

## **Revenue Sharing Arrangements: Options and Relative Merits**

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### **I. THE INCREASING TREND TOWARD FISCAL DECENTRALISATION**

The decades immediately after World War Two saw: (a) the spreading of ideas, rightly or wrongly attributed to John Maynard Keynes, that called for a larger government role in the economy; (b) the growing popularity of socialism; and (c) the creation of the United Nations, an event that gave a global voice to the citizens of low-income countries and that provided statistics that, for the first time pointed to the big differences in living standards that existed between the so-called “developed” or “advanced” countries and the “underdeveloped”, or “developing” countries, and between the rich and the poor within specific countries.

Those decades witnessed a period of fast growth in the activities of governments and especially in those of the *central* governments. The central governments of many countries assumed increasingly important and wider roles and functions. See Tanzi (2011) forthcoming, and Tanzi (2008). The governments of many countries tried to raise their tax revenue to be able to increase public investment, to create needed infrastructure and to provide better social services, such as education, health, and social assistance, to their citizens. In those decades the importance and the revenue needs of national or central governments grew and the literature on “taxable capacity” became a popular branch of economics. Especially developing countries needed more government revenues and more taxes to be able to grow.

Somewhere around 1980s a reaction against this centralisation of economic and political power in the national governments started to take form, at first weakly and then progressively more forcefully. The centralisation of governmental activities began to be seen as having reduced the “voice” of many citizens and the power or importance of local (i.e., sub-national) governments or jurisdictions. With the passing of the years, a pro-decentralisation movement developed and acquired intensity and started to be embraced by some international organisations. It was assisted, especially in developing countries, by the movements toward more democratic governments.<sup>1</sup> This movement accompanied,

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<sup>1</sup>Data from the IMF *Government Finance Statistics* on richer countries show that in more recent years the shares of sub-national expenditure in percent of General Government Expenditures increased in many, but not all.

and to some extent competed with, the movement toward privatisation that was becoming important in many countries at about the same time.

When and where the focus of attention and action shifted, from the national government toward the sub-national governments, rather than toward privatisation, questions were raised about the fiscal arrangements that should or could be created in order to assign more fiscal resources and more fiscal responsibilities to the sub-national governments. In most countries there were no political constitutions that provided legal and political guidance as there was, for example, in the United States. The limited literature on fiscal federalism that had existed until the 1980s had been largely inspired by the special U.S. experience and by the writings of US based economists such as Oates, Tiebout, and Musgrave.

By 2010 a huge literature had become available that dealt with multi-level public resource assignments in many countries. In recent decades this literature grew in size and scope and attempted to develop principles or rules to determine what should be the fiscal responsibilities of sub-national governments and how their activities should be financed. That literature has gone well beyond the often-cited contributions by the above-mentioned economists.

In most federal countries there are three government tiers: the national (or central) governments, that are responsible for the whole countries; the governments that deal with large geographical areas within countries, usually referred to as *regional* governments. When the existence of these governments has preceded, historically, that of the national government, as in the United States and in Brazil, the (regional) governments are called “states”.<sup>2</sup> Within the regions (or the “states”) there are smaller political or administrative units that are the municipalities, the communes, or, in some countries, the counties. Municipal governments have of course existed for a very long time, perhaps for as long as there have been cities, at least 5000 years. In many cases they are many in numbers. For example, they are about 5,760 in Brazil and 8,000 in Italy.

In a few countries, such as Italy, there are also governments or administrative units between the regional and the municipal governments. They are called provinces and each of them deals with the area covered by a group of municipalities.<sup>3</sup> These provinces are financed by transfers from the higher tiers, or by shares in some national taxes. Many experts question the merit of their existence but it is politically difficult to eliminate them where they have existed.

Multi-tier governments, or fiscally decentralised administrations, exist in most large countries (China, Brazil, the United States, Russia, Canada, Australia, India, Indonesia, South Africa, Nigeria, Argentina, Pakistan, Germany) and even in some relatively small countries (Switzerland, Belgium, Denmark, Norway). In most countries municipalities have some degrees of political and financial autonomy.

In recent decades, there has been a growing willingness to give more political power, or more voice, to the subnational governments. One manifestation of this trend has been that of having direct elections for city mayors and for regional governors. This is a relatively recent phenomenon, as Table 1 indicates. In earlier years, the individuals

<sup>2</sup>In these countries regional governments, the “states”, had at some point decided to “unite” and to create, and be part of, national governments, often defined as *federal* governments.

<sup>3</sup>In some countries the *provincial* governments are the same as the *regional* governments.

that occupied these positions were appointed rather than elected. Table 1, provides information on this development for the Latin American region. It has affected, especially, the municipal level, but is increasingly spreading to the regional level. The Latin American experience is, probably, fairly representative of this trend in other regions.

Table 1

*Latin America: First Year for the Direct Election of Executive Positions  
In Sub-national Governments*

Countries	City Mayors	Regional Governors
Argentina	1983	1983
Bahamas	1997	
Belize	1981	
Bolivia	1985	2005
Brazil	1982–85	1982
Chile	1992	
Colombia	1998	1991
Costa Rica	1949	
Ecuador	1983	1983
El Salvador	1985	
Guatemala	1985	
Guyana	1995	
Honduras	1981	
Jamaica	1962	
Mexico	1917	1917
Nicaragua	1992	
Panamá	1995	
Paraguay	1991	1993
Perú	1980	2002
Dominican Republic	1966	
Uruguay	2010	1984
Venezuela	1989	1989

Source: Rafael de la Cruz (2011), p. 47.

While the subnational governments are being given increasing authorities, political autonomy and, generally, more spending mandates and responsibilities, their *direct* access to fiscal resources has remained limited. Thus, the financial autonomy of sub-national governments has remained somewhat constrained.<sup>4</sup> Their resources continue to come mainly from less-productive taxes and from fees and transfers, often with strings attached, from the national government. Of course the more rigid are the strings, the less free they are to use the money they receive as they wish. At times, poor accounting, on the spending side, allows local governments to relax the power of the strings, in a *de*

<sup>4</sup>This is less so for municipalities. In several countries their access to loans has been prevented. However, delayed payments to suppliers creates implicit loans but also hidden debts that, occasionally, have led to difficulties.

