recent major changes in tax shares of countries with strong regional identity differences suggest that changes along the tax-grants nexus and political agreement among diverse regional actors are connected.

32. As shown in Table 4 and figure 3, three countries had large changes in own-taxes as a percent of total sub-national government revenue between 1995 and 2005: Australia, Italy, and Spain. At least two of these countries (Italy and Spain) are countries with strong regional identity differences. Italy, for instance, has five “special regions” (three with linguistic differences and two with geographic differences – they are islands) that have autonomous tax and spending powers while the remainder are regular regions with much less autonomy. A 2006 referendum on increased regional powers was defeated, but over the past two to

three decades spending responsibilities in the health and education areas have been devolved, while devolution of financing has not been as quick (see Italy presentation for OECD Workshop on “Taxes and Grants”). Nevertheless, the data indicate a major shift in financing of sub-national governments in Italy – OECD data indicate that own taxes as a share of total sub-central revenue increased from 30% in 1997 to 50% in 1998. Spain is another country with specially defined “historic regions.” Spain has also seen a large increase in own taxes as a share of total sub-central revenue, with the share rising from 37% to 55% between 2001 and 2002.

**Table 3. SCG tax revenues as share of total SCG revenues**

**Figure 4. SCG tax revenues as share of total SCG revenues**

33. A second political dimension that can affect the tax-grants relationship relates to a country’s Constitution. By its very nature, a Constitution is difficult to change. This has two implications. First, constitutional forces initially shape tax, grant, and expenditure assignment in countries in which these are specified in the Constitution. Second, reforms of tax-grant systems are more difficult when a constitutional barrier needs to be surmounted and hence constrain the tax-grant balance.

34. The first point is well exemplified by the cases of Germany and Switzerland. In both of these countries, the Constitution imposes some initial conditions that shape the initial tax-grants balance. In Germany, the Constitution determines the financing of the levels of government to a high degree. (See German answers to questionnaire.) It determines that, in principle, the States have the right to legislate in tax matters. The federation has the option to legislate for taxes if it is partly or completely entitled to the revenues or if the creation of equal living conditions in Germany or the preservation of the legal or economic unity in the national interest makes federal legislation necessary. In practice, this option is used widely and most taxes which the States are entitled to are regulated by federal legislation. As traditionally defined by the OECD, German states are mainly financed by “own tax” revenues (see Table 4 and figure 3) but Figure 1 shows that this is primarily tax sharing. Transfers have a supplementary function and the legal possibilities for the Federation to make transfers to the States are limited by the constitution. Changes in the tax-grant nexus in Germany are thus limited and large changes require a change in the Constitution.

35. This raises the second point, that reforms of tax-grant systems are more difficult when a constitutional barrier needs to be surmounted. In Switzerland, the central government’s decisions on taxes are restricted by the Constitution. Constitutional changes in Switzerland must be approved by a majority of all Swiss and a majority in each canton. Further, the Constitution requires the participation of cantons in the decision-making process on the federal level, in particular in federal legislation. At the request of eight cantons, a popular vote on federal statutes will be held. Although the grants-tax nexus in Switzerland is based partly on Constitutional provisions and partly on legislated grants, change tends to be slow (particularly on the tax side) because of the extensive involvement of the cantons. A similar sort of constraint on reforms of the tax-grants system operates in Germany. German States are involved in tax legislation through the Bundesrat (the upper parliamentary chamber which represents Laender governments at the national level). Their consent is required for changes to revenue sharing arrangements so that the federal government cannot change the revenue of states without their approval. Furthermore, if States believe that Constitutional provisions (relating for instance to equal living conditions) have been violated, they can appeal to the federal constitutional court. Thus political institutions and a country’s Constitution can limit reforms of tax-grant systems.

36. Even though Germany and Switzerland both have a constitutional constraint, notice that Germany and Switzerland are at the opposite ends of the Figure 2 “types”; Germany is type 1 while Switzerland is type 4. Thus Constitutions can initially shape countries in very different ways. It is also the case that these are both federal countries and this is no coincidence. Table 5 indicates that most countries

which have Constitutional constraints with respect to taxing powers are Federations. Federal countries, which naturally combine diversity, need a set of rules such as a Constitution that legally binds regions together, and this set of rules usually sets out the structure of government, which need not be the same between countries.

**Table 4. Federations and Constitutional Rules**

### **III. How has the Tax-Grants Balance Changed over Time? Country Reforms**

37. Many problems arise in intergovernmental relations and countries react to these problems. The data indicate several features of reforms in the tax-grants balance. First, there have been some major changes in tax-grant structure, but these are concentrated among a few countries. These large reforms have tended to shift the tax-grants balance towards shared taxes. Most reforms are smaller reforms that leave a country with the same basic tax-grant structure delineated in Figure 2. These smaller reforms aim to make a given tax-grant structure more efficient or responsive and can push the tax-grants balance in either direction, though reforms have by and large had the effect of increasing the share of SCG taxes as defined in Table 4. It should also be noted that sometimes, changes in the share of SCG taxes in Table 4 and Figure 3 are due to changes in general economic conditions rather than reforms per se. We first discuss large reforms and then smaller reforms. The final part of this section examines how the political system can make changes harder or easier in a country.

#### ***A. Large reforms have mainly increased shared taxes***

38. Table 6 indicates the change in SCG tax revenues from 1995 to 2005. Most countries have relatively small changes, but two countries, Spain and Australia, stand out. In both Spain and Australia, SCG tax revenues as a percent of total SCG revenues increased by over 20%. Both of these countries are of the sub-national finance type 3 of Figure 2, countries that rely heavily on all three revenue pillars. (Italy is a third country to have had an increase in tax revenues as a proportion of SCG revenues of over 20 percent, but Italy cannot yet be classified among the types delineated in Figure 2 for a lack of data.) That the large changes in tax revenues are concentrated among countries with strong reliance on all three revenue pillars is further evidenced by Figure 4.

**Table 5. Changes in SCG tax revenue (as percent of SCG revenue) 1995-2005**

39. The major changes in Spain and Australia are due to changes at a single point in time, the year 2000 for Australia and the year 2002 in Spain (see Table 4 and Figure 3). Both changes resulted in an increase in tax sharing. As mentioned previously, in 2000, Australia's Intergovernmental Agreement on the Reform of Commonwealth-State Financial Relations came into force. (Australia's answers to OECD questionnaire.) This reform did not initially aim to be a fiscal federalism reform, but only a rebalance between types of taxes. The final Agreement introduced a General Sales Tax (GST) with all revenue going the States and Territories. The GST is collected by the Commonwealth and redistributed to the States with a view towards horizontal fiscal equalisation.

40. In Spain, the major change resulted from a re-negotiation of regional government financing (which happens every five years) that was agreed to in 2001 and has been in force since 1st January 2002 until the present. This arrangement increased the financial resources of the Autonomous Communities as well as their taxing power. The previous agreement (1997-2001) provided the regions with a 15% share of the personal income tax revenues collected within their boundaries with limited rights to set rates and tax credits. The 2002 arrangement widened both the range of tax bases and the regions' discretionary powers. The Autonomous Community share of personal income tax revenues has increased to 33% and the main consumption taxes (VAT and excises) have been included among the Autonomous Community shared taxes, though without power to change the rates. (Spain's answers to OECD questionnaire.)

41. According to Table 4, the change in Italy also occurs at a particular year, 1998. This is most likely due to the possibility that sub-national governments were allowed to impose a surcharge on the federal income tax at about this time. (See Italy presentation for OECD Workshop on “Taxes and Grants”.)

### ***B. Smaller reforms can increase or decrease the tax-grant balance and are more varied***

42. Figure 4 indicates that smaller changes in SCG tax revenue as a percentage of total SCG revenue are (i) both positive and negative and (ii) spread across the sub-national finance types of Figure 2. The smaller reforms that countries have undertaken have tended to be adjustments within a general SCG financial type (as defined in Figure 2) and have concentrated on making a given tax-grants balance more effective. As the problems are varied, this set of reforms can push the tax-grants balance in either direction, but on balance tend to have increased the tax share, and have been geared to making a given tax-grants balance more efficient by addressing a particular problem. Generally the negative values in Table 6 are due to general economic conditions rather than reforms per se, although there are some exceptions which are noted below.

