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Intergovernmental Fiscal Relations
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Intergovernmental Relations: Issues in Public Policy

by

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I. Introduction

Policy making at subnational level is a relatively recent phenomenon. Decentralization of policy-making power among governments has gained grounds especially with the European Union example, the break up of communism and micro-nationalism (Tanzi, 1995). More importantly, advancements in economic theory, and new financing and management tools have equipped policy makers with adequate means for decentralization of power.

Developments in financial markets and advancements in information technology have significantly reduced the time and cost of processing information and understanding hierarchies in the marketplace. Today, the private sector has a wider set of tools for financing and advancing business opportunities. And, the public sector is getting its own share of change. Public sector reforms in developing and emerging market economies have put strong emphasis on local participation in addressing the issues once were largely tackled with by central government.

This paper reviews the key recent advancements in economic theory¹ and changes in practice in governance. The paper is organized as follows: The next section discusses the definition of subnational governments and subnational policy-making in different governance systems. Section 3 presents the traditional assignment of functions to subnational governments and presents the results of the empirical analyses. In fourth and fifth sections, assignments of expenditure and revenue in an intergovernmental fiscal system are discussed. And, the final section concludes the paper with suggestions for further inquiry.

II. What is Subnational and Subnational Policy-Making?

The term subnational covers all tiers of governmental units under central government. In federal systems, subnational governments refer to states, provinces, or cantons and lower level units such as counties and councils. However in unitary systems, there are two levels of government usually. Regardless of the administrative structure of a

country, the design of intergovernmental relations has important implications on the performance of public sector. An effective system should provide guidance to agents of public administration system in fulfilling expectations of constituencies. Three defining features of an effective intergovernmental system determine the performance of public sector.

The *legal basis* provides a transparent framework for intergovernmental relations. The legal basis of the system of intergovernmental relations should provide clarity to the role of subnational governments in public policymaking process. The important components of an intergovernmental system are expenditure and revenue responsibilities. The legal framework defining intergovernmental relations should assign revenues and expenditures to different levels of government without leaving a room for ambiguity and negotiations.

In countries where the system of intergovernmental relations is guaranteed by the constitution, subnational policymaking power is not susceptible to shifts in the allocation of power. On the other hand, in countries where the legal basis for policymaking power lies in the enactment of simple laws, the changes in the political environment affect intergovernmental relations. In countries where the majority of the legislative branch of government enacts simple laws for defining subnational governments' revenue and expenditure assignments, central government has discretionary power over subnational governments' policymaking domain.

Fiscal discipline and coordination ensure compliance with the guidelines of macroeconomic policy objectives. Given that the potential exists for fiscal misbehavior of subnational governments complicate the national objectives of fiscal and monetary policies, therefore an institutional framework should be set for assisting them in compliance. An appropriate institutional framework for intergovernmental cooperation must ensure voluntary compliance, such as the design of intergovernmental councils/committees as "gate-keepers" for central grants and transfers. Furthermore,

establishing hard-budget constraint is an important tool for fiscal discipline where subnational governments face financial consequences of their decisions.

The system of *intergovernmental fiscal relations* is an important component of the subnational policy-making. Properly structured intergovernmental transfers provide support for policy objectives of subnational governments. The system of intergovernmental fiscal relations should be transparent and promote fiscal harmonization, subnational government accountability, and regional equity.

Subnational Policy-Making

In all countries, power is necessarily divided to some extent across governments. The extent of division of power has important implications for the functioning of the public sector and hence the macroeconomic performance of countries. The concept of fiscal decentralization is a general term that includes broader elements of political, fiscal and institutional arrangements, and can be characterized as *devolution*, *deconcentration* and/or *delegation*. The clear distinction between three forms of decentralization practices is decision-making power of subnational authorities. Devolution is the fullest form of decentralization where independently established subnational governments are given the responsibility for delivery of a set of services along with the authority to impose taxes and fees to finance services. Deconcentration refers to decentralization of central government offices. Delegation is mandating subnational governments with certain services under the supervision of central government.

Decentralization is a widely used term and there are several definitions of fiscal decentralization. In some cases, it refers to spatial decentralization, in others administrative decentralization. However, the one used by Ebel and Hotra (1997) covers most of the prominent features of the term and is the most appropriate one for the purpose of this paper:

The term fiscal decentralization encompasses the political, economic, and institutional underpinnings of intergovernmental fiscal relations, and

ranges from examining the efficiency of public institutions and developing sustainable infrastructure finance, to rationalizing fiscal transfer mechanisms and supporting the social safety net.

III. Decentralization versus Centralization

If we analyze decentralization under the light of general government functions, the question that needs to be answered is which level of government performs different functions of government best. The argument in favor of decentralization stems from motivation for enhanced efficiency, accountability and autonomy. According to Stigler (1957), a representative government works best the closer it is to the people. Carrying Stigler's argument further, Oates (1972) formulates the decentralization theorem as "each public service should be provided by the jurisdiction having control over the minimum geographic area that would internalize benefits and costs of such provision."

In orchestrating decentralization, Oates formulation of decentralization theorem and Musgraves (1959) definition of functions of government provide an intellectual basis. In his seminal work on the theory of public finance, Musgrave (1959) separates the functions of government into three: macroeconomic stabilization, income redistribution, and resource allocation. In the fiscal federalism literature, there seems a consensus about assigning resource allocation function to subnational governments, however there is a debate about assigning the other two functions.