*facto*, if not *de jure*, way. When this happens, poor accounting is often accompanied by accountability or corruption problems. In any case the scarcity of fiscal revenue for local governments has contributed to observations, on the part of some, that a “democratic deficit” has been created, because the delegation of political power to sub-national governments has not been accompanied by the assignment of equivalent financial resources. See OAS (2009, 2010). This has become a recurrent theme in the Latin American continent. The total tax resources collected in developing countries, or in emerging markets, are still somewhat limited in many of them. Thus it has been difficult for central governments, which also face spending pressures, to spare large portions of the resources that they get from taxes or from the ownership of mineral resources. Of course it could be argued that, at least some of them, should make a greater effort to raise their tax collection.

Table 2 provides some information, for developed countries and for Latin American countries, on the revenues (before and after transfers to sub-national governments) and on the expenditures (after the transfers) for the three government tiers. Unfortunately a similar table is not available for other parts of the world.

The importance of transfers is evident from the table. The resources transferred downward, from the national government to the sub-national governments, average about five percent of GDP, for both “developed” and Latin American countries. The table refers to averages for large groups of countries. It does not reflect the situation of specific countries that may differ significantly from the average. The table shows the continuing great predominance of national governments in both taxing and spending.

Table 2

*Inter-governmental Finances in Groups of Countries*

	Developed Countries Averages		Latin American Countries Averages	
	Revenues		Revenues	
	% of GDP	% of Total	% of GDP	% of Total
	<b>Before Transfers</b>		<b>Before Transfers</b>	
Public Sector	42.4	100.0	25.6	100.0
Central Government	27.8	65.6	20.9	81.6
Regions or States	9.0	21.2	3.4	13.3
Municipalities	5.5	13.0	1.3	5.1
	<b>After Transfers</b>		<b>After Transfers</b>	
Central Government	22.8	53.3	16.1	64.9
Regions or States	11.7	27.5	6.1	24.6
Municipalities	8.1	19.0	2.6	10.5
	<b>Expenditures</b>		<b>Expenditures</b>	
	% of GDP	% of Total	% of GDP	% of Total
Public Sector	47.8	100.0	27.9	100.0
Central government	27.2	56.9	18.4	65.9
Regions or States	12.6	26.4	6.9	24.7
Municipalities	8.0	16.7	2.6	9.3

Source: Rafael de la Cruz (2011), p. 50.

## II. DIFFERENCES WITHIN COUNTRIES' REGIONS AND FISCAL DECENTRALISATION

Multi-tier fiscal arrangements exist in countries with high and low levels of economic development. They also exist in countries in which the level of economic development is broadly uniform across the countries' regions, and in countries where there are large, within-country, regional differences in per capita incomes. They exist where, because of the uneven distribution of mineral resources within a country (especially resources from exportable commodities), or because of the uneven distribution of good land, water, or good climate, some regions have much higher per capita incomes than other regions or simply because some regions have developed more quickly than other regions. These regional differences create strong pressures on national governments for policies that aim at reallocating income horizontally, from the richer toward the poorer regions. These policies often encounter strong resistance from the richer regions that object to this use of "their" financial resources.<sup>5</sup> It may often be easier, politically, for a *national* government to implement policies that help directly the poorer citizens, regardless of where they live, than to implement redistribution from richer to poorer regions in the hope that the regional governments will themselves redistribute income towards their poorer citizens. These policies of regional income reallocation have created major political difficulties in countries such as Belgium, Canada, Italy, Spain, Nigeria, and others.

The factors mentioned above have important implications for the kind of fiscal arrangements that can be established, or would be desirable to establish in countries. In principle, the greater is the unevenness in the income distribution of a country measured by some relevant index such as the Gini index, the more desirable might appear to be the role that the national government ought to play. As Richard Musgrave argued as far back as in 1959, generally it is the national government that is expected to play the major role in redistributing income with its national policies. However, not all national governments are capable or willing to play such a role. Politicians that represent particular regions at times control particular governments. Those that represent high incomes individuals control other governments. These two situations will lead to different policies. However, a national government that is seen as inefficient in the use of public resources, or as not dedicated to the welfare of the majority of citizens, cannot be expected to be the main actor in the pursuit of a more even income distribution.

In addition to the above, there may be social or cultural considerations that call for or that can promote fiscal decentralisation. The following deserve mention:

- (a) historical, cultural or religious differences across regions of the same countries, as for example exist in Nigeria, Sudan, Iraq and other countries;
- (b) linguistic differences across regions, as in Switzerland, Canada, Belgium and other countries; and
- (c) ethnic, or racial, differences, as in South Africa.

<sup>5</sup>It is often the richer regions that object to policies that aim at horizontal (across regions) revenue redistribution, while it is the richer individuals or the parties that they control that often object to policies of income redistribution pursued by national governments.

These factors lead to pressures for decentralised policies and fiscal arrangements, because the regions may have significantly different preferences for particular economic policies or public services even though the basic needs of the populations can be assumed to be broadly the same.

Research by economists, political scientists, and sociologists has shown that these regional differences may affect attitudes vis-à-vis particular policies, as for example for policies that aim at income redistribution or at education.<sup>6</sup> Thus, economic policies, promoted by the national government, that tend to be the same for the whole country, may be more attractive to the populations of some regions than to those of other regions. The historical, cultural, religious, and linguistic developments have in many cases preceded the creation of national, political entities (nations) so that *national* governments that cover large and heterogeneous areas may not be seen as representative by particular regions. In a significant number of cases, the national entities (the nations) were promoted, or even imposed on the existing population, by distant colonial or foreign, powers. In other cases, the national entities were promoted by the action of a particular region, within the current country. The national countries were, thus, often created ignoring, or in spite of, the differences that existed within their territories. This is, for example, a common situation in several African countries, where different tribes were bound together to form the modern countries. It should not be surprising that in these cases, national policies may have more support in some regions than in others, and that some regions would prefer to have more autonomy.<sup>7</sup>