#### **Figure 5. Changes in SCG taxes (as % of total SCG revenue) by SCG Finance Type**

43. One area of reform reported by some countries dealt with information problems and budget transparency. The countries that report problems in this area, Mexico and Turkey, are both in SCG Finance Type 1 (high tax-sharing and low autonomous taxes). In Mexico, SCG accounting standards differ among states, which make statistical data collection difficult for the central government. Spending information of SCGs is not transparent and has resulted in increased use of earmarked transfers. In 2007 Mexico’s Congress approved a fiscal reform, which sets the stage to create a new law that will harmonise SCG accounting, reduce the time for presenting official reports and ultimately lead to increased transparency in SCGs public finances. In 2003 Turkey enacted The Public Fiscal Management and Control Law. According to that law, information for the assurance of audit in both collection and expenditure of public resources should be shared with the public. In addition, the revenues and expenditures of SCG’s are being monitored by the Ministry of Finance since 2006 according to that law.

44. Spain reports a different sort of information problem. The central government in Spain does not have access to the databases of sub-central taxes which are collected by the regional governments. This hampers the ability of the central government to estimate the effects of discretionary changes in tax rates by regional governments.

45. Some countries reported on recent reforms that have improved the effectiveness of their information and accountability systems. The Australian system of government accountability, for instance, relies heavily on transparency which has improved due to an agreement by all to a uniform budget presentation (UPF) of financial statements. This helps making comparisons between jurisdictions. The primary objective of the UPF is to ensure that Commonwealth, State and Territory governments provide a common 'core' of financial information in their budget papers. The increased transparency delivered by the adoption of the UPF is considered to provide the Australian public with more meaningful data by which to judge the relative performance of Australian governments.

46. A second area of smaller reforms is geared at increasing SCG financial responsibility. This can take different paths depending especially on the SCG finance type, and can increase or decrease the relative importance of taxes and grants.

47. In some cases, reforms in this area have increased SCG taxes as a proportion of SCG revenue. This is the case in Belgium in which the 2001 Fiscal Reform led to the observed increase in the percentage of tax revenues in 2002 (and also the observed increase between 1995 and 2005). The Special Financing Law (part of the Fiscal Reform) assigned additional taxing powers to the Regions. First, it gave them the

power to set rates and reliefs on certain taxes (which represented about 95 % of autonomous taxes in the Regions in 2007). It also allowed the Regions to decide to increase or decrease the rate of personal income tax, within some limits. Regions may not use this taxing power to reduce the progressivity of personal income tax and to exert unfair competition. Reforms in Belgium are complex especially because of the multi-lingual Brussels Region. The French Community and the Flemish Community are simultaneously competent for public service provision in the Brussels Region (education and childcare), so that people living or using public service provision in the Brussels Region can choose, often according to a linguistic preference, between one or the other public service provider. Community-level taxes thus become problematic as they would be exercised partially on the same territory.

48. In other cases, the impact of such reforms on the tax-grants balance is ambiguous. For instance, in Portugal (a country in which SCGs have little fiscal autonomy and in which the SCG tax share was quite stable from 1995 to 2005) the Local Finance Act of January 2007 gave municipalities the possibility to receive up to 5% of the national income tax. It also increased the competencies of municipal governments to include certain aspects of education, health and social policy; created a new earmarked grant to finance these; and increased the amounts dedicated to two equalisation funds. As some of these reforms increase tax revenues and some increase grant revenues, the impact on the tax-grants balance in Portugal is unclear for the time being.

49. In Australia, the newest reforms give more autonomy to States, though it is also unclear how it will change the SCG tax share. The focus of the new framework, agreed to on March 26, 2008, is on significantly reducing Commonwealth prescriptions on service delivery by the States, in conjunction with clearer roles and responsibilities and outcomes based public accountability. The new framework will commence on 1 January 2009 and applies to all Commonwealth payments to the States, except GST.

50. The UK has not undertaken recent reforms that change the tax-grants balance (the ghost of the poll tax attempt under former Prime Minister Thatcher looms large) but there is a plan to introduce a small amount of additional tax autonomy. This new tax autonomy will be in the form of a supplement to the business tax and is scheduled to be allowed in 2010 to finance projects that promote economic growth.

51. Attempts at increasing SCG financial responsibility have sometimes been plagued by a difficulty in getting SCGs to use new taxing authority. In Mexico, SCGs prefer to have less tax autonomy given the political cost of tax collection. As a consequence, from 1990 until 2007 the central government and the SCGs preferred transfers over increasing tax autonomy. In Spain a similar problem is reported. Spanish regional governments in theory can now increase the rate of income tax for funding, but none have chosen to do so. The regional governments apparently prefer to rely on central government financing.

52. A third area of smaller reform is grant reform. Grant reform can lead to more grant revenue or less grant revenue so the impact on the taxes-grants balance is ambiguous. In Austria for instance, new grants were introduced in 1997 for environmentally friendly and energy efficient actions, and also other grants for health and social actions. In 2002, new grants were introduced for roads. In both cases, the additional grants decreased the share of taxes, which explains the negative value for Austria in Table 6. However, Austria has recently undergone a reform of its Fiscal Equalisation Law. The idea of the reform is to create more responsibility at the sub-national level by decreasing earmarked grants and increasing tax-sharing. Consequently, after 2009 revenues from tax-sharing will be higher for SCGs. Depending on whether one counts tax-sharing revenues as taxes or grants, this will either increase or have little impact on the taxes-grants balance.

53. In the Czech Republic, an evolving intergovernmental system has led to several changes that have both increased and decreased the SCG share of taxes. Regions were established in 2000 as a level of SCG. In 2001 regional financing was limited to grants and hence SCG tax revenue fell; in 2002, regions



received tax sharing resources and hence SCG tax revenue increased. Since 2003, the department offices have been abolished and their responsibilities assumed either by regions or by some municipalities and financed by grants, hence decreasing the SCG tax share. And finally in 2005, the regional percentage of tax sharing increased from about 3 to about 9 percent.

54. In 2003, Japan underwent a major reform known as the “Trinity Reform.” The idea was to make local governments more financially responsible by moving away from grants and toward more autonomous tax revenue and spending freedom. The reforms included a moderate reform of grants (increasing the way in which SCGs can use funds by reducing earmarked grants), tax reform (increasing funds available to SCGs by reducing taxes paid to the central government), and changes to the size of the local allocation tax (a type of grant). Some tax bases were also shifted from national to local control. Although some say the reform did not go far enough, it started a debate on local autonomy. It is difficult to say exactly how these reforms changed the tax-grants balance in Japan as Japanese data is unavailable for Table 4.

55. It seems that in many countries, maintaining SCGs involvement in tax raising is a political economy challenge. Indeed, most SCGs seem to prefer to rely more heavily on grants, even if it goes with limited spending autonomy, as raising local taxes might have negative consequences on their votes. Left to himself, the system could have an inertia towards more grants and less own taxes. In this sense, the reforms just described above might help mitigating this tendency.

### ***C. Changes in the Tax-Grants Balance and Political Systems***

56. Political systems can make changing the tax-grants balance easier or more challenging. In federal countries in particular, agreement usually must be obtained from sub-national representatives as part of a political system that includes checks and balances between levels of government. In unitary governments, the central government usually has more control.

57. Germany is an example of a federal country where change is challenging. In Germany, the Bundesrat (with state representatives) must approve any change relating to the states. This has made changes to the system very difficult. For instance, a recent reform proposal was to replace the shared taxes with non-earmarked grants. States would have received an amount of grants that grew annually with GDP growth and revenue would no longer depend on federal tax legislation. The role of the states would have been reduced and there was no majority for this proposed reform. Another reform proposal was to give states more tax autonomy. While states were granted autonomy for a tax on transfers of real property, this is a small revenue source and there was no real strengthening of tax autonomy.