Macroeconomic Stability

Macroeconomic stability can be achieved by a policy prescription with two sources of cause: monetary and fiscal. It is argued that assigning the stabilization function to subnational governments is inappropriate because currency stability requires that

monetary policy can be best pursued by central government and central governments are better equipped in dealing with spillover effects of local spending, inflationary pressures of monetization of local debt and cyclical shocks (Oates, 1972).

The major determinant of the success of monetary policies is the price stability (Barro, 1996) and price stability is a direct result of independence of monetary authority, central bank, from political pressure (Alesina and Summers, 1993). The independence of central bank might be endangered under centralized systems because in most of the central countries, the central bank operates under the influence of ministry of finance. However, in decentralized systems, the independence of central bank might be protected by an institutional design. The four central banks recognized as the most independent central banks are in highly decentralized federal countries: Swiss central Bank, Bundesbank of Germany, Central Bank of Austria, and the United States Federal Reserve Board (Shah, 1997). Moreover, these countries had very low rates of inflation over the last millenium.

Huther and Shah (1998) examines statutory aspects of central bank operations, such as the terms of office for the chief executive officer, the formal policy making power, limitations on lending to the government and other 13 criteria and created a central bank independence index for 80 countries. Their analysis shows that there is a statistically significant positive correlation between central bank independence index and decentralization index. Pearson correlation coefficient of central bank independence and decentralization of 0.327 is statistically significant at 5 percent level.

Some argue that subnational level fiscal policy-making jeopardizes macroeconomic stability (Oates, 1972; Prud'homme, 1995; Tanzi, 1996). In a decentralized system, fiscal policy becomes a responsibility shared by different levels of decision-making powers. The main concern is the financing of subnational governments' spending which might circumvent central fiscal policy objectives. The key in the crisis avoidance solution is a hard budget constraint.

Under a soft constraint regime, subnational government spending increases the pressure on central banks to engage in inflationary finance regardless of decentralization. Many centralized countries suffered through high inflation in the past. In this regard, the question is whether fiscal decentralization mitigates the problem or not. In countries where subnational governments' accountability is weak and the institutions of political control are immature, there may be a risk that subnational governments may abuse the fiscal power. Therefore, according to Wildasin (1997) "effective fiscal decentralization requires an institutional structure that minimizes these adverse incentives." He argues that fiscal decentralization can make budget constraints harder rather than softer.

An effective decentralization initiative should also promote transparency, accountability, and predictability in the system of intergovernmental fiscal relations. When the incentive structure is set without these institutional arrangements, policymakers would find hard to resist making an adverse selection. In order to avoid the adverse selection problem in the form of bailouts, hard-budget constraints should be enforced.

Although devolution of power to subnational governments is a necessary condition for decentralization, it is not a sufficient condition. In fact, devolution of power is an inseparable indicator of fiscal decentralization together with hard-budget constraints. The natural consequence of devolution must be establishing hard-budget constraints. If decentralized governments' spending increase fiscal deficits at the central level and put macroeconomic stability into jeopardy, a genuine form of decentralization is not achieved. The question that needs to be asked in defining a genuine decentralized system is "Does central government absorb fiscal imbalances incurred by subnational governments?"

If hard-budget constraint is lacking, the moral hazard problem is inevitable. Hard-budget constraint motivates responsible behavior by subnational governments and eliminates bail-out conditions. In a recent study Wildasin (1997) defined bailout conditions as

...[i]f the level of local expenditures selected by a central government under a bailout is 'close' to the level that the locality would choose at a social optimum, then there is not much cost imposed on the locality from the loss of control over local spending levels relative to the gain from having the central government finance the totality of local public good provision (p. 26).

When Musgrave (1959) identified macroeconomic stability as one of the three functions of government, policy makers and economists alike viewed fiscal policies as important factors for the aggregate demand fluctuations, which in return affect prices and employment. In traditional Keynesian theory, fiscal policy is an important tool for manipulation of short-run demand therefore it should be left to the central government. However, Spahn (1998) criticizes Keynesian demand management at five points:

- (1) It assumes regionally symmetrical shocks: there may well be regionally asymmetrical shocks.
- (2) It assumes a closed economy: fiscal shocks would be offset by an exchange-rate change in an open economy.
- (3) It assumes segmented capital markets: as long as capital markets are informed and rational, it might be less costly for subnational governments to borrow from capital markets. Borrowing from central government for the sake of stabilization policy might exceed the cost of region specific risk factors.
- (4) It neglects supply-side effects of effects of fiscal policy: fiscal policy has supply effect also, especially infrastructure investment programs. Subnational governments are better informed about their residents' needs.
- (5) It neglects built-in stabilizers: fiscal stabilization is automatic through built-in elements of tax system.

In the case of regional asymmetrical shocks, Tanzi (1995) raises the willingness and ability of subnational governments in pursuing countercyclical fiscal policy. He highlights heterogeneity of regional economies and argues that regions with high dependency on a particular resource, such as oil, might be unwilling to pursue countercyclical policies contradictory to rest of the regions in the country. Gramlich (1987) calls such situation "zero sum" shocks and argues that in the presence of such "zero sum" shocks, there is not much that central authority would do. Opening of national economies to foreign trade and capital flows weakened the central government's ability to take countercyclical measures. However, Gramlich (1987) demonstrates that there are cases which subnational governments can pursue countercyclical policy and also, built-in stabilizers limit subnational governments to exploit fiscal policy. In addition, subnational governments can take measures such as the use of "rainy day" funds: revenues of good times can be used over the course of business cycle.

