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Fiscal federalism in Mexico
Scope and necessary changes

Genaro Aguilar Gutiérrez

I. Introduction

The beginning of the 20th century has been characterized, in the Mexican political and economic arena, by the recognition of the importance of public finance control and good management. Macroeconomic stability, the return of economic growth and reduction of poverty have, mandatorily, undergone a Mexican fiscal system change, which had lasted for over thirty years. The changing of the fiscal system entails fighting against the evasion and diversion of public funds, the rationalization of public expenditure and the suppression of the inflationary financing of the Government.

An essential point of public expenditure rationalization is the need to remodel Mexican fiscal federalism, endowing and demanding more fiscal responsibilities to state and municipal levels of government; fiscal authorities in lower levels of government must be more efficient in the collection of their corresponding taxes. Even more to meet current needs: Mexico is undergoing fiscal centralization[1]. Expenditures of local governments tend to increase, but 'states and municipalities' fiscal competences have not changes for at least seven decades. As a result, state and municipal finances have ceased to be local issues, which have increasingly affected the nation's macroeconomic stability; states' and municipalities' fiscal deficits directly affect National Finances. Indebted states will jeopardize resources collected by the Union (Serra and Rodrigues, 2007; Claeys, 2007; Faguet, 2001).

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* The author holds a PhD in Economics, won the Jesús Silva Herzog award in Economics Research and tenured professor in the PhD program of the Superior School of Economics of the National Polytechnic Institute. This paper is the result of Research Project 20121150 registered and approved by the Research and PhD Ministry of the National Polytechnic Institute.

[1] We can find an interesting review of the different stages of centralization and decentralization of the Mexican Fiscal Federalism in Marichal (2012).

Furthermore, there is an important challenge: determine the real costs of the provision of public goods and services and elaborate a tax system that distributes these taxes correctly and that also allows each Government unit to finance their own expenses.

This paper is a research that shows the limitations in the progress of fiscal federalism in Mexico. We compare the four federalism that exist in Latin America and a mathematical methodology and indicators of public finance, calculates and displays the tax effort of states in the nation, which is very limited, and from this concludes there is a need to promote a Fiscal Responsibility Law involving penalties for administrators who fail to achieve attainable state tax collection goals.

The paper is divided into six sections. The second section, after the introduction, establishes the economic rationality of why an efficient fiscal federalism is needed; is also includes a brief theoretical review of fiscal federalism, it highlights comparative advantages of the complementarity of the Government of the Union and Local Governments in this system. The second part puts forward a classic problem of fiscal federalism: expenditure responsibilities and needs of Local Governments, which generally tend to exceed their own income; making transfers from the Union or State necessary. The criterion for these transferences is then discussed. In the third section, essential problems generated by fiscal federalism are discussed, if the distribution of responsibilities between levels of governments is done in a balanced fashion. The fourth part discusses the reasons of existence of federalism in Latin America, indicating the differences in functioning of the four Latin-American federalisms. The fifth part shows the fiscal effort done by the states in Mexico; it particularly shows the great heterogeneity of local collections. Finally, the sixth part shows the main conclusions of this research.

II. Participation of Local Governments in Fiscal Federalism

A federative State is constituted by two or more levels of Government: Government of the Union or national and others at subnational level. Countries with important territorial dimensions such as Mexico, need some kind of work division to fulfill public actions (Singh, 2006; Boadway, 2003; Wildasin, 1995). The Government of the Union and Local Governments have different comparative advantages that complement each other to provide different kinds of public goods, this promotes an efficient division of labor (Bird and Stauffer, 2001; Faguet, 2001).

The Government of the Union has different comparative advantages. We should consider, initially, a public good which all the country's population consumes uniformly. Said good must be provided by the Government of the Union, ergo, all of the population consumes and pays for said good.

National security activities are the perfect example of this kind of good (Bird and Ebel, 2005).

Another comparative advantage of the Government of the Union is the fact that only a Central Government which has power over the whole national territory can level interstate and intermunicipal differences regarding tax capacities and supply of public goods (Bird and Ebel, op cit). That is, the Government of the Union can direct a redistribution policy of fiscal resources among subnational Governments. FAIS (Fund for Social Infrastructure) and FISM (Municipal Social Infrastructure Fund) are examples of this kind of policy in Mexico.