58. Other federal countries also have sub-national involvement in deciding issues related to the states, making change a challenge. In Belgium, changes to the Special Financing Law which embodies the largest transfers must receive a 2/3 majority of the members of the federal Parliament, which contains sub-national representation. In addition, a majority must be reached in each linguistic group (French and Flemish). As a result, the Regions and the Communities are heavily involved in all political decisions affecting their funding. In Switzerland, constitutional changes must be approved by a majority of all Swiss and a majority in each canton. A popular vote on federal statutes will be held at the request of eight cantons. In contrast with constitutional changes, only a "single" majority of Swiss citizens is required to enact changes to federal statutes.

59. Unitary countries operate more through consultation with SCGs, sometimes in a formal and sometimes in an informal way. For instance, in Hungary, the national Parliament can modify the terms of intergovernmental transfers, but consultation of SCG associations is legally required. In other unitary countries, the consultation process is more informal from a legal perspective. In Greece the “Central Union of Municipalities and Communities of Greece” can make suggestions to the CG to influence the

allocation of the grants. Similarly, in the Netherlands, discussions and negotiations are held between the central and sub-central governments even though there is no legal requirement to do so. Thus, the central government has more control in unitary than federal countries, and this can influence the possibility of change in the tax-grants balance.

#### **IV. Conclusion**

60. The normative theory of sub-national governance suggests a strong role for sub-national taxes as a revenue source and a limited role for grants. Yet observation suggests a wide range of tax-grant combinations across OECD countries, so traditional normative theory cannot explain countries' tax-grants balance. This paper documents the tax-grants balance in OECD countries, classifies countries as belonging to one of four different SCG finance types, investigates the main factors explaining differences in the tax-grants balance across countries, and investigates country reforms to understand the variation over time within countries.

61. In documenting the tax-grants balance in OECD countries this paper avails itself of a new data set from OECD 2008a to describe the tax-grants balance in terms of the three pillars of sub-national government finance: autonomous taxes, tax sharing, and transfers. Tax-sharing is very similar in economic terms to transfers, but in the past has been classified as tax revenue in OECD publications, making OECD statistics on sub-national government finance somewhat misleading. The paper finds that OECD countries' tax-grants balance can be described by a set of four SCG finance types:

- Type 1: Low autonomous tax, high tax-sharing, medium transfers
- Type 2: Low autonomous tax, low tax-sharing, high transfers
- Type 3: Medium autonomous tax, medium tax-sharing, medium transfers
- Type 4: High autonomous tax, no/low tax-sharing, medium transfers

62. What explains why countries come to be in one of these categories, and hence their tax-grants balance? The federal-unitary distinction does not explain observed SCG finance types very well. The reasons that countries differ in their observed tax-grant balance are:

- SCGs have different roles in the delivery of public goods and services;
- SCGs with higher autonomous taxes generally need higher equalisation grants. This can be because of an externality resulting from unequal tax bases or an ex-ante desire for equal service provision;
- Externalities involving SCGs and approaches to internalising these externalities differ between countries;
- Historical circumstances involving SCGs differ among countries leading to different initial values and customs.
- Differing political concerns and institutions across countries.

63. To explain changes in the tax-grants balance within a country over time, the paper investigates particular reforms and relates those reforms to changes in the sub-national tax share in a particular country. The paper finds:

- Large changes in the sub-national tax share between 1995 and 2005 are unusual (only three countries had large changes) and these changes have mainly increased tax sharing.
- Smaller changes both increase and decrease the sub-national tax share (though more often reforms have very slightly increased it) and occur among a much broader set of countries.
- Political systems can influence the ease with which the tax-grants balance can change. Federal countries require more SCG consent while the central government has more control in unitary countries.

64. The overall picture is one of a varied tax-grants balance that results as much from factors that lie outside of the traditional normative theory as within. An understanding of the diversity of the OECD tax-grants balance also requires a description according to the three pillars of sub-national government finance: autonomous taxes, tax sharing, and transfers. By and large, OECD countries seem to maintain the basic structure of the tax-grant balance (they remain within their “type” in Figure 2) while also actively reforming their tax-grant balances in smaller (and sometimes bigger) ways to solve particular problems, and enhance the efficiency and effectiveness of their SCG financial systems.

## REFERENCES

- Brueckner, Jan, 2003, "Strategic Interaction among Governments: An Overview of Empirical Studies," International Regional Science Review 26, April, 175-188.
- Courchene, Thomas, Alberto Diaz-Cayeros, and Steven Webb, 2000. "Historical Forces: Geographic and Political," in Achievements and Challenges of Fiscal Decentralisation: Lessons from Mexico, ed. by Marcelo Giugale and Steven B. Webb. Washington: World Bank.
- Goodspeed, Timothy J. 2002. "Tax Competition and Tax Structure in Open Federal Economies: Evidence from OECD Countries with Implications for the European Union." European Economic Review. February. 46(2): 357-374.
- Goodspeed, Timothy J. "A Re-Examination of the Use of Ability to Pay Taxes by Local Governments." 1989. Journal of Public Economics. 38: 319-342.
- Goodspeed, Timothy J. 1995. "Local Income Taxation: An Externality, Pigouvian Solution, and Public Policies." Regional Science and Urban Economics. 25: 279-296.
- Lotz, Jorgen. 1998. "Local Government Reforms in the Nordic Countries: Theory and Practice." in Fiscal Federalism and State-Local Finance: The Scandinavian Perspective, edited by Jorn Rattso, Edward Elgar Press.
- Mintz, Jack & Tulkens, Henry, 1986. "Commodity tax competition between member states of a federation: equilibrium and efficiency," Journal of Public Economics, Elsevier, vol. 29(2), pages 133-172, March.
- Oates, Wallace E. 1972. Fiscal Federalism. New York: Harcourt Brace Javonovich, Inc.
- Oates, Wallace E., and Robert M. Schwab. 1988. "Economic Competition Among Jurisdictions: Efficiency Enhancing or Distortion Inducing?" Journal of Public Economics. 35 (1988): 333-54.
- OECD Workshop on "Taxes and Grants" presentations, Vienna, May 2008.  
[http://www.oecd.org/document/55/0,3343,en\\_2649\\_35929024\\_40922359\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/55/0,3343,en_2649_35929024_40922359_1_1_1_1,00.html)
- OECD 2009. "Finding the Dividing Line between Tax Sharing and Grants: A Statistical Investigation"
- OECD 2008a. "Progress Report on Statistics: Tax Autonomy, Intergovernmental Grants, and the Dividing Line between Tax Sharing and Grants." COM/CTPA/ECO/GOV(2008)7.
- OECD 2008b. OECD Territorial Review of Portugal.
- OECD 2008c. "Taxes versus Grants: on the Revenue Sources of Subcentral Governments", Network of Fiscal Relations Across Levels of Government, OECD, Paris.
- OECD. 2007a. Revenue Statistics, 1965-2006.

OECD 2007b. “Fiscal Equalisation in OECD Countries”, Network of Fiscal Relations Across Levels of Government, OECD, Paris.

OECD 2006a. “Fiscal Autonomy of Sub-central Governments”, Network of Fiscal Relations Across Levels of Government, OECD, Paris.

OECD 2006b. “Intergovernmental Transfers and Public Spending”, Network of Fiscal Relations Across Levels of Government, OECD, Paris.

OECD 2006c. “Fiscal Rules for Sub-Central Governments: Design and impact”, Network of Fiscal Relations Across Levels of Government, OECD, Paris.

OECD. 2004. “Place based policies for rural development: Basque Country case study”, OECD, Paris.

Soderstrom, Lars. 1998. “Fiscal Federalism: The Nordic Way.” in Fiscal Federalism and State-Local Finance: The Scandinavian Perspective, edited by Jorn Rattso, Edward Elgar Press.

Wildasin, David. 1989. “Interjurisdictional capital mobility: Fiscal externality and a corrective subsidy.” Journal of Urban Economics, Volume 25, Issue 2, Pages 193-212.