Although macroeconomic management must be a concern of central governments primarily, the arguments laid out above support the idea that decentralization would not endanger stability. In fact if appropriately designed, fiscal decentralization may indeed help macro stability.

Redistribution

In the literature of decentralization, it is argued that subnational governments cannot effectively carry out redistributive policies. The traditional view that subnational governments can not achieve redistribution stems from the fact that factors of production, capital and labor, are mobile. However, the literature about labor migration suggests that labor is relatively immobile in the short-run (Greenwood and Hunt, 1986) and some of the capital is tied to locality. Despite the theoretical underpinnings, the varied degree of mobility provides an opportunity to subnational governments to engage in redistributive policies to a certain extent.

In most of the federal countries, the constitution explicitly assigns social welfare functions and redistributive taxing ability to subnational governments. Even in some of the developing and transition countries, such as Brazil, India, Russia, subnational governments are engaged in public health care and public education (Bird, Ebel, Wallich, 1995). In addition to those functions, Sewell (1996) argues that the regulatory power of subnational governments has profound distributional implications. Regulatory policies that have distributional impact include land use, rent controls, user charges, and others.

Resource Allocation

With respect to resource allocation function, Musgrave (1959) argues that policies of subnational branches of governments should be permitted to differ in order to reflect the preferences of their residents. If greater decentralization increases number of alternative fiscal jurisdictions, in Tiebout's analysis (1956) any attempt to increase tax rates in one jurisdiction would result in migration of its residents to another jurisdiction. Therefore, the argument in favor of fiscal decentralization is twofold: (1) fiscal decentralization will increase competition among the local governments which will ultimately limit the size of the public sector; and (2) decentralization will increase efficiency because local governments have better information about their residents' needs than the central government.

In Tiebout's analysis, taxpayers migrate alternative jurisdictions in order to avoid higher taxes and interjurisdictional competition limit excessive taxing power of the governments. Along with the lines of Tiebout, Brennan and Buchanan (1980) developed the "Leviathan" hypothesis where they argue that fiscal decentralization serves as a constraint on the behavior of the revenue-maximizing government. The Leviathan model predicts that the overall size of the public sector should inversely vary with decentralization.

Empirical studies have tested the Brennan and Buchanan model of the "Leviathan" government and their findings are contradictory. Oates (1985) and Nelson

(1986) found no supporting evidence for the Leviathan hypothesis, whereas Marlow (1988), Grossman (1989), Joulfanian and Marlow (1990) and Grossman and West (1994) have reported a strong positive correlation between the increase in the subnational government expenditure in total government expenditure and reduction in total public sector size.

These studies measured fiscal decentralization as a ratio of subcentral government expenditure in total government expenditure. The higher is this ratio, the higher is the degree of fiscal decentralization. However, previous attempts to conduct econometric tests ignored differences in governance systems by using a pooled data set of federal and unitary countries. Because of the differences in the design of the intergovernmental relations, these two different groups of countries should be analyzed separately.

In this part of the paper, by using Oates' (1985) definition of decentralization, the arguments in favor of decentralization are revisited by using regression analysis for countries listed in Table-1.

Table-1 List of Countries

<u>Unitary Countries</u>		<u>Federal Countries</u>	
Belgium	Kenya	Argentina	Peru
Chile	Luxembourg	Australia	Spain
Denmark	Netherlands	Austria	Switzerland
Finland	Norway	Bolivia	United States
France	Philippines	Canada	
Iceland	Sweden	Columbia	
Ireland	Thailand	Germany	
Israel	United Kingdom	India	
Italy		Mexico	

Two models are specified for the 1971-1990 period. The first model tests Leviathan hypothesis by looking at the impact of decentralization on government share of GDP. In this model, dependent variable (GOV) is total government share of GDP and

independent variables are decentralization (DEC/DEC1/DEC2), population (POP) and per capita GDP. Three different decentralization variables are:

DEC = share of local governments expenditure in total government expenditure in unitary countries (local governments' expenditure divided by total government expenditure);

DEC1 = share of state governments expenditure in total government expenditure in federal countries (state governments' expenditure divided by total government expenditure);

DEC2 = share of local government expenditure in total state government expenditure in federal countries (local governments' expenditure divided by total state government expenditure).

In the second model, the impact of decentralization on economic growth is tested by using an intensive form production function. The dependent variable is real per capita output (GDP) and independent variables are stock of capital per labor (STO) and decentralization variable (DEC/DEC1/DEC2). The description and sources of variables are given in Table-2.

Table-2 Description of Variables

Variable	Description	Source
DEC	Share of local governments expenditure in total government expenditure	Government Finance Statistics (IMF)
DEC1	Share of state governments expenditure in total government expenditure	Government Finance Statistics (IMF)
DEC2	Share of local government expenditure in total state government expenditure	Government Finance Statistics (IMF)
POP	Population	World Tables (The World Bank)
GOV	Government Share of GDP % (1985 International Prices)	Penn World Tables 5.6
GDP	Real GDP per capita (1985 International Prices)	Penn World Tables 5.6
STO	Capital Stock per worker (1985 International Prices)	Penn World Tables 5.6

Since the true specifications of decentralization models are not known *a priori*, omitted factors in the regression analysis become part of the unobservable error terms. Furthermore, in the analysis of panel data the disturbance term in the model consists of

two components: overall disturbance and the individual specific error that reflects individual differences and varies across observations. Therefore, the information contained in the omitted variables cause error terms to be contemporaneously correlated. Using country specific dummy variables alleviates the burden of omission of explanatory variables but not the effects of temporal shocks. Country dummy variables capture country specific effects, accounting for country specific characteristics of decentralization, such as form of decentralization, hard or soft budget constraints on local governments. Temporal shocks are taken into account by using time-period dummy variables in the analysis. However, introduction of time and country dummies at the same time raises identification problems, therefore one set of country and time dummy variables are excluded arbitrarily without affecting the results and for the sake of efficiency an overall constant term is included to the analysis (Balestra, 1996).