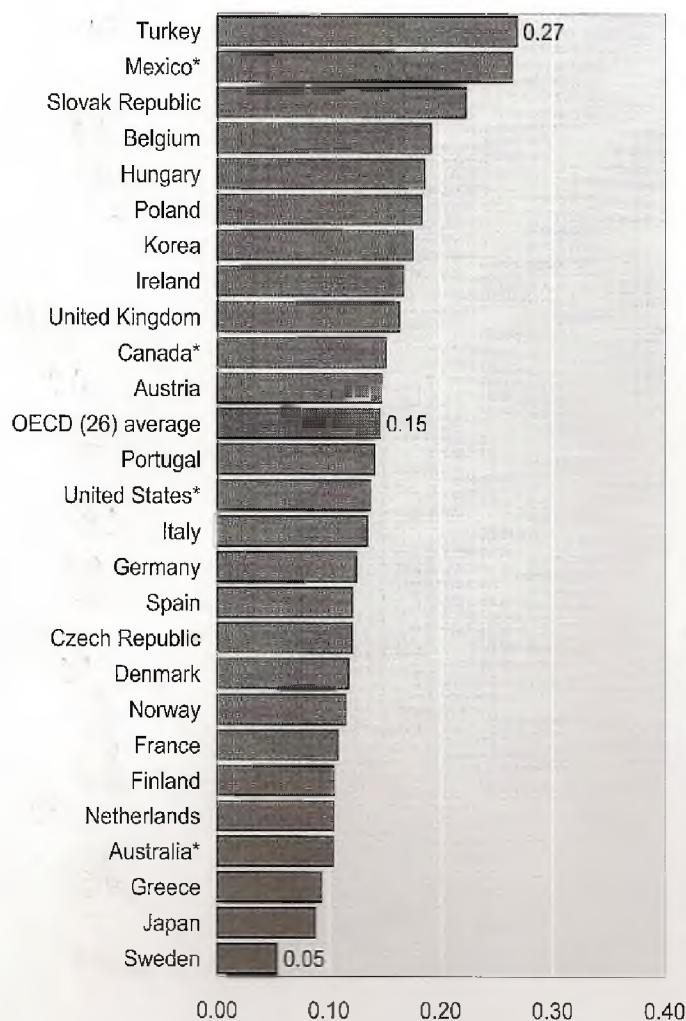
It is often forgotten, however, that the differences mentioned above do not stop at the borders between existing regions. They are at times duplicated, to some extent, *within* areas of the same regions, especially when in the past there have been significant migratory movements within the country and the regions' borders have not been adjusted over the years. Also the regional borders may have been adjusted at some point. A mistake made by a large part of the literature on fiscal federalism is that of assuming that the differences exist only, or mainly, *between* regions and that they stop at a region's border. Differences *between* regions can at times be matched by significant differences *within* regions. When this is the situation, the case for fiscal federalism loses some of its legitimacy, because the main justification for fiscal federalism is often differences *across* regions.

On one kind of difference, that in average per capita incomes *across* the regions of the same countries, there are data for many OECD countries. See Figure 1. The OECD has estimated the Gini coefficients for income differences *across* regions but within the same countries. These calculations implicitly assume that the per capita income is the same within a region but is different across the country's regions. With Gini coefficients of 0.27 and 0.26, Turkey and Mexico, have the largest regional inequality. With Gini coefficients of 0.05, 0.09, and 0.09, Sweden, Japan and Greece, have the lowest regional inequality. The average regional Gini for 26 OECD countries is estimated to be 0.15.

<sup>6</sup>The differences may not be confined only to economic matters but may extend to attitudes toward social issues, such as the education of women or the freedom of religious expression.

<sup>7</sup>In these cases even democratically-elected, national governments may be more representative of a region than of some others. The populations of particular regions may feel that the interests of other regions are disproportionately represented in the national government.

**Fig. 1. Gini Index of Inequality of GDP Per Capita Across Regions within Each Country, 2003**



Source: OECD (2007), 'Regions at a Glance'.

Notes: Data are estimated for TL3 regions, except for countries marked with an asterisk (\*) which indicates that data are for TL2 regions. Regional type is defined in the methodology annex.

The regional Ginis do not seem to be highly related to the size of the country. For example, Australia, Germany and the United States have regional inequalities that are lower than those of Belgium, the Slovak Republic, Ireland and some other small countries. Furthermore, with the exception of Turkey and Mexico, that have high *regional* Ginis and high *national* Ginis, for the other countries the regional Ginis do not seem to be significantly related to the national Ginis. An important point to make is that the higher is

the *national* Gini, the greater is theoretically the need for *national* redistributive policies. The higher is the cross-region, or *regional* Gini, the greater is the justification for a fiscal decentralisation policy that would require policy measures that reassign resources from richer to the poorer regions.

Economic inequality across regions creates the main rationale for horizontal fiscal equalisation. Inequality within a country creates a strong reason for national policies of income redistribution. The national government must get the resources from the richer citizens wherever they are although they are more likely to be in larger numbers in the richer regions. Regions with lower per capita incomes have, *ceteris paribus*, a greater claim for getting transfers from the national government, especially if they are capable of using, efficiently and fairly, the resources that they get. The unequal costs of providing essential, but local public services in different regions of the same country may also play a role. For example some regions might have more school-age children, or more elderly individuals, needing more governmental spending for education or health services than regions with similar per capita incomes. These unequal costs may justify resource transfers that go beyond those justified strictly by the level of a region's per capita income. Unequal costs across regions may also be due to the size of a region, to the concentration of the population, to the demographic characteristics of the population, and so on.<sup>8</sup> However, these cost differentials must not be the outcome of different efficiency on the part of the different sub-national governments in the use of public resources.<sup>9</sup>

How big the differences in economic conditions *within* a country can be can be shown with the use of Brazilian data. In 1999, the per capita income across the 29 Brazilian "states" ranged from a high level of US\$6008, in the Distrito Federal, and US\$5060, in the state of São Paulo, to a low of US\$770 in the state of Maranhão, and US\$912 in the state of Piauí. The infant mortality rate ranged from a low level of 18.4, in Rio Grande do Sul, to a high level of 66.1, in Alagoas. The range in the illiteracy rate was from 32.8 in Alagoas to 5.1 and 6.1 in the Distrito Federal and in Rio Grande do Sul respectively. These are huge differences that justify horizontal resource transfers. Brazil has also one of the highest national Ginis in the world, thus justifying a large national government intervention to complement a federal fiscal structure that transfers significant fiscal resources to the poorest states. The data above come from a paper by Rezende and Afonso, mimeo, no date. It would be helpful to have similar data from other countries.