## TABLES AND FIGURES

**Table 1. Tax-Grants Balance and SCG Health Spending**

	2003 share of SNGs in Health spending	SNG Finance Type
Sweden	97.3	4
Finland	82.5	4
Spain	91.8	3
USA	54.53	4
Norway	30.65	4
Germany	9.84	1
Netherlands	6.17	2
Belgium	6.14	3
Luxembourg	0.28	2
UK	0.1	2
France	0.1	4

Source: OECD National Accounts database.

**Table 2. Tax-Grants Balance and Fiscal Equalisation**

	Fiscal Equalization (% of total govt spending)	SNG Finance Type	Fiscal Equalization (% of GDP)
Finland	7.42	4	3.79
Switzerland	8.17	4	3.00
Spain	7.65	3	2.97
Sweden	4.61	4	2.61
FRG/Germany	4.21	1	1.97
Australia		3	1.41
Greece	2.39	2	1.19
Turkey		1	1.09
Norway	1.18	4	0.54

Source: Fiscal equalisation figures: OECD 2007b, Table 1; Finance Type: Figure 2 above.

**Table 3. Local income tax revenue of OECD countries in % of GDP, 1975, 1985, 2005.**

Country	1975	1985	2005
Sweden	12.12	14.46	16.31
Denmark	10.08	12.30	15.48
Finland	8.57	8.78	8.64
Iceland	3.64	3.32	7.18
Norway	8.06	7.00	5.17
Switzerland	4.25	4.07	3.92
Japan	2.92	4.13	3.30
Czech Republic	0.00	0.00	3.02
Spain	0.45	0.82	2.72
Slovak Republic	0.00	0.00	2.63
Poland	0.00	0.00	2.32
Germany	2.14	2.59	2.09
Luxembourg	1.63	2.18	1.57
Belgium	1.15	1.49	1.54
Italy	0.18	0.52	1.30
Austria	1.76	1.73	1.16
Turkey	0.00	0.67	0.82
Korea	0.35	0.00	0.68
Portugal	0.00	0.57	0.51
United States	0.16	0.19	0.23
Hungary	0.00	0.00	0.00
Greece	0.10	0.03	0.00
Netherlands	0.07	0.00	0.00
Australia	0.00	0.00	0.00
Canada	0.00	0.00	0.00
Mexico	0.00	0.00	0.00
France	0.00	0.00	0.00
Ireland	0.00	0.00	0.00
New Zealand	0.00	0.00	0.00
United Kingdom	0.00	0.00	0.00

Source:OECD (2007a).

**Table 4. SCG tax revenues as share of total SCG revenues**

<b>Share of SCG taxes and social contributions on SCG total revenue</b>											
<b>Country</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Australia				53.12%	53.34%	71.00%	70.51%	74.92%	76.84%	75.53%	76.19%
Austria	62.97%	64.47%	66.05%	59.77%	59.29%	58.61%	60.93%	57.95%	57.46%	56.44%	55.27%
Belgium	18.91%	19.76%	19.88%	19.47%	19.66%	18.68%	18.88%	25.02%	25.19%	25.33%	25.50%
Canada	68.34%	71.31%	73.65%	73.45%	72.55%	73.49%	72.06%	72.47%	71.03%	71.87%	68.64%
Czech Republic	46.33%	32.81%	61.42%	53.28%	61.11%	58.76%	49.97%	52.65%	44.24%	46.80%	56.72%
Denmark	52.56%	54.45%	55.87%	56.49%	56.67%	58.38%	58.95%	58.68%	57.38%	56.92%	57.57%
Finland	58.34%	64.42%	68.28%	70.63%	71.31%	72.74%	71.74%	66.98%	64.82%	63.51%	63.07%
France	61.69%	61.39%	62.12%	63.07%	62.20%	61.63%	59.49%	57.15%	56.96%	58.74%	60.54%
Germany	68.87%	69.51%	70.33%	71.47%	72.59%	72.74%	72.32%	71.91%	71.75%	72.27%	71.50%
Greece	19.14%	20.20%	19.95%	17.93%	16.79%	17.19%	14.92%	13.85%	15.08%	14.78%	14.31%
Hungary					24.32%	25.82%	25.71%	25.21%	23.75%	27.26%	27.26%
Iceland				89.96%	89.14%	89.97%	88.53%	89.23%	88.12%	88.88%	89.56%
Ireland	8.66%	8.64%	7.93%	7.75%	7.02%	6.38%	5.69%	5.61%	5.78%	6.05%	15.63%
Italy	28.01%	30.80%	30.44%	49.96%	47.23%	51.67%	49.62%	52.10%	53.23%	51.77%	50.70%
Japan											
Korea						36.13%	37.79%	39.48%	37.91%	38.77%	37.55%
Luxemburg	47.79%	48.50%	49.13%	50.85%	48.38%	49.90%	49.18%	50.18%	49.79%	42.84%	42.94%
Mexico				51.85%	50.02%	49.88%	46.54%	46.56%	45.28%	43.66%	45.35%
Netherlands	7.12%	11.03%	11.21%	12.04%	11.72%	11.71%	11.56%	11.59%	11.50%	12.38%	12.76%
New Zealand	84.84%	85.19%	85.33%	84.70%	84.72%	85.13%	74.81%	84.88%	86.19%	85.04%	82.89%
Norway	53.67%	54.80%	55.21%	51.54%	52.07%	50.92%	53.10%	47.49%	56.05%	55.54%	55.94%
Poland	54.95%	45.39%	59.93%	56.98%	28.17%	26.73%	34.17%	36.48%	33.24%	39.94%	39.52%
Portugal	50.59%	50.27%	48.18%	42.90%	46.55%	50.12%	47.12%	48.24%	47.23%	48.06%	49.52%
Slovak Republic	82.50%	56.81%	68.01%	69.12%	80.46%	74.69%	72.84%	53.66%	25.14%	26.14%	59.49%
Spain	32.77%	31.99%	38.10%	39.21%	38.53%	37.25%	36.70%	55.45%	57.37%	58.92%	60.40%
Sweden	73.60%	78.72%	78.15%	73.77%	74.37%	75.23%	75.97%	76.11%	76.70%	77.50%	75.27%
Switzerland	68.01%	66.89%	65.58%	65.53%	64.30%	64.04%	64.20%	65.12%	63.71%	64.74%	65.00%
Turkey											
United Kingdom	13.81%	14.22%	15.51%	16.69%	16.80%	16.42%	16.87%	16.56%	16.45%	16.82%	16.67%
United States	60.94%	61.31%	61.47%	61.41%	60.56%	60.07%	58.82%				

Source: OECD Revenue Statistics.



**Table 5. Federations and Constitutional Rules**

	<b>Specific taxing powers assigned by:</b>	<b>Form of government</b>
Australia	Constitution	Federal
Austria	Statute	Federal
Belgium	Statute, Constitution	Federal
FRG/Germany	Constitution	Federal
Mexico	Constitution	Federal
Switzerland	Constitution	Federal
USA	Constitution	Federal
Czech Republic	Statute	Unitary
Finland	Statute, Constitution	Unitary
Greece	Constitution	Unitary
Hungary	?	Unitary
Japan	Statute	Unitary
Korea	Statute	Unitary
Luxembourg	Regulation, Statute, Constitution	Unitary
Netherlands	Statute	Unitary
Norway	Statute	Unitary
Portugal	Parliamentary Law, Constitution	Unitary
Spain	Regulation, Statute, Constitution	Unitary
Sweden	Statute, Constitution	Unitary
Turkey	No	Unitary
UK	Statute	Unitary