Results

Table-3 presents the results for both of the models. As seen in the table, there is a negative relationship between fiscal decentralization and governments size in both groups of countries. The point estimate is significant at 10 % level for unitary countries and at 1 % level for federal countries. The two different definitions of fiscal decentralization variable for federal countries have the same sign (negative) and they are both significant at 1 % level. A negative relation supports Leviathan hypothesis: the overall size of the public sector varies inversely with fiscal decentralization.

The first model includes two control variables. Real per capita income controls for the influence of Wagner's law that argues that rising income is positively related to government growth. GDP variable exerts a negative effect that is statistically significant at 1 % level of confidence for unitary states and federal states with DEC2 variable. In the case of DEC1 variable for federal states, GDP variable has the correct sign but it is not significant. The negative sign of GDP variable suggests that public sector size is an income-inferior good. Population variable POP has a negative sign for unitary states and

it is significant at 10 % level. Although the sign of population variable is unexpected, its impact on government growth is trivial. In the case of federal countries, the population variable has two opposite signs, for DEC2 variable, it has negative sign, but it is not significant. For DEC1 variable, it has positive sign and it is significant at 1 % level.

By estimating an intensive form production function, we tested the impact of decentralization on output. In this analysis, the output variable is GDP per capita and explanatory variables are stock of capital per worker and decentralization. As seen in Table-3, the stock variable has positive sign, as expected, and statistically significant in all three models. The main point of interest is the sign of decentralization variable. The decentralization variable has positive sign in all of the models but it is not significant in the first two models. In the last model, decentralization variable is positive and statistically significant at 1 percent level.

The results of regression analysis suggest that public sector size is negatively correlated with decentralization. An increase in subnational governments' expenditure share in the total government expenditure share would limit the size of the government in the economy. The negative relation between decentralization and government size is statistically significant. However, the relationship between decentralization and economic growth is positive but not statistically significant at the conventional levels. The only statistically significant relation between decentralization and economic growth is in the third model where decentralization is represented by the increase of local governments share in states' expenditure in federal systems. The lack of legal basis and fiscal coordination might be the reasons for insignificant relation in unitary countries.

Table-3 Regression Results

	Unitary		Federal			
	GOV	GDP	GOV	GDP	GOV	GDP
C	23.3450* (1.5669)	8116.393* (256.818)	12.2930* (1.9109)	7778.371* (1041.01)	22.0959* (0.9818)	1586.733 (2088.703)
DEC	-9.1328*** (5.4932)	1395.196 (1163.61)				
DEC1			-6.1820* (1.8939)	259.2456 (3139.08)		
DEC2					-3.7412* (0.7895)	9150.633* (2856.74)
POP	-0.0001*** (6.7400)		2.5700* (2.3400)		-1.6100 (9.9400)	
GDP	-0.0009* (0.0001)		-9.1800 (0.0002)		-0.0008* (6.7800)	
STO		10424.16* (3238.55)		9827.314*** (566.2.22)		14120.17*** (7445.02)
R ²	0.914	0.981	0.972	0.979	0.972	0.956
Adjusted R ²	0.902	0.978	0.966	0.975	0.965	0.946
N	307	306	186	186	148	148
RSS	1.8605	605.4491	0.9315	781.6988	0.4295	991.9066
F-statistic	79.9619*	377.0716*	167.2822*	242.4240*	128.5568*	90.4462*

Note: Standard errors are in parenthesis.

* significant at 1% level

** significant at 5% level

*** significant at 10% level

IV. Expenditure Assignment

The theory of fiscal federalism does not provide a clear guidance to expenditure assignment (Hemming and Spahn, 1997). However, an effective decentralization requires a well-defined framework in the assignment of expenditure responsibilities. Since the system of intergovernmental relations differs from country to country, country specific conditions determine the framework of expenditure assignment (see the appendix for design of expenditure assignments in different countries). However, the underlying premise behind the expenditure assignment should be avoiding "government failure."

The basic inquiry in assigning expenditures must include identifying the services that can be provided under competitive market conditions. If market conditions do not prevent internalization of costs in the service provision, private provision of services, such as telecommunications, electricity, water, etc., would alleviate the burden of expenditure assignment. In most of the transition countries, privatization has played an important role in defining expenditure assignments.

Under certain circumstances, competitive market conditions fall short in service provision and government intervention is necessary. In the delivery of public goods and the presence of externalities, markets do not function properly. Services, like education and health care, produce positive externalities. An externality occurs when the activities of an individual can affect others in a way that is not reflected in market transactions. In the presence of externalities, governments intervene the marketplace and in most of the countries provide the services. From intergovernmental system design the basic question is which level of government meets the needs of people. Being more knowledgeable about the local residents' preferences, subnational governments have comparative advantage in fulfilling the expectations of constituents in these services.