If a country were made up of different regions but all reflecting similar economic, cultural, linguistic, ethnic and geographic characteristics there would be little justification for fiscal decentralisation, unless the central government could collect taxes more efficiently while the subnational governments were more efficient in spending the revenue, perhaps by better assessing the needs of the population and its expenditure preferences.

However, the more different are the economic, cultural, and social characteristics *across* regions, and the more homogeneous are they *within* the regions, the stronger become the arguments for a federal structure. The main argument for a federal structure would be the different preferences that would exist across regions for public goods and social services. One region might prefer to spend more resources for festivals and sport events, while another

<sup>8</sup>The more dispersed is the population, the more costly it is to provide services to it.

<sup>9</sup>Various studies have indicated wide differences in efficiency in the use of the resources provided to regions in Italy for educational and health services.



might prefer to spend more resources for cultural events and for education. However, if *within* the regions there are as wide differences in preferences as across the regions, a decentralised fiscal structure becomes less justified. If the distribution of personal income *within* the regions is highly uneven and the national government is more efficient at redistributing income, perhaps because it can better use progressive income taxes and better targeted expenditure programmes, there may even be an argument for fiscal *centralisation*. In fact this was in part the historical reason why the role of the *national* governments grew in the decades after World War Two. See Tanzi (2008) and Tanzi and Schuknecht (2000).

In conclusion, there are several considerations likely to play a normative role in the countries' decisions on which fiscal arrangements should be promoted. They must deal with the need for vertical transfers, from the national to the sub-national governments, and for some horizontal transfers, from richer to poorer regions. These arrangements must include especially those that determine the desirable tax revenue assignments that are the main focus of this paper. These considerations have received less attention than they deserve in the now vast literature on fiscal federalism. That literature continues to be influenced to a significant extent by the American circumstances and by the writing of US scholars, especially those in earlier years.

### III. A TYPOLOGY OF TAX ASSIGNMENT POSSIBILITIES

In this section we present, in a schematic and simple way, the main tax assignments possibilities available to a country that chooses a fiscal decentralisation arrangement, or fiscal federalism. In the next section, these possibilities are described in more details, while providing some information on countries that have followed them, on the requirements for their successful use, and on their attractive features, or shortcomings, if any. A final section will draw some general conclusions.

#### 1. Giving Sub-national Governments the Freedom to Set Up Their Own Tax Systems

The first option is that of giving subnational governments, and especially larger, intermediate governments (regions or states), the freedom to set up their own tax systems and tax administrations and to use any tax bases and tax rates that they choose. The same freedom could be given to the lower sub-regional tier (municipalities or counties). However, these governments are often too small and have less capacity to use successfully this freedom, unless they are large cities.

It is normally agreed that the only taxes that the sub-national governments cannot be allowed to use are the foreign trade taxes. The imposition of import and export duties must remain the exclusive prerogative of national governments. Whether, in this option, the subnational governments would need to receive also transfers or grants from the national government would depend on various considerations of which the most important would be large regional difference in tax capacity and the need for some equalisation of resources among regions. In this option the same tax base could be used by more than one tier of government.<sup>10</sup>

<sup>10</sup>In countries that follow this option, such as Brazil and the United States, some transfers from the national (federal) government to the sub-national governments are provided especially for specific, earmarked uses.

## **2. All Taxes are Collected Centrally and Shares of Total Tax Revenue are Transferred**

In the second option, diametrically opposed to the previous one, the tax collection is the (almost) exclusive, monopolistic responsibility of the national government. It is the national government that has the authority and the administrative capacity to collect all or most taxes. Obviously, if this option is used, within a federal, fiscal arrangement, in which decentralised administrations are expected to provide some public goods and services to the citizens, the monopoly on taxing at the national level must inevitably be accompanied by a system of transfers to the sub-national administrations. The proportion of the taxes transferred may be fixed in time, or may be determined yearly or periodically.

This system exists in some form in what are essentially *unitary* governments. Examples are France and Chile. In these countries the sub-national “governments” are essentially or largely “administrative units” of the national governments. They manage the resources that they receive and follow guidelines established nationally. In this option, it is more correct to speak about fiscal decentralisation than of fiscal federalism.

Apart from political reasons that may lead to this kind of arrangement, it can be defended when (a) the national government is clearly more efficient in collecting taxes, than the sub-national governments would be, while (b) the sub-national administrations are more efficient in the use of the tax resources for the provision of some public services. Obviously it is the national government that retains the political power including that of appointing the local administrators although this may not be necessary. As Table 1 shows, Chile allows the direct election of city mayors and so does France.

## **3. Assigning the Exclusive Use of Some Taxes to Sub-national Governments**

In the third option, specific taxes are assigned for the use of the sub-national governments, some to the regional governments and others to the municipalities. The decisions on which taxes to assign must be based on technical considerations and/or on revenue needs on the part of the second and third tier of government. The decision must also be made as to whether to assign to the sub-national governments not just the revenue from specific taxes but also the power to determine the tax bases and the tax rates for those taxes. In some cases the national government may choose to keep the prerogative to determine the tax base but let the subnational governments decide, freely or within a prescribed range, the rates.

In this option, it is likely that the national government will retain the right to use the highly productive, but administratively demanding, taxes, such as the value added tax and the personal and corporate income taxes, and let the other taxes to be used by the sub-national governments.

## **4. Sharing with the Sub-national Governments the Revenue from Some Nationally—Collected, Specific Taxes**

In the fourth option the national government collects *most* of the important taxes, leaving some of the less important ones for the optional use by the sub-national governments so as to give these government some freedom at the margin. However,

following agreed, sharing arrangements, the national government shares the proceeds from particular taxes, such as the value-added tax or the income tax, with the sub-national governments. The national government also collects some taxes that it does not share, and the subnational governments also collect, for their own use, some taxes. The share of each tax may vary from tax to tax and may be adjusted from time to time.<sup>11</sup>

In the context of this fourth option it ought to be recalled that the taxes that in recent decades have generated the highest amounts of revenue to countries are the value added tax (since its introduction in France in the 1950s), the taxes on income (both personal and corporate), and the social security or payroll taxes. Foreign trade taxes, collected by the national governments, were very important in the past. However, their importance has fallen sharply in recent years due to the impact of globalisation and of trade agreements. This fall has reduced the revenue received from these taxes by the national governments. In conclusion, the sharing arrangements that are important in terms of revenue are those that concern the highly productive taxes.