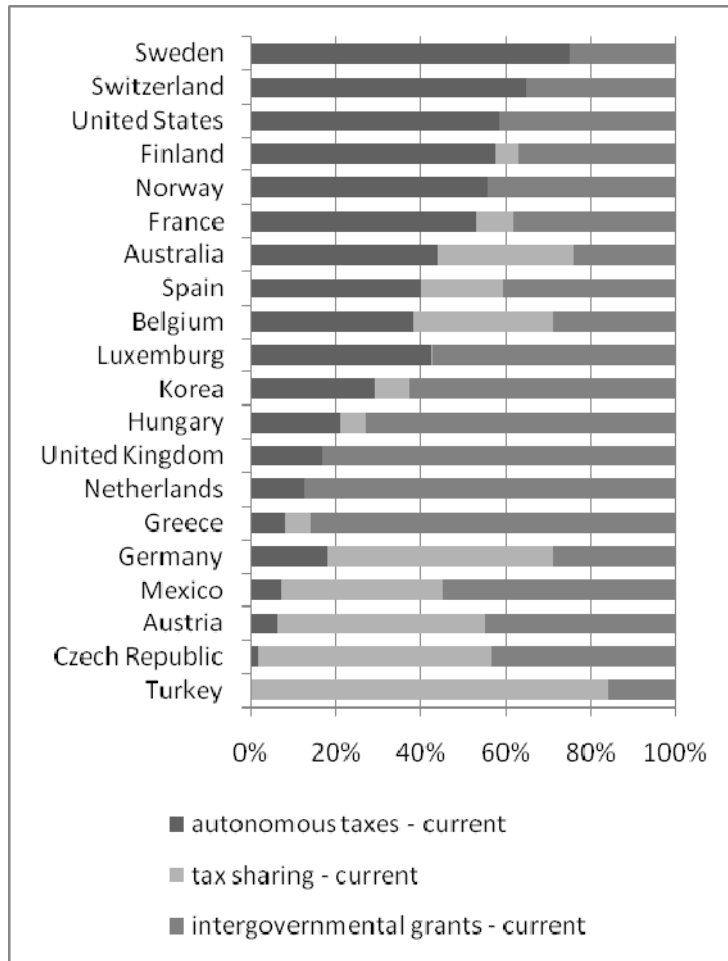
Source: OECD questionnaire.

**Table 6. Changes in SCG tax revenue (as percent of SCG revenue) 1995-2005**

<b>Country</b>	<b>SNG Finance Type</b>	<b>Change in SCG tax revenue as percent of SCG revenues 1995-2005</b>
Turkey	1	0
Czech Rep.	1	10.39
Austria	1	-7.7
Mexico	1	-6.49
Germany	1	2.63
Greece	2	-4.83
Netherlands	2	5.64
UK	2	2.86
Hungary	2	2.94
Korea	2	1.42
Luxembourg	2	-4.84
Belgium	3	6.58
Spain	3	27.63
Australia	3	23.07
Norway	4	2.26
Finland	4	4.73
USA	4	-2.12
Switzerland	4	-3.01
Sweden	4	1.67
France	4	-1.15
<b>Data unavailable</b>		
Canada		0.3
Denmark		5
Iceland		-0.39
Ireland		6.97
Italy		22.69
New Zealand		-1.95
Poland		-15.43
Portugal		-1.07

Source: Figure 2; Calculations from Table 4.

**Figure 1. OECD Subnational Government Revenue Shares (% of total SCG revenue, 2005)**



Source: OECD 2008a.

**Figure 2. OECD Subnational Government Finance Patterns: Four Average Finance Types (average SCG revenue shares, by type, 2005)**