This advantage can be valid in the execution of distribution policies of private income. Such policy could have limited impact if it is implemented by a subnational Government. A state that establishes progressive income tax to improve income distribution within its territory, for example, would force its higher-income taxpayers to move to another state; at the same time, it would attract low-income population to its state and result in erosion of its tax base and the failure of its redistributive policy (Mikesell, 2007). This has been extensively debated in classic research by Musgrave (1969) and Oates (1972).

Macroeconomic policies must be executed by the Government of the Union. Local governments that seek to expand growth and employment rates within their territories, through fiscal deficit will totally or partially fail because the benefits of expansionist policies might escape their territories and benefit the productive sector of neighboring regions.

A federal nation's Central Government has the advantage of being able to collect taxes more efficiently than subnational Governments. Firstly, the Central Government has greater possibilities of investigating and discovering relevant information in regards to the tax base. It is difficult that municipalities, for example, know about taxpayer's out of state income. Federal taxing is above possible conflicts between local governments, avoiding consecutive reductions in local taxes so as to attract private investment to their territories. Obviously, the identification of the existence of taxable income is easier and the possibility of transferring economic activities to other jurisdiction decreases, the higher the level of government that is in charge of taxation.

The strongest argument in favor of the existence of local Governments is the efficient distribution of public goods which benefit remote areas of the country. There is no reason why a city's urbanization or their garbage collection service, for example, be executed by the Government of the Union and paid by taxes of all the country's taxpayers. If these goods are supplied by the Local Government, and paid by local taxes, there is a greater intersection between all of the recipients and all of the taxpayers that finance the production of said good (Claeys, op cit; Bird and Ebel, op cit; Boadway, op cit; and Bird and Stauffer, op cit). Besides, this would provide more equity, said system makes the population have greater control over Government actions (Musgrave's classic thesis defended by his followers): individuals –who pay for the services they use– are forced to evaluate costs and benefits; they put pressure on the Government to improve quality, reduce costs or change the basket of offered goods. To summarize, in the public sphere, the market-benefits received by the consumption of goods and expenditure to acquire it relationship is roughly reproduced.

There are some public goods and services that not only benefit areas in which they are offered but also produce positive "externalities" in significant areas of the country or even the national territory; like education or health. By offering formal education to the population of some municipality, the Local Government not only benefits those who attend school. It benefits the whole country; a better educated population means a more qualified and productive work force and citizens that pay more attention, participate more and have greater political responsibility. These benefits go beyond the municipality's frontiers and affect the whole country. Similarly, sanitation and health services not only benefit local population, but also neighboring populations because they reduce, for example, possible epidemics.

Externalities of these public goods justify Central Government's financial collaboration to force Local Governments to produce them. In these cases there is still a relationship between those who pay and receive public goods' benefits, although it is less obvious, and there is also a comparative advantage to have the Local Government as provider of these goods.

Another advantage of the subnational Governments' offering of public goods is greater flexibility and better adaptation of public activities to the preferences of local population. Each locality can have the basket of goods they prefer, achieving greater satisfaction of their preferences (lower costs); this would not happen if the Central Government was in charge of this task. Additionally, the population participates more in the design of public policies. Local governments address a reduced universe of people than the Government of the Union. This is why local authorities are more voter-friendly; they are subject to more pressure than Central Government authorities. Participative local governments have more possibilities of creating successful projects, once a great number of people have thought how to solve local problems and how to increase social wellbeing. Said projects can, subsequently, be adopted by other local Governments.

To summarize, it can be said that the greatest advantage of an efficient federal system is the exploitation and maximization of different and complementary advantages of the Federal, State and Municipal Governments in the execution of public functions. In general terms, it can be said that the Government of the Union has to be responsible for: macroeconomic policies, redistributive policies of private income, redistributive policies of fiscal resources between subnational Governments and the offering of public goods and services consumed at national level. Sub national governments have to be mainly responsible for the offering of public goods and services of local consumption, even though they produce externalities for the rest of the country.

III. Fiscal Federalism Problems: Fiscal imbalances

Having established economic rationality for the existence of fiscal federalism, we now want to address a specific problem that emerges from this form of government: imbalances between the demand of public goods and services and financial disparities of each level of Government.