When the total revenue needs of countries are modest, tax sharing arrangements tend to be easier, both technically and politically. But when the total revenue needs become high, sharing arrangements become more difficult. Because of changes in the structure of economies, and because different taxes have different elasticities with respect to economic growth especially over the longer run, arrangements or options that may have seemed right at the time they were made, may become difficult, or no longer right, at later times.

#### IV. A BRIEF EVALUATION OF THE ABOVE OPTIONS

In this section we comment briefly on the options mentioned above.

##### First Option

The first option is the one in which each government's tier has the freedom to levy any tax and choose any tax rate that it wishes. The only taxes that sub-national governments are not allowed to use are those on foreign trade (import and export duties). Foreign trade taxes must necessarily remain national because of trade agreements with other countries and also because, if free to use these taxes, the sub-national jurisdictions where ports of entry are located would be able to tax other jurisdictions, when the citizens or enterprises from those jurisdictions use the ports or the other points of entry to export or import goods. The sub-national governments must observe the "territoriality principle" of taxation that states that the taxes must be imposed on activities that take place within the territory of the jurisdiction that collects the taxes.

This option is technically easier when the regions or the municipalities, are large in size and in economic activity. For example, the state of California would be one of the G-8 countries if it were an independent country. Some of the Chinese provinces, or some of the Brazilian states, would be among the largest countries in the world, at least in terms of population or land area, if they were independent countries. Because of these

<sup>11</sup>There have been some rare examples in which taxes collected by regional governments have been shared upwards with the national government. To some extent this is still the case within the European Union that has become a kind of super-national government and that receives a share of the value added taxes collected by the member countries' national governments.

factors, these regions, or at least some of them, can be expected to have, or to be able to create, the administrative capacity to establish their own tax systems and their own tax administrations.<sup>12</sup> This assumption might be assumed to be behind the use of this option by the “states” in both the United States and Brazil. However, in both of these countries, historical reasons have been equally important. In both, the states, or the regional governments, existed *before* the national governments came into existence. Therefore, the constitutions of these countries have reflected and preserved these states’ rights.

The political, and theoretical economic attractiveness of this first option is obvious. The subnational governments (or at least the regional governments) do not face political or legal constraints in their decisions, at the margin, to use any tax and any tax rates that they choose, to satisfy their revenue needs.<sup>13</sup> In principle, they can rely on their own resources (if they are willing and able to raise them) to finance any desired level of spending. This gives (at least some of them) a lot of political and financial independence from the national government. In the few countries that have allowed this option (especially the United States and Brazil) the sub-national governments (especially the states) have exploited this option and have been able to raise higher levels of revenue than might have been possible with other options.<sup>14</sup> In these countries the municipal governments partly depend on revenue collected from their own taxes and partly on revenue received from transfers that they receive from regional and/or national governments. In the United States, the municipal governments depend largely on revenues from the property tax that can be and is considered an important revenue source for the lowest government tier.

This first option is, however, not without costs or problems. The first cost is that all the subnational governments are forced to create their own independent tax administrations. Thus, there is a duplication of administrative costs for governments and an increase in compliance costs for citizens. Because of economies of scale in tax administrations, this option can lead to significantly higher costs of administration.<sup>15</sup> Second, not all the states or regions would be able to create equally efficient tax administrations. Some may be just too poor or too backward to do so.<sup>16</sup> Third, both skilled labour and financial capital tend to be highly mobile within a country. Thus, the freedom of a given state or region to impose taxes higher than other states may encourage mobility and may thus be reduced by the potential emigration of some tax bases. Even consumers tend to be mobile in their spending, especially if they live near the border of other regions that impose lower consumption taxes. Sales outlets often locate themselves

<sup>12</sup>Equally, cities such as New York, London, or Tokyo have large economies that make it feasible for them to impose any tax that they would want to use.

<sup>13</sup>However, agreements with other regions may constrain the level of the rates and some of the regions may not have much taxable capacity because they are too poor. This has been the case in Brazil. On the other hand, the use of retail sales taxes by the states in the United States may explain why it has remained the only major country in the world without a value added tax.

<sup>14</sup>In the year 2000, the Brazilian states collected 28 percent of Brazil’s total tax revenue; the municipalities, 5 percent. In the United States the share of total taxes raised by subnational governments has been about half that of the federal government.

<sup>15</sup>It is also likely to lead to high tax complexity and high tax compliance costs. Surveys of tax systems have indicated that fiscally federal countries tend to have the most complex tax systems.

<sup>16</sup>This leads to an obvious question. If these regions are too poor to raise taxes, will they be able to set up the institution to spend well the money that they receive from central government transfers?

close to borders to attract consumers from other areas. For example, taxes on cigarettes or alcohol cannot differ much between neighboring regions. When they do, the regions that put higher tax rates lose buyers, and cross-regional smuggling becomes a problem. This has been a problem in both Canada and the United States and has become a major problem within the European Union.

Tax competition inevitably becomes an issue in this option, as it has become in the United States and Brazil, especially with the corporate income tax in the United States and with the value added tax in Brazil. These taxes are imposed by both the national and the sub-national governments in Brazil. Some states try to attract capital from other states by using lower tax rates and better tax incentives for corporations; and they try to attract consumers with lower value added taxes and lower excise taxes. Tax competition can lead to revenue losses to governments and to major economic distortions. Therefore it can reduce the sub-national governments' degrees of freedom in taxation. In extreme cases, it can lead to "tax wars". [See Prado and Cavalcanti (2000) and Tanzi (1995)].

The first option is not a good one for countries where the sub-national governments control areas with small and poor economies because they will not be able to set up efficient tax administrations and collect significant tax revenue. There are important economies of scale in tax collecting especially for some taxes, because of the fixed capital needed (computers, buildings, cars, etc.) and because of the needed operational systems and data necessary. The smaller and less developed economically is a jurisdiction, the more inefficient its tax administration is likely to be. Additionally, in an economically small jurisdiction, taxpayers and tax administrators are likely to live within the same areas and to know each other. This often leads to intimacy and intimacy leads to corruption.<sup>17</sup> In conclusion, when some jurisdictions are more developed than others, they will, *ceteris paribus*, end up with more tax revenue than the others. This would bring large differences in their ability to provide public services in the quality and quantity desirable unless the national government intervenes with significant transfers.