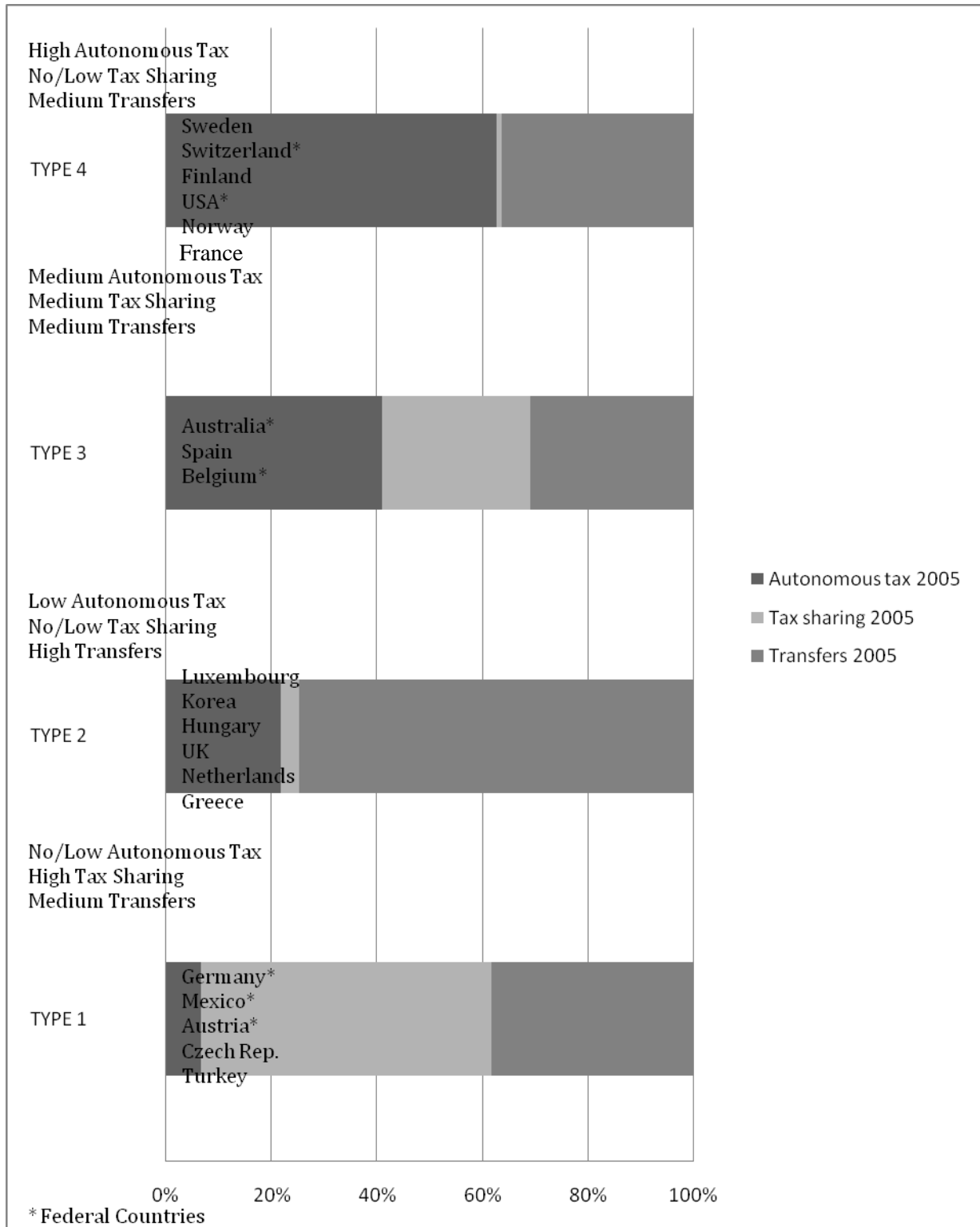
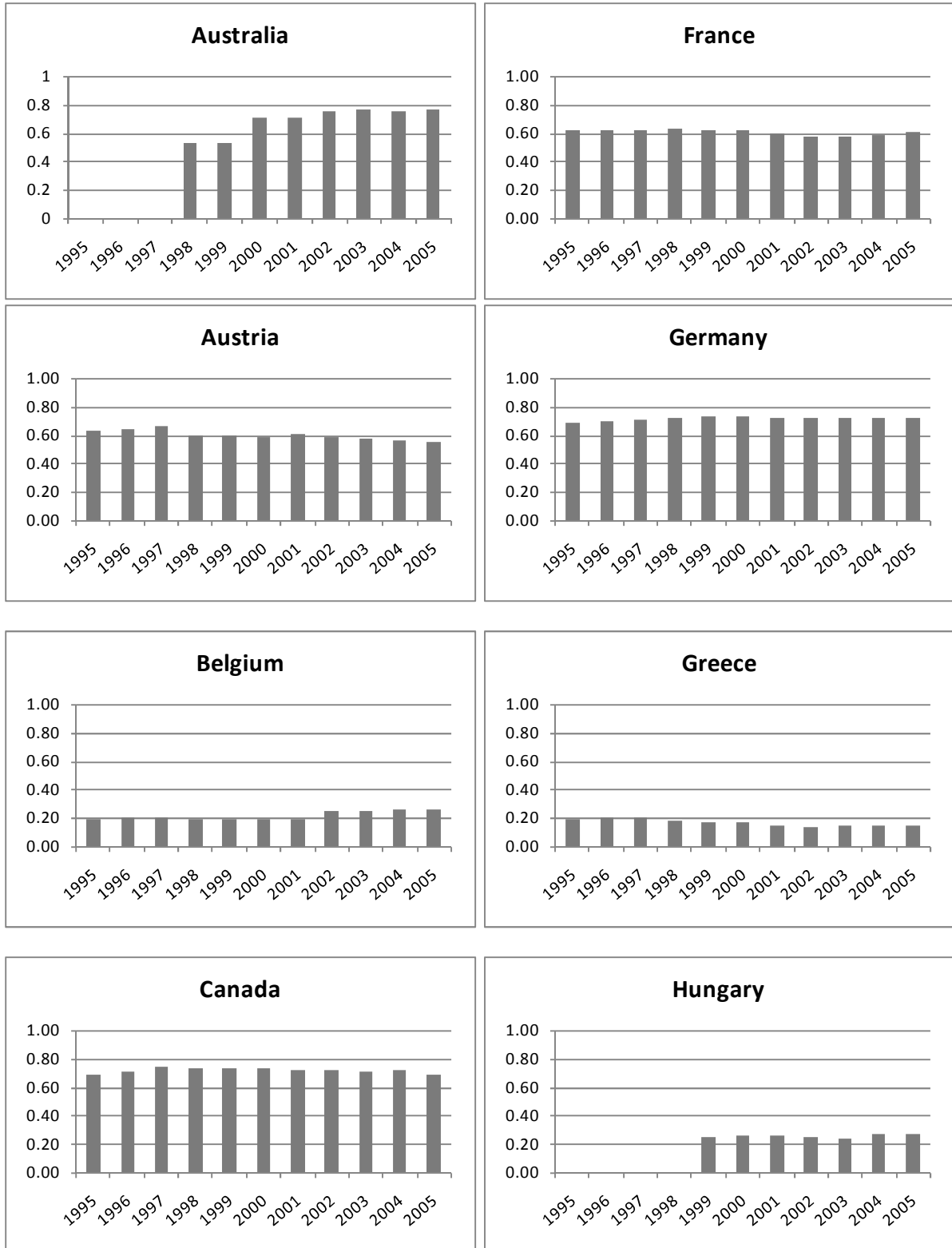
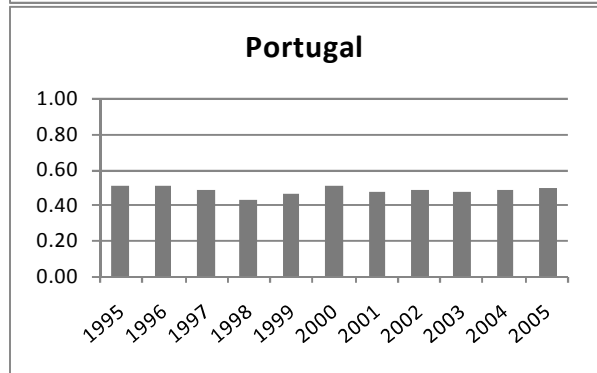
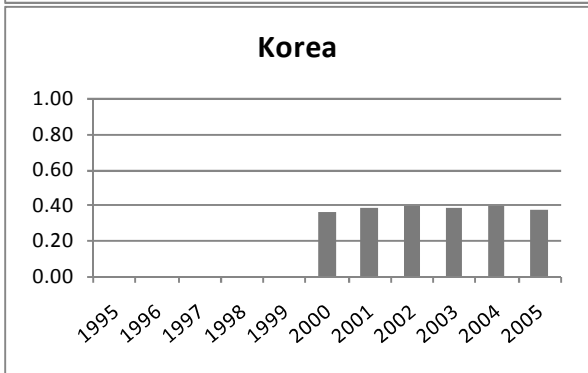
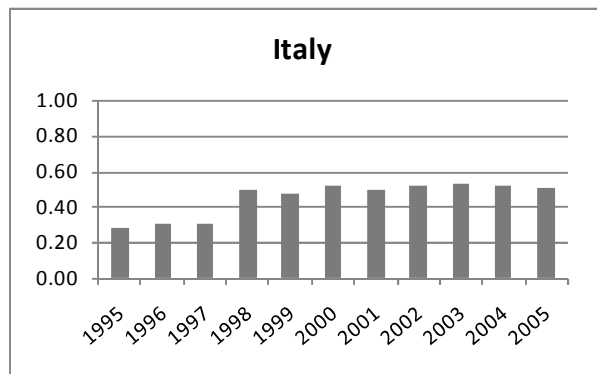
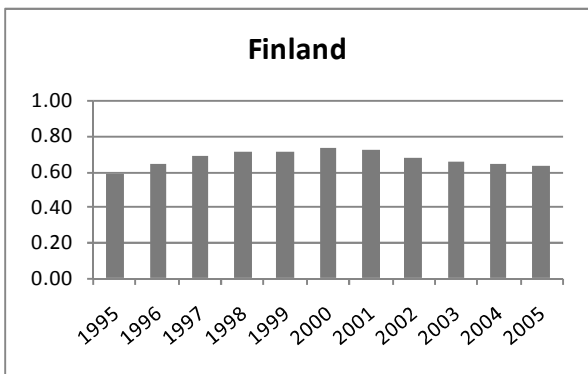
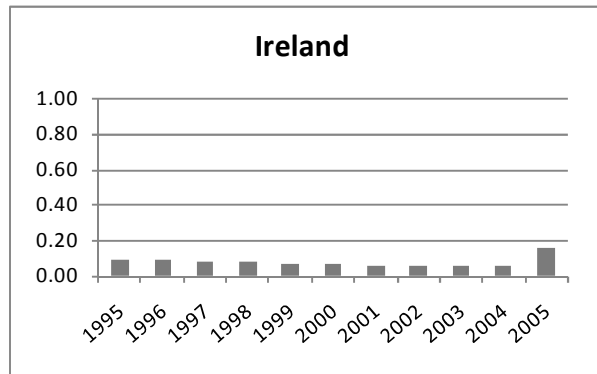
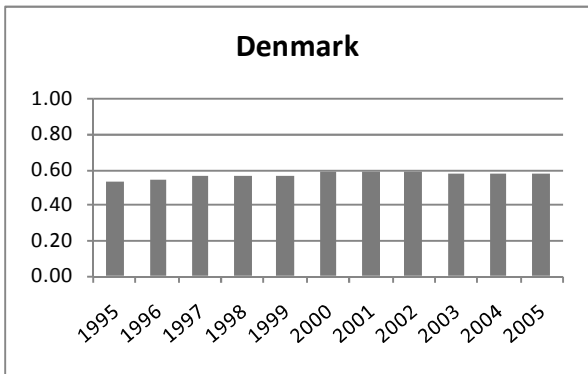
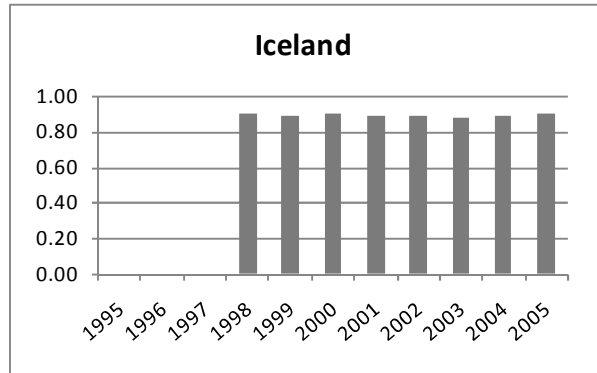
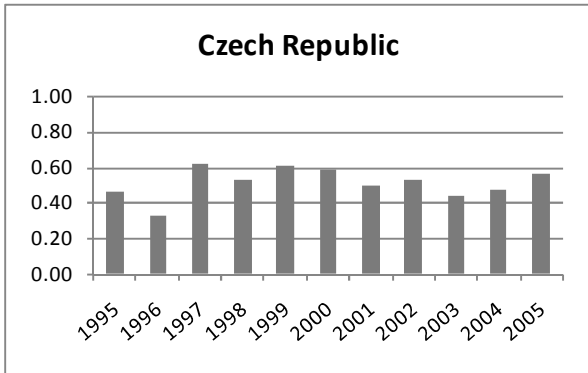
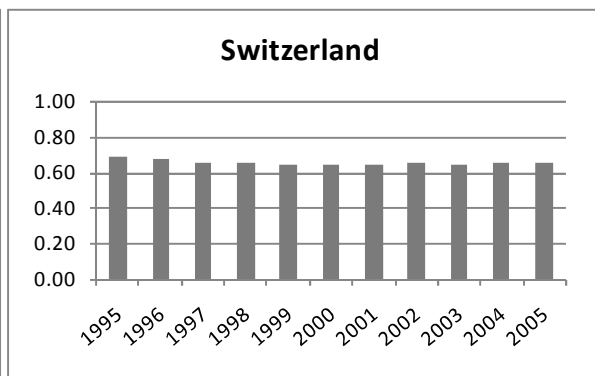
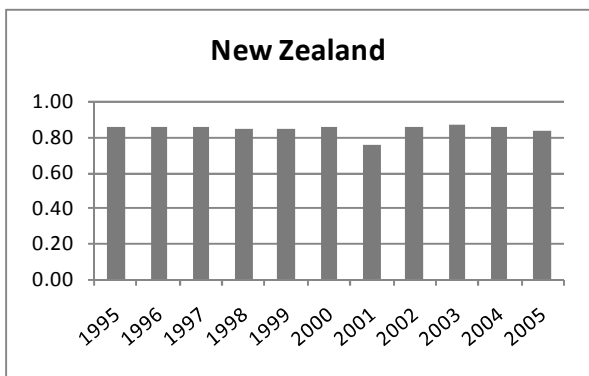
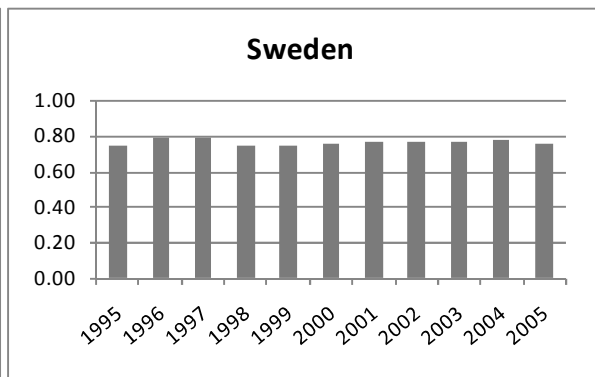