In the case of public goods, the most common definition stresses two attributes: nonexclusivity and nonrivalness. Subnational governments can provide public goods like roads and transportation services. However, regional spillovers across subnational

governments are an important factor that needs to be taken into consideration in public goods service provision. Presence of benefit spillovers is the major argument in favor of central government intervention. However, horizontal cooperation among subnational governments provides a solution spillover problem. Regional authorities, like Metropolitan Transit Commissions in the U.S., would coordinate efforts among subnational governments. Public goods, like national defense can not be provided by subnational governments and should be left to the central governments.

Expenditure assignment is the first step in designing an intergovernmental fiscal system. Revenue assignments without a concrete assignment of expenditure responsibilities would weaken the decentralization process (Martinez-Vazquez, 1994). However, there is no set of rules in defining the best system of expenditure assignment. Instead, the proper division of expenditure responsibilities should be guided by country specific conditions and people's preferences. Expenditure assignment is directly related with the third function of government in Musgrave's analysis: resource allocation. Efficiency criteria should provide guidance to the assignment of expenditure responsibilities.

V. Revenue Assignment

The essence of decentralization is that subnational governments have the authority and responsibility to own-finance local services at the margin. The debate about which revenues to assign for this purpose focuses on which revenue sources are appropriate for subnational governments given their unique economic, institutional and demographic characteristics. There are six important points in revenue assignment (Musgrave, 1983).

High inter-jurisdictional *mobility* of tax base makes taxation difficult to subnational governments. Taxes that do not reflect benefits received have the power to distort the location of economic activity. If consumption-based taxation exceeds the value of benefits of public services, the result is minor distortion of residential choice. However, if production-based taxation exceeds the value of benefits, it would crowd-out

economic activities. Inter-jurisdictional mobility adds another degree of complexity to the tax assignment problem. For example, if geographic area of subnational governments are small, the result of different rates in consumption taxes would be "shopping abroad."

Steep progressive tax rates can be problematic for subnational governments. Especially if income redistribution function is assigned to the central government, progressive taxes at subnational level would drive-out investments and high-income and supposedly more productive people. Uniform subnational taxes minimizes locational distortions of economic activities.

Services provided by subnational governments can be financed through *benefit taxes*. Efficient allocation of resources requires subnational governments recover their expenses from the beneficiaries of their services. In this case, services provided by subnational governments should be financed through user charges and other local fees and taxes that are related to benefits. Examples of benefit related revenues include taxes levied on motor vehicles and fuels and construction fees.

If subnational governments are assigned to provide *redistributional services* such as, education and healthcare, they need to control a stream of revenues. Such revenue items include income tax, local general business taxes and the sales tax. The proper assignment of revenues depends on the expenditure assignment. For some of the expenditure assignment items, it is impossible and undesirable to exclude people who are not willing to pay or do not effort payments.

During the assignment of revenues, *stabilization* function of government needs to be protected by a system of counter-cyclical rate adjustments. Built-in stabilizers are necessary in order to avoid subnational governments exploitation of fiscal power.

Uneven distribution of tax bases among subnational governments forces the residents of one subnational area to bear the economic burden of taxes imposed by

another jurisdiction. Taxation of natural resource is the best example this type of taxation practice.

VI. Conclusion

The trend in examining the roles of government has led to a resurgence of interest in fiscal decentralization. However, such an interest fueled controversies and debates. This paper summarized some of the principles and practices in decentralization practice. Decentralization is not a panacea for government failure, however it provides a greater potential for an improved public administration system.

Decentralization practice needs to be applied with care. There are different pieces of a decentralized system that make the system function properly. Based on the country specific conditions, decentralization practice must be carried out with a special attention paid to the incentive structure. Transparency, accountability and predictability are the three most important features of an intergovernmental fiscal system. The incentive structure must be set to promote these features.

Table 1: Fiscal Autonomy in Subcentral Governments

Own taxes

Base and rate under local control.

Overlapping taxes

Nationwide tax base, but rates under local control

Nontax revenues

Fees and charges. Generally, the central government specifies where such charges can be levied and the provisions that govern their calculation.

Shared taxes

Nationwide base and rates, but within a fixed proportion of the tax revenue (on a tax-by-tax basis or on the basis of a “pool” of different tax sources) being allocated to the subcentral government in question, based on (1) the revenue accruing within each jurisdiction (also called the derivation principle) or (2) other criteria, typically population, expenditure needs, and/or tax capacity.

General purpose grant

Subcentral government share is fixed by central government (usually with a redistributive element), but the former is free to determine how the grant should be spent; the amounts received by individual authorities may depend on their efforts.

Specific grants

The absolute amount of the grant may be determined by central government or it may be “open-ended” (that is, depend on the expenditure levels decided by lower levels of government), but in either case central government specifies the expenditure programs for which the funds should be spent.

Source: Anwar Shah, *The Reform of Intergovernmental Fiscal Relations In Developing & Emerging Countries*, Policy and Research Series #23, World Bank 1994.