## Second Option

This is the one in which all taxes are collected centrally, by a *national* tax administration.<sup>18</sup> In countries with a unitary-style government, it is the (national) government that decides which taxes to use, which rates, and how to spend the revenue collected. However, the actual spending may be done by decentralised agencies of the government, agencies that operate at the sub-national or local level. Unitary governments (such as the ones in Chile or France) generally have representatives ("prefets") and offices in the regions. These offices are responsible for the spending of the national revenue at the local level following nationally established rules. The "prefets", or other representatives, become highly knowledgeable about local conditions, needs, and preferences, but the guidelines are established centrally.<sup>19</sup> The unitary governments generally provide more freedom at the municipal level. Chile and France, for example, allow the election of city mayors and the use of some municipal taxes. A country does

<sup>17</sup>It is more difficult to apply arm's length principles to friends than to strangers. Tanzi (1995).

<sup>18</sup>This option does not prevent sub-national jurisdictions from collecting some fees for services that they provide to the citizens, and municipal jurisdictions from levying some local taxes.

<sup>19</sup>The "prefets" are a Napoleonic institution still in use in France, Italy, Chile and some other countries.

not need to be unitary to follow the second option. In a federal setting the national government could collect all (or most) tax revenue, relying on the best tax systems and tax administrations possible, and then allocate part of the revenue collected to the regions and/or to the municipalities following some agreed rules. However, this option also faces some shortcomings.

First, there may be the issue of the legitimacy of the national government, as perceived by the populations in different regions. Is the national government truly democratic? Is it perceived as representing equally well the populations from all the regions? Do some groups, or some regions, have more power within or more influence on the government than other groups or region?

Second, there is the question of the tax sharing formula that may not be the one preferred by some regions. Questions may be raised about the vertical sharing, i.e., what share of the revenue collected should the national government retain for itself and what shares it should distribute to the sub-national tiers? And what about the horizontal allocation of revenue, that is, the distribution among the regions or the sub-national jurisdictions?<sup>20</sup> Inevitably there will be claims that some regions should be entitled to a larger share than others. The poorer regions would claim larger shares because of needs. The richer regions, that presumably have paid more taxes because of their higher incomes, would feel entitled to a larger share.

Third, there is the major issue, stressed by the fiscal federalism literature, that, in this system, the sub-national governments are boxed in; they have little freedom or power that does not come from above. For example, the school system becomes a national school system, decided and imposed by the national government with identical curricula salaries for teachers and so on. This may eliminate much of the competition among school districts and is likely to reduce experimentation. As the supporters of fiscal federalism stress, even when the per capita incomes of the regions are the same, different regions may have greater or lower preferences for some public goods. The former might be willing to pay higher taxes, to bring their public spending closer to their preferences. This option is prevented in this system. Some experts go as far as to argue that the local administrators will be more wasteful in the use of resources received from the national government because, presumably, these resources do not represent a direct effort or sacrifice by the local administrations. However, this is not a convincing argument.

### **Third Option**

The third option is that of assigning specific tax bases to the use by sub-national governments. It is an option adopted by many countries. The national government keeps some important taxes for its own use—especially the value added tax, the income taxes, and the payroll taxes, in addition to the foreign trade taxes—and allows the subnational governments the use at their discretion of all other taxes. These may also include locally imposed taxes on tax bases used also by the national government. For example in Argentina, the national government taxes consumption with a value added taxes, while the regional governments (that in Argentina are called provinces) tax consumption with a “cascading” turnover tax. If the Federal government of the United States should one day

<sup>20</sup>Unitary governments would probably aim at providing the same basic services for the citizens of all the regions. The more regional differences there are the more this uniformity will be questioned.

levy a value added tax, it would have to coexist with retail sales tax that many states now use.

This option allows “piggy-backing” by regional and even municipal governments on national taxes. For example, the national government might determine a tax base and tax it but it could allow the subnational governments to use, or “piggy-back” on, that base. This is done in the United States with the personal income tax and with the corporate income tax.<sup>21</sup> The states often use the same tax base (with some minor modifications) as the national government to impose some additional tax rates on that same base. In this way they can benefit from the information provided by the taxpayers to the national government, thus reducing their administrative costs. This approach also reduces the compliance costs for the taxpayers. Alternatively, the base for a given tax (as for example the property tax) is determined by the national government, but the tax is imposed and collected by regional governments although the national government could also tax it, if it chose to do so. This option removes the danger that the vicinity of the property owners to those who impose the taxes may lead to acts of corruption though the underestimation of the values of the properties, a danger that is more likely to exist when the property values are locally determined. It also shifts some of the administrative burden from the local governments to the national government. In Italy, the national government uses the traditional value added tax but the regional governments collect a special income version of that tax that is not the traditional credit-and-invoice one. Therefore, to some extent, in Italy there are two value added taxes as in Brazil.

In many countries, however, the exclusive use of the property tax and the administrative burden of determining the value of the properties rests on the municipalities. Other significant taxes that are allocated to the sub-national governments are: (a) taxes on car ownership and car use; (b) various excises; (c) taxes on local commercial activities (on shops, restaurants, movie houses, personal services, hotels, stands at fairs or outdoor markets); (d) taxes connected with some local gambling activities; (e) taxes connected with, or justified by, garbage collection or other municipal services; (f) taxes on commercial parking; and other similar taxes. Fines on parking or moving violations by cars within cities have become indirect but significant ways for municipalities to raise money. They have become de facto “pseudo taxes”. Some of these taxes are based on a “benefit received” principle, because they are considered payments for services (use of streets, street lighting and street cleaning, police protection,) that benefit the local citizens.

Of the above taxes, the most important, in terms of potential revenues, are the property taxes, the taxes on car ownership, and some excises, especially those on cigarettes, gasoline, and other items of mass consumption, such as soft drinks.<sup>22</sup>

Property taxes have provided revenue of up to four percent of GDP in some highly urbanised and developed countries, such as Singapore. They generate about three percent of GDP in the USA. However, their revenue generation is generally not more than one percent of GDP. Taxes on car ownership can raise significant revenue, especially when

<sup>21</sup>The states that use the income taxes generally use the same tax bases as the Federal government and exchange the information on the taxpayers in their state with the national tax administration.