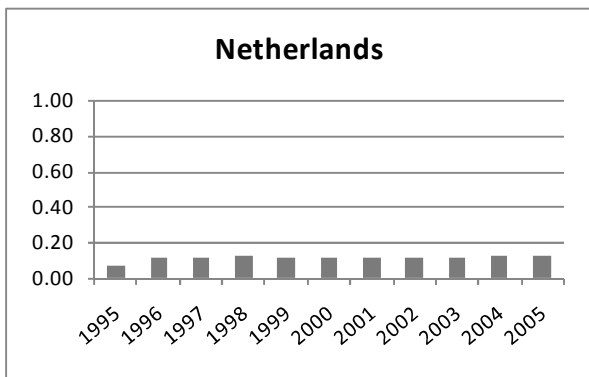
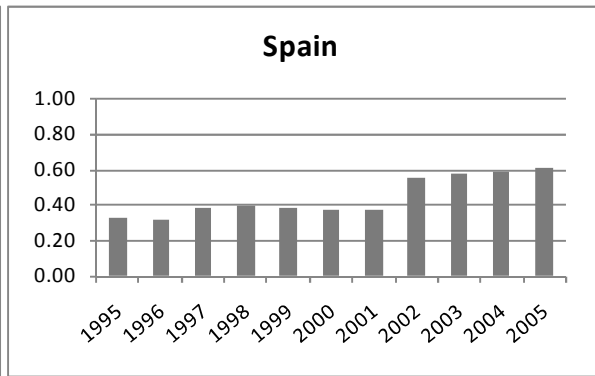
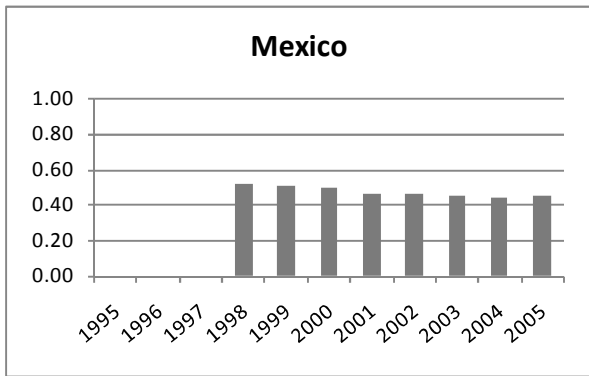
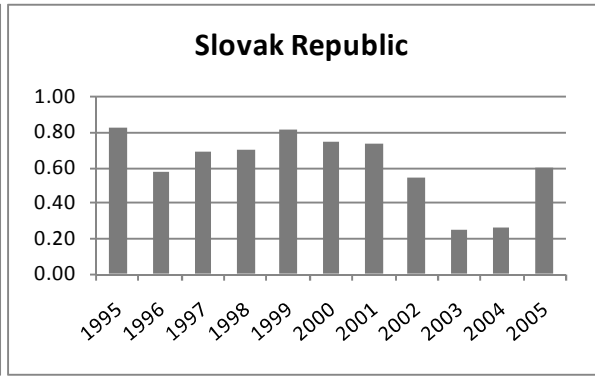
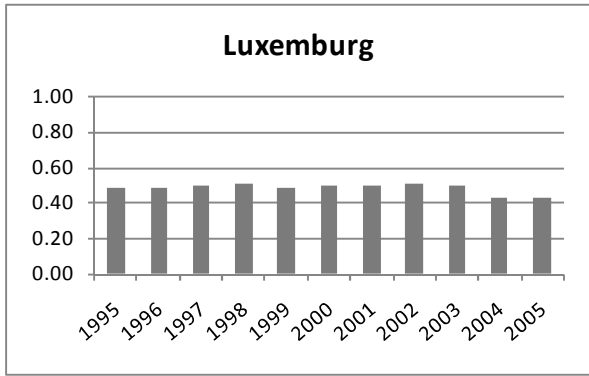
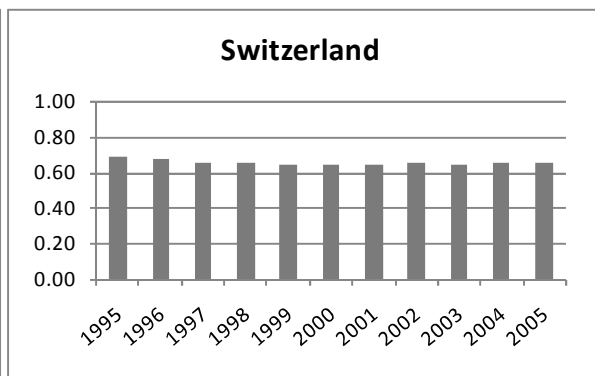
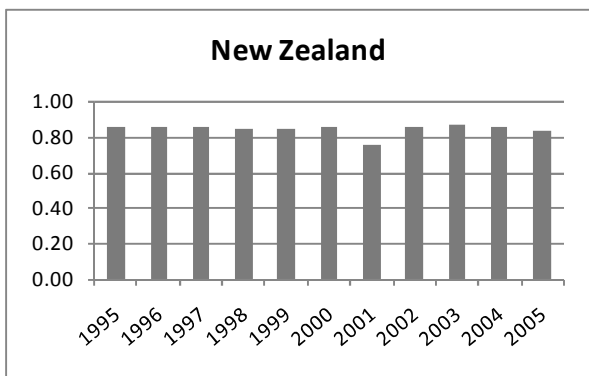
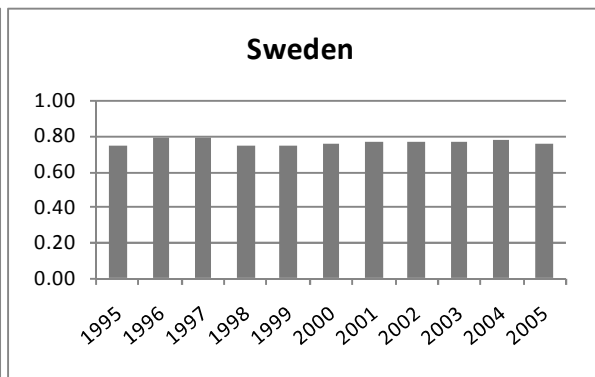
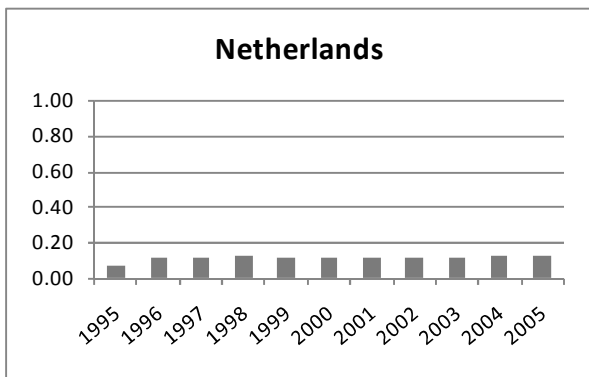
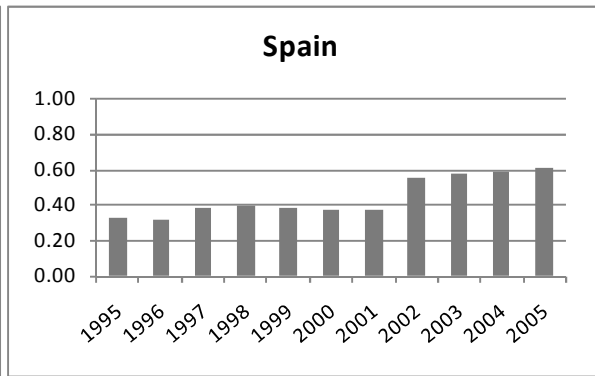
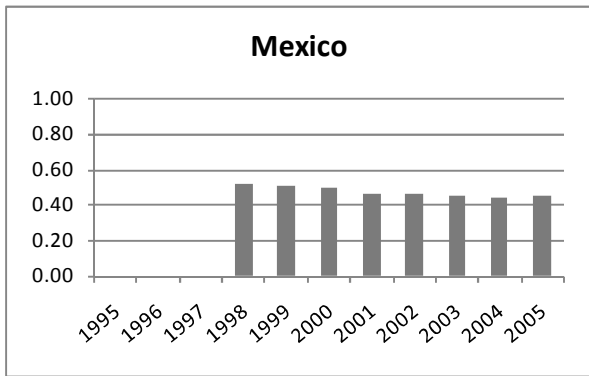
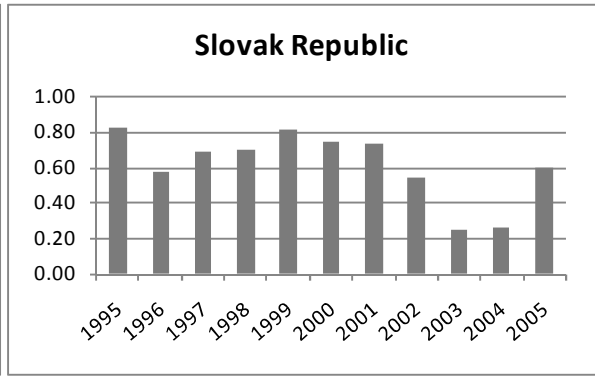
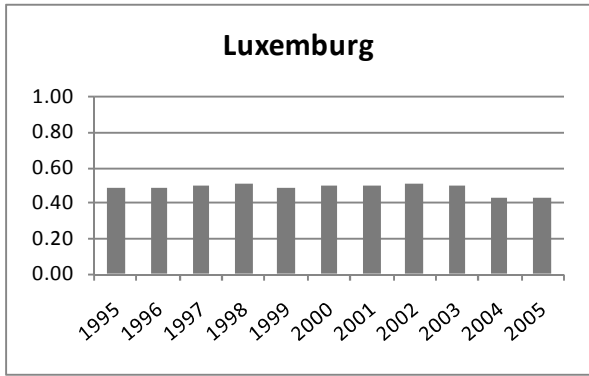