Table 2: Conceptual basis of expenditure assignment

<i>Expenditure Category</i>	<i>Responsibility</i>		<i>Comments</i>
	<i>Policy, standards, and oversight</i>	<i>Provisional/ administration</i>	
Defense	F	F	Benefit and costs are national in scope
Foreign affairs	F	F	Benefit costs are national in scope
International trade	F	F	Benefit and costs are national in scope
Monetary policy, currency, banking	F	F	Benefit costs are national in scope
Interstate commerce	F	F	Benefit and costs are national in scope
Transfer payments to persons	F	F	Redistribution
Subsidies to business and industry	F	F	Regional development, industrial policy
Immigration	F	F	Benefit and costs are national in scope
Unemployment insurance	F	F	Benefit and costs are national in scope
Airlines and railways	F	F	Benefit and costs are national in scope
Fiscal policy	F, S	F, S, L	Coordination is possible
Regulation	F	F, S, L	Internal common market
Natural resources	F	F, S, L	Promotes a common market
Environment	F,S,L	S,L	Benefits and costs may be national, regional, or local in scope
Industry and agriculture	F,S,L	S,L	Significant interjurisdictional spillovers
Education	F,S,L	S,L	Transfers in kind
Health	F,S,L	S,L	Transfers in kind
Social welfare	F,S,L	S,L	Transfers in kind
Police	S,L	S,L	Primarily local benefits
Water, sewage, refuse	L	L	Primarily local benefits
Fire protection	L	L	Primarily local benefits
Parks and recreation	F,S,L	F, S, L	Primarily local responsibility, but national and provincial govts. may establish own parks
Highways			
Interstate	F	S,L	Internal common market
Provincial	S	S,L	Provincial benefits and costs
Interregional	S	S,L	Interregional benefits and costs
Local	L	L	Local benefits and costs
Spending power	F,S	F,S	Fiscal transfers to advance own objectives

Note: F is federal responsibility; S is state or provincial responsibility; and L is local responsibility

Source: Anwar Shah, *The Reform of Intergovernmental Fiscal Relations in Developing and Emerging Countries*.

Policy and Research Series #23, World Bank 1994

Table 3: Assignment of local public services to municipal and regional/metropolitan governments

Public Service	Allocation criteria for provision						Composite	Allocation criteria for public vs. private production		
	Economies of scale	Economies of scope	Benefit-cost spillout	Political proximity	Consumer sovereignty	Economic evaluation of sectoral choices		Efficiency	Equity	Composite
Fire fighting	L	L	L	L	L	M	L	P	G	P
Police protection	L	L	L	L	L	M	L	P	G	G
Refuse collection	L	L	L	L	L	M	L	P	P	P
Neighborhood parks	L	L	L	L	L	M	L	P	G	G
Street maintenance	L	L	L	L	L	M	L	P	P	P
Traffic management	L	M	L	L	L	M	L	P	P	P
Local transit service	L	M	L	L	L	M	L	P	P	P
Local libraries	L	L	L	L	L	M	L	G	G	G
Primary education	L	L	M	M	L	M	M	P	G	P,G
Secondary education	L	L	M	M	L	M	M	P	G	P,G
Public transport	M	M	M	L, M	M	M	M	P, G	G	P,G
Water supply	M	M	M	L, M	M	M	M	P	G	P,G
Sewage disposal	M	M	M	M	M	M	M	P, G	P,G	P,G
Refuse disposal	M	M	M	M	M	M	M	P	P	P
Public health	M	M	M	M	M	M	M	G	G	G
Hospitals	M	M	M	M	M	M	M	P, G	G	P,G
Electric power	M	M	M	M	M	M	M	P	P	P
Air/water pollution	M	M	M	M	M	M	M	G	G	G
Special police	M	M	M	M	M	M	M	G	G	G
Regional parks	M	M	M	L, M	M	M	M	G	G	G
Regional planning	M	M	M	L, M	M	M	M	G	G	G

Note: **L** is local government; **M** is regional/metropolitan government, **P** is private sector, and **G** is public sector

Source: Anwar Shah, The Reform of Intergovernmental Fiscal Relations in Developing and Emerging Countries.

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Table 4: Conceptual basis of tax assignment

<i>Type of Tax</i>	<i>Determination of</i>		<i>Collection and administration</i>	<i>Comments</i>
	<i>Base</i>	<i>Rate</i>		
Customs	F	F	F	International trade taxes
Corporate Income	F	F	F	Mobile factor, stabilization tool
Resource Taxes				
Resource rent (profits, income) tax	F	F	F	Highly unequally distributed tax bases
Royalties, fees, charges, severance taxes,				
production, output and property taxes	S, L	S, L	S, L	Benefit taxes/charges for state-local services
Conservation charges	S, L	S, L	S, L	To preserve local environment
Personal income	F	F, S, L	F	Redistributive, mobile factor; stabilization tool
Wealth taxes (taxes on capital wealth, wealth transfers, inheritances, and bequests)	F	F, S	F	Redistributive
Payroll	F, S	F, S	F, S	Benefit charge, e.g. social security coverage
Multistage sales taxes (value-added tax [VAT])	F	F	F	Border tax adjustments possible under federal assignments; potential stabilization tools
Single-stage sales taxes (manufacturer, wholesale, retail)				
Option A	S	S, L	S, L	Higher compliance cost
Option B	F	S	F	Harmonized, lower compliance cost
"Sin" taxes				