<sup>22</sup>As Roy Bahl put it (no date): “Motor vehicle ownership and use represent an excellent but much neglected tax base for urban governments in developing countries”. He also considers the residential property tax...the ideal local tax...”

the tax payments are related to the value or the size of a car, making these taxes somewhat progressive. The growing use of cars in many countries makes this a potentially elastic tax with respect to economic growth. Taxes on specific products (gasoline, soft drinks, cigarettes) can also be important for local governments and are not difficult to collect. Therefore, local governments should not ignore the possibility of using these taxes.

Tax experts consider the property tax as a good tax for use by sub-national governments and, especially, by municipal governments. The reason is that the property tax is applied on a tax base (land and buildings) that is immobile.<sup>23</sup> The tax can also be justified as a payment for services received by the property from the local governments. Generally the property tax tends to be proportional or even progressive with respect to income, because richer individuals tend to own larger and more expensive houses. However, to be productive this tax requires the availability of good and up-to-date *physical* cadasters. These are official registers that describe precisely the physical characteristics of each property and identify clearly their current owners. Once the physical cadasters are available, market values must be determined and attached to each property and the values must be kept updated. This is not an easy task, especially in countries in which inflation is a problem and modification to the physical characteristics of properties are frequent. Often the physical cadasters are in poor shape and the property values have not been adjusted, or have been adjusted with long lags making them fall behind the actual market values. This makes these taxes progressively less productive and less equitable.

In some countries, including Italy, there has been an unfortunate tendency to *personalise* the property taxes, presumably to make them more “fair”, by taxing at different rates different categories of taxpayers or even of properties. These categories may be related to the ages of the owners, their potential disabilities, the number of people living in the houses, whether the house is the first house for a family or a second, vacation house, and so on. The more this tax tries to take into account different family situations, the more unproductive in terms of revenue, and the more distortional in terms of resource allocation, it becomes. It is the classic case when the perfect becomes the enemy of the good. This tax works best when it follows the simplest principle: (a) it is an *ad rem* tax,<sup>24</sup> and (b) the property values are correct and are kept updated.

National and sub-national governments often levy taxes on energy use, especially on gasoline. For these taxes, “piggy-backing” by sub-national government is easy. These taxes are easy to collect (from the enterprises that sell the gasoline), can be justified on the principle of benefits received (because of the free use of most road by cars), and on that of ability to pay, because those who own cars generally have higher incomes. An additional justification for collecting these taxes is the contribution that energy consumption is supposed to make to global warming, or, at least, to environmental problems.

Some countries tax both energy consumption *and* automobile ownership using the same justification for taxing the latter as mentioned in the last paragraph for taxing

<sup>23</sup>However, while land and already built buildings are immobile, high taxes may discourage future buildings or expansion on existing land.

<sup>24</sup>That is a tax on a *thing* and not on a *person*.



gasoline. Automobiles need to be registered, generally in the jurisdiction where their owners live. They may be required to pay taxes at the time of registration, and the taxes may be paid annually.<sup>25</sup> They can be made progressive with respect to the value of the car or to the size of the engine. These taxes can provide significant and increasing revenue to sub-national jurisdictions.

#### **Fourth Option**

In the fourth option the tax revenues that are shared with the subnational governments are not the total revenues collected by national governments but shares of the revenue from *specific* taxes. For example, the national government may agree to divide with sub-national governments the revenue from the value added tax or the income taxes. The proportions may be stipulated for a long period or they can be negotiated periodically. Several countries, including Argentina, Russia, Brazil, Spain and others, follow this option. In Spain for example, the regions receive 33 percent of the revenue from the personal income tax and 35 percent of the revenue of the value added tax. When the possibility of renegotiation is possible, it opens, for the central government, the possibility of passing on the subnational governments its fiscal problems, when it runs into financial difficulties. This happened in Argentina in the 1990s and in some other countries. Often fiscal adjustments are achieved by shifting the cost of the adjustment on the local governments. The financial difficulties of the national governments are shifted on the lower levels through a reduction of the taxes shared. Of course the reverse possibility also exists, when the subnational governments are politically powerful. It happened in Brazil in past years, when some states (and especially the state of São Paulo) had accumulated large foreign debts and had to be rescued by the national government.

The main attraction of this fourth option is that the national tax administration is generally more efficient in collecting the main taxes and especially the value added tax and the income taxes. A significant shortcoming is that, as the share of the collected taxes passed on to the sub-national governments increases, the interest on the part of the national tax administration to administer well these particular taxes may be reduced. An other significant problem is that the national tax system may progressively get distorted because the national government acquires an interest in introducing non shared taxes, even bad ones. For example, in recent years the Argentina government has relied more and more on export taxes, because the revenue from these taxes is not shared with the sub-national governments.

Another problem with this option is that a decision must be made not only on what proportions of the shared taxes to pass downward, in order to correct for the “vertical imbalance” that exists between the national government and the subnational governments, but also on how the shared portion is to be allocated among the sub-national governments in order to correct for the so-called “horizontal imbalance” that often exists between poor regions, or poor municipalities, and rich ones. However, general revenue is often used for this purpose.

<sup>25</sup>Drivers’ licenses may also be taxed.

## V. CONCLUDING OBSERVATIONS

The discussion in this paper has indicated that there are several possible arrangements for assigning tax revenue to sub-national governments. Some of these arrangements give the latter the right to impose their own taxes. Other arrangements, give them the right to share in taxes collected by the central government. Which arrangement a country chooses or should choose would depend on technical considerations, on the relative power of the different tiers of government, on the existence of constitutions that determine the arrangements and, possibly, on other factors. It seems futile to search for an “optimal” arrangement that would fit all countries because there are wide variations among the countries’ circumstances.

When the first of the above alternatives is chosen, there is the concrete possibility that the subnational governments, or at least some of them, may be too poor, and not enough sophisticated, to be able to make good use of the “power to tax” provided to them. Thus, in this option, both “vertical imbalances” and “horizontal imbalances” may appear requiring corrections.

When the second alternative is chosen, the sub-national governments become politically and financially dependent, or more dependent, on decisions made centrally. As a consequence, their fiscal freedom becomes limited. Apart from political considerations, and from historically determined sharing arrangements, economies of scale in tax administrations and potential tax competition are factors that must be taken into account in choosing the right option. When the tax collection is fragmented among many different jurisdictions, especially for the major taxes (value added tax and income taxes), the costs of collection for the tax administrations and the compliance costs for the taxpayers are likely to rise, while the revenue collected is likely to fall.