Figure 3. SCG tax revenues as share of SCG total revenues





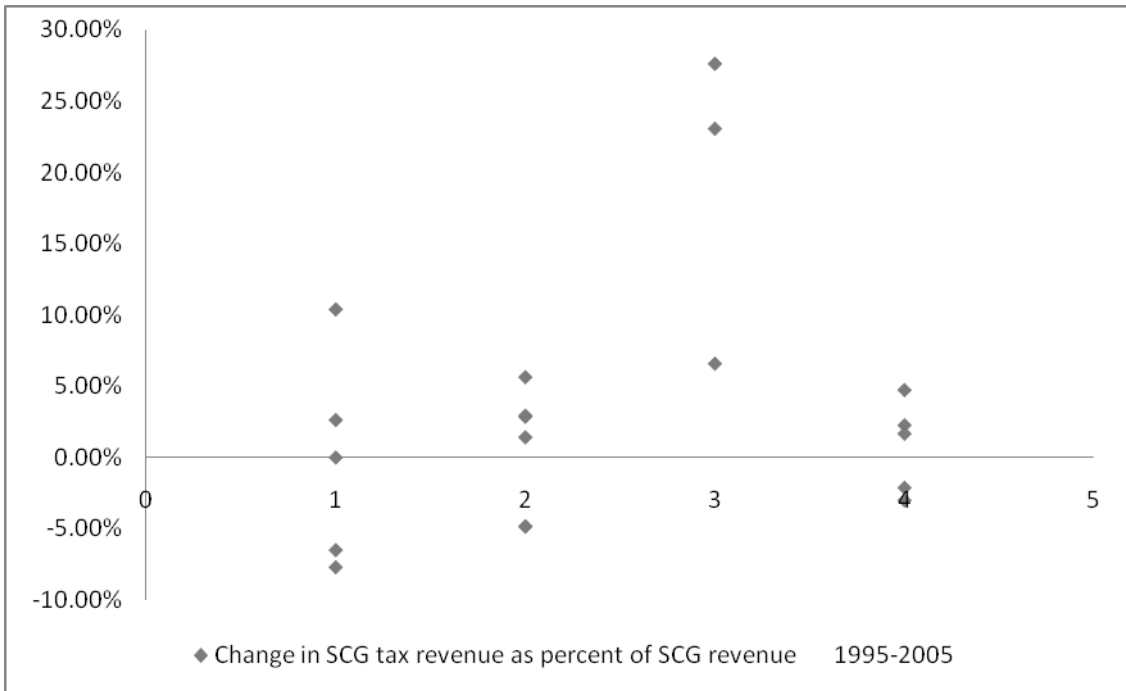




Source : OECD Revenue Statistics



**Figure 4: Changes in SCG taxes (as % of total SCG revenue) by SNG Finance Type**



Source: Figure 2; Calculations from Table 5.