Excises on alcohol and tobacco	F	F	F	Health care shared responsibility
Betting, gambling	S, L	S, L	S, L	State and local responsibility
Lotteries	S, L	S, L	S, L	State and local responsibility
Race tracks	S, L	S, L	S, L	State and local responsibility
Taxation of "bads"				
Carbon	F	F	F	To combat global/national pollution
BTU taxes	F, S, L	F, S, L	F, S, L	Pollution impact may be national, regional or local
Motor fuels	F, S, L	F, S, L	F, S, L	Tolls on federal/provincial/local roads
Effluent charges	F, S, L	F, S, L	F, S, L	To deal with interstate, intermunicipal, or local pollution issues
Congestion tolls	F, S, L	F, S, L	F, S, L	Tolls on federal/provincial/local roads
Parking fees	L	L	L	To control local congestion
Motor Vehicles				
Registration, transfer taxes and annual fees	S	S	S	State responsibility
Driver's licenses and fees	S	S	S	State responsibility
Business taxes	S	S	S	Benefit tax
Excises	S, L	S, L	S, L	Residence-based taxes
Property	S	L	L	Completely immobile factor, benefit tax
Land	S	L	L	Completely immobile factor, benefit tax
Frontage, betterment	S, L	L	L	Cost recovery
Poll	F, S, L	F, S, L	F, S, L	Payment for services
User charges	F, S, L	F, S, L	F, S, L	Payment for services rendered

Note: **F** is federal responsibility; **S** is state or provincial responsibility; and **L** is local

Source: Anwar Shah, The Reform of Intergovernmental Fiscal Relations in Developing and Emerging Countries.

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Table 5: Magnitude of General Government Expenditures and Portion Administered by Each Level of Government																		
(Average of Latest three years available)																		
			Social Security and Welfare			Total Expenditure			Education			Health			Social Security and Welfare			
Country and Ending Year	Total	Education	Health	Central government	State government	Local government	Central government	State government	Local government	Central government	State government	Local government	Central government	State government	Local government			
			<i>(In percent of GDP)</i>			<i>(In percent of general government)</i>			<i>(In percent of general government)</i>									
Argentina ² (1987)	33.2	4.0	1.1	9.1	60.3	39.7		33.3	66.7		24.4	75.6		89.4	10.6			
Australia (1987)	39.1	5.5	5.5	9.6	52.9	40.4	6.8	8.5	91.3	0.2	43.5	55.6	0.9	92.8	6.2	1.0		
Austria (1987)	51.8				70.4	13.7	16.9											
Belgium (1987)	56.7				85.9		11.9											
Bolivia (1986)	11.1				85.9	10.6	3.4											
Brazil (1987)	34.1				65.8	24.5	9.6	4.8	34.5	60.7	2.6	89.5	7.9	65.8	31.3	2.9		
Canada (1987)	46.0	5.8	6.0	12.3	41.3	40.3	18.4	81.7		18.3	98.1		1.9	100.0				
Chile (1987)	32.3	4.9	1.9	8.8	93.8		6.2	55.5	39.2	5.3	49.0	40.2	10.8	90.0	7.8	2.2		
Colombia (1984)	18.0	5.5	1.3	3.2	67.4	23.9	8.7	46.8		53.2	7.1		92.9	26.1		73.9		
Denmark (1986)	57.6	7.1	5.2	23.1	44.9		52.9											
Finland (1987)	43.0				54.7		45.3	75.3		24.7	97.0		3.0	91.8		8.2		
France (1985)	49.3	4.6	8.3	20.9	82.2		16.5	1.0	73.8	25.2	74.4	11.2	14.4	79.0	10.9	10.1		
Germany (1983)	50.2	4.2	8.0	21.2	58.7	21.5	17.9	20.0		80.0	39.2		60.8	95.7		4.3		
Hungary (1988)	64.5	5.7	4.2	18.1	77.8		22.2	9.0	90.1		30.2	69.8		0.0		100.0		
India ² (1986)	22.6	3.4	0.9	2.3	47.5	52.5		65.3	34.7		72.8	27.2		0.0		100.0		
Indonesia ² (1988)	22.8	3.1	0.5	0.4	88.7	11.3												
Ireland (1987)	55.8				72.5		27.5	67.2		32.8	97.0		3.0	94.9		5.1		
Israel (1986)	62.9	5.3	2.0	10.0	90.8		9.2	94.0		6.0	91.9		8.1	75.9		24.1		
Kenya (1984)	29.3	5.2	2.1	1.4	94.3		5.7	74.1		25.9	92.0		8.0	97.4		2.6		
Luxembourg (1987)	39.1	4.4	0.7	21.3	81.3		15.9	98.7		1.3	82.9		17.1	100.0		0.0		
Malawi (1984)	29.1	3.7	2.2	0.6	93.7		6.3											
Mexico (1984)	30.2				90.1	7.6	2.3											
Netherlands (1988)	59.2				70.1		29.9											