The above discussion has indicated that there are some potentially productive taxes that lend themselves more easily to the use of sub-national governments, including municipal governments. The efficient use of these taxes could significantly increase the tax autonomy of these jurisdictions, thus reducing the size of the vertical imbalance and the need for controls from the top. Among these taxes the following merit specific mention: property taxes, especially those on urban properties; taxes on the ownership of cars and, possibly, of phones; excises on gasoline, alcohol, cigarettes, and soft drinks and taxes connected with garbage collection; some “presumptive” taxes on business activities such as shops, market stands and so on. All these taxes can be justified on the grounds of benefit received or negative externalities created. If well used, these taxes could raise significant amount of resources, say over five percent of GDP. Most jurisdictions should be able to collect these taxes. However, horizontal imbalances would still remain, because of different levels of developments. It will be up to the national government’s goals to decide whether and by how much these imbalances should be reduced or eliminated with earmarked transfers and unconditional grants.

This takes us to the major and most productive taxes, such as the value added tax and the taxes on personal or enterprise incomes. With relatively few exceptions, these taxes are generally used at the national level. As Richard Bird put it with respect to the value added tax (VAT):

“... most but not all federal countries have VATs” “29 of the 30 OECD countries—all except the United States—apply a VAT...” “All these VATs are levied by central governments”.

There are a few exceptions however. Brazil has value added taxes at both the national and the state level. Italy has what could be considered a value added tax at both the national and the regional levels. The one at the regional level is called IRAP. It is an origin-based, income-type, VAT. It is payable by businesses on the sum of wages, profits, rents and interest payments that measure the enterprise value added. See Ahmad and Brosio, 2008. Many Italians consider the IRAP as the most hated tax in Italy. The government has not succeeded in getting rid of it mainly because of its revenue contribution, about two percent of GDP. The Brazilian use of the VAT at the state level has also led to enormous problems of efficiency and even to “tax wars” as states have tried to compete with other states by providing unfair incentives. For years Brazil has been trying to get rid of this sub-national, value -added tax. This tax makes it difficult for Brazilian exporters to rebate exports. The same is true for the Italian IRAP. Thus both of these taxes have become a burden on exporters.

Other countries that have used general sales taxes at both the national and the sub-national levels—Canada, Argentina, others—have used the value added tax at the national level and other kinds of sales taxes at the local levels. There have been various proposals by tax experts that would make it possible for multi-government jurisdictions to use VATs at lower government tiers. See Boadway (2010), Bird (2010), Ahmad and Brosio (2008). Although theoretically possible, these alternatives (with names such as CVAT, VIVAT, etc.) are not likely to operate well in the real situations that exist in the majority of countries. Therefore, in the view of the writer of this paper, when a valued added tax is used, it is best to use it at the national level and, if necessary, to allocate part of the revenue to the sub-national jurisdictions by the use of some formula. A simple way to distribute a share of the revenue from the VAT would be in proportion to the population of the various regions. It would be simple and would reflect a progressive criterion. Perhaps it ought to be added that a VAT works best when it uses a single rate on the broadest possible tax base. Using this approach even relatively unsophisticated countries, such as Ecuador, have succeeded in making this tax highly productive.

Similar considerations prevail for the taxes on personal and enterprise incomes. For these taxes, there are difficulties in their use at the subnational level, especially when the activities of the enterprises and of the individuals are national in scope. For the personal income tax, it would be possible for sub-national governments to tax separately *specific components* of income, such as payrolls, rents, dividends and some others. It would be difficult or impossible to tax the *global* (aggregated) incomes of individuals unless the sub-national jurisdictions “piggy-back” on national taxes, using the same tax base as the national government and relying on a system of full exchange of information with the national government, as done in the United States. It has to be recognised that emerging markets and developing countries already encounter significant difficulties to tax personal incomes even at the national level.

Similar considerations apply to the taxes on business enterprises especially those that operate in more than one jurisdiction. This opens the way for jurisdictions to try to attract investments in their territories by lowering taxes and offering tax incentives, thus

leading to tax competition and other tax problems. When these taxes are collected at the national level, some formulas (based on sales, property and employment in each jurisdiction) can be used to allocate the revenue across the sub-national institutions.

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## Comments

In Pakistan, choices have been made in terms of which taxes would be included in the divisible pool and how to share taxes between the federal and provincial governments as well as the horizontal sharing arrangements between the provinces in the context of the last Finance Commission Award. This award is scheduled to remain in place for the next four and a half years.

However, as already mentioned by Professor Tanzi and Governor Kardar, the level and stability (i.e., lack of growth) of tax revenue is the big issue. I would like to comment on this aspect. Professor Tanzi has provided an interesting historical perspective in saying that the level of tax revenue to GDP of 10 percent of GDP has not changed since he first came to Pakistan about 25 years ago. I think that one of the reasons why the tax revenue has remained low is the relatively low level of equity within the taxation system. Some people are paying a lot in taxes while many other people are paying very little or nothing at all and this issue has received a lot of discussion in the past few months in Pakistan.

To improve tax collection in Pakistan, more equity in the tax system is needed, so it is perceived as fairer and the burden of taxation is shared more equally so that everybody contributes in paying taxes in Pakistan. More equity requires efforts on behalf of both the federal government as well as provincial governments. The provincial governments have an important role because many items of taxation are provincial subjects, i.e., the provinces decide whether or not to levy taxes on those items. Further, as provincial governments only collect about five percent of the total taxes and as a Table in Professor Tanzi's paper shows that is relatively low. In Pakistan 95 percent of tax is collected by the federal government which compares to figure 80 percent in Latin American countries.

The reason for both the federal and provincial governments need to play their parts in mobilising more tax revenue is to raise the level of savings in Pakistan. The level of savings needs to be increased in Pakistan to create a domestic cushion to reduce the vulnerability of the economy to economic shocks, so they do not result in a crisis in the Pakistan economy. Further, additional saving is needed to finance more investment to create jobs and growth needed to employ the growing labour force and raise living standards. Moreover, this revenue is needed to finance poverty reduction and spending on health, education and infrastructure.

Thank you for your attention, this concludes my comments.

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