Comparative advantages of the different levels of Government, describe in section II clearly define which functions each of those levels have to assume. However, this work division does not ensure that each level of Government has the necessary fiscal resources to fulfill these tasks which have comparative advantages. A fiscal imbalance situation can be seen as an imbalance between an effective demand of public goods and services and the available resources to pay for them.

Vertical fiscal imbalance is a situation in which state and municipal Governments do not have sufficient funding sources to pay for the functions they are in charge of; meanwhile the Government of the Union, which has greater tax collecting capacities, can use more fiscal resources than their expenditure needs.

Horizontal fiscal imbalance is the one between same-level Government units. Insomuch as there are considerable differences in income, wealth and commercial and productive operations (three basic sources of taxing) among different States and Municipalities, there will also be differences in their collecting capacities. Less developed States and Municipalities, in collecting capacity terms, tend to offer the population public goods and services of lesser quality and in fewer quantities and / or impose higher taxation per capita (Briceño-Garmendia, et al; 2004).

Should the Federation be interested in minimizing these imbalances o should every subnational Government “live according to their possibilities”? Insofar as a group of subnational States chose the federative way of Government, we must assume they accept the idea of regulating the quantity and quality of public goods and services offered by each of their members. On the contrary, an increase in the differences through time would dissolve the Federation.

Ergo, a fiscal rebalancing mechanism for the Federation must be established. A widely used instrument all over the world is unconditional transfers. In a system like this, the Federal Government transfers part of the tax collection to state and municipal Governments according to the effective demand of public goods and services that each one of these Governments cannot offer with their own resources. It is a distribution mechanism of fiscal resources, through which tax collected by the Union in States or Municipalities of greater fiscal capacity are transferred to Local Governments of lesser fiscal capacity. States can also execute the same kinds of policy with municipalities.

We then hit a tough spot in this paper: the analysis of the theoretical justification for the existence of unconditional transferences[2]. As we have seen before, these transferences' goal is to level the conditions of each one of the subnational Governments to offer public goods and services demanded by their populations. To construct an effective fiscal federalism it is necessary to efficiently define the demand of public goods and services in a municipality. When this demand is compared to the fiscal availability of local Governments it can be concluded that the need –or lack of- for complementarity in this Government's budget through unconditional transferences that come from the Federal or State Government.

IV. Federalism's and Fiscal Federalism's raison d'être in Latin America

Europe's fight for Federalism has, historically, reflected a deep aspiration to preserve the identity of ethnical or cultural groups which have their own history. Latin America's fight for Federalism can only be understood as aspiring to have economic and social development of the most impoverished regions, states and municipalities.

As we already know, federal Latin American countries do not have the clash of nationalities problem or cultural conflicts associated with ethnical or religious disparities.

In Latin America the main problem is the economic dependency of certain regions and states (the most backward ones) in relation to others; asymmetry in state and federation relationships.

That is, behind Latin American federalism there is structural heterogeneity of economic development. In Latin America three countries have an incomplete federalism and one country has a developed federalism. We

[2] These transferences are called "unconditional" to differentiate them from those where the Central Government transfers conditioned funds to use them in specific expenditures, such as education, health or sanitation. Generally, conditioned transferences seek to promote the production of public goods and services that generate positive externalities.

have defended this thesis the last few years. Countries with incomplete federalisms are Argentina, Mexico and Venezuela and the consolidated federalism is Brazil.

i) First evidence: collection (2005)

As we can see in the following chart, municipal governments in Brazil collect 17% of national collection; meanwhile Mexico collects only 1% and none of the other two countries with an incomplete federalism collect over 5.4%.

Tax structure of four Latin American countries

	Percentage composition of collection by level of government		
	Federal	State	Local
Argentina	89.3	8.7	2.0
Mexico	92.7	6.2	1.1
Venezuela	94.1	0.5	5.4
Brazil	57.6	25.2	17.2

ii.a) Second evidence: collection as a share of the GDP

On the other hand, collection efficiency in nations that have an incomplete federalism is so low that none of them collect over 18% of the GDP; meanwhile, Brazil's percentage is 36.7% (2010 data):

- Argentina: 18.5%
- Mexico: 11.7%
- Venezuela: 8.1%
- Brazil:36.7%

Capacity to meet the country's economic and social needs mainly depends on the existence or non-existence of resources to fund priority investments (education, health, infrastructure