New Zealand	(1981)	43.2				86.9		13.1										
Norway	(1986)	47.2				66.4		33.6										
Pakistan	(1979)	26.1				68.2	28.3	3.5										
Paraguay	(1984)	11.3				95.1		4.9										
Poland	(1988)	48.1				71.1		28.9	28.0		72.0	10.3		89.7	99.3		0.7	
Romania	(1985)	32.3	2.1	2.1	8.9	77.0		23.0										
South Africa	(1986)	33.3				74.8	12.5	12.7										
Spain	(1986)	38.2				78.8	9.9	11.3										
Sweden	(1987)	61.6				59.8		40.2										
Switzerland	(1984)	37.4	5.3	5.9	13.9	47.5	28.3	24.2	6.2	57.5	36.3	45.5	32.1	22.4	88.5	5.6	5.9	
Thailand	(1982)	21.2	4.1	1.1	1.2	92.3		7.7	94.8		5.2	93.5		6.5				2.6
Tunisia	(1982)	34.0	5.1	2.5	4.7	94.6		5.4	100.0			100.0		100.0			0.0	
United Kingdom	(1987)	44.8	5.1	5.1	14.3	70.9		27.2	12.7		87.3	100.0		0.0	84.0			16.0
United States	(1987)	37.1	5.1	4.3	9.0	60.3	17.3	22.4	4.2	24.5	71.3	50.5	33.8	15.7	78.0	14.6		7.4
Yugoslavia	(1987)	25.3	3.2	4.2	7.8	23.2	31.4	45.4	0.0	0.0	100.0	0.0	0.0	100	7.3	75.9		16.8
Zimbabwe	(1986)	45.0	8.3	2.6	3.0	75.8	24.2	60.2		39.8	86.6			13.4	100.0		0.0	

Source: Levin (1990) based on International Monetary fund, *Government Finance Statistics Yearbook*, Vol.13 (Washington: International Monetary Fund, 1989).

	¹	Excluding intergovernmental grants.																
	²	Data for general government do not include local government.																
	³	Includes supranational authorities' share of general government expenditures in Belgium (2.2 percent), Denmark (2.2 percent), France (1.4 percent), Germany (1.8 percent), Luxembourg (2.7 percent), and the United Kingdom (1.9 percent)																

Table 6: Tax Revenue Attributable to Each Level of government												
<i>(In percent of general government)</i>												
	Total Tax Revenue			Taxes on Income			Taxes on Property			Domestic Taxes on Goods and Services		
Country and Year	C	S	L	C	S	L	C	S	L	C	S	L
Netherlands (1988)	97.8		0.8	100.0			100.0			99.4		
Paraguay (1987)	97.6		2.4									
Indonesia (1988)	97.3	2.7		100.0			55.4	44.6		95.4	4.6	
Chile (1987)	96.5		3.5	100.0			100.0			95.5		4.5
Kenya (1986)	96.4		3.6	100.0			1.4		98.6	97.6		2.4
Zimbabwe (1986)	96.3		3.7	100.0			12.3		87.7	98.3		1.7
Ireland (1987)	96.0		2.3	100.0			42.9		57.1	98.7		
Malawi (1984)	95.9		4.1	99.7		0.3	1.9		98.1	99.8		0.2
Israel (1986)	95.5		4.5	100.0			22.9		77.1	100.0		
Thailand (1988)	95.0		5.0	100.0			58.8		41.2	92.8		7.2
South Africa (1986)	94.4	1.5	4.1	100.0			27.7		72.3	95.6	4.4	
Belgium (1987)	93.5		5.0	90.0		10.0	100.0			95.9		3.3
New Zealand (1981)	93.5		6.5	100.0			17.9		82.1	98.8		1.2
Luxembourg (1987)	93.3		6.2	87.6		12.4	92.0		8.0	99.2		0.7
Hungary (1988)	91.7		8.8	73.6		26.8	55.5		45.5	99.2		0.8
France (1988)	90.0		9.2									
United Kingdom (1987)	88.1		10.7	100.0			17.0		83.0	99.8		
Spain (1986)	87.7	3.3	9.0	84.3	1.2	14.4	56.7	23.9	19.4	76.1	7.4	16.5
Mexico (1984)	84.6	12.7	2.7	98.2	1.6	0.2	8.7	52.4	38.9	99.4	0.3	0.3
Australia (1987)	81.1	15.3	3.6	100.0			4.9	49.2	46.0	75.6	24.4	
Norway (1986)	80.9		19.1	57.1		42.9	40.6		59.4	99.8		0.2
Poland (1988)	80.9		19.1	79.6		20.4	50.8		49.2	89.2		10.8
Columbia (1984)	80.3	13.3	6.3	100.0			9.5		90.5	70.0	30.0	
Bolivia (1986)	78.6	18.4	3.0	99.2	0.8					60.1	36.2	3.7
Sweden (1987)	77.7		32.6	33.2		66.8	100.0			100.0		
Pakistan (1979)	76.9	18.5	4.6									
Finland (1987)	76		25.3									
Austria (1987)	75.8	11.5	12.7	58.0	22.6	19.4	52.1	4.3	43.6	71.3	13.1	15.6
Brazil (1987)	71.4	26.6	1.9	100.0			2.8	51.9	45.3	43.7	53.4	2.8
Denmark (1987)	71.2		28.2	54.0		43.0	57.0		43.0	99.4		0.1
Germany (1988)	69.8	21.7	7.6	39.4	40.5	20.1	5.2	54.5	40.3	69.9	29.4	0.1
India (1986)	67.2	32.8		100.0			39.0	61.0		51.9	48.1	
United States (1987)	66.7	20.6	12.8	81.6	16.8	1.7	5.6	7.2	87.1	17.1	68.0	14.9
Switzerland (1987)	60.5	22.8	16.7	22.8	42.2	35.0	32.6	42.2	25.2	87.7	11.8	0.5
Canada (1988)	50.8	40.0	9.2	63.5	36.5			16.1	83.9	38.7	60.8	0.5
Source: Levin (1991).												
Note: C = central government, S = state government, and L = local government; figures are the average of latest three years available.												

Endnotes:

¹ This is now a robust literature on what we label fiscal decentralization. More about this literature can be found at <http://www.worldbank.org/decentralization>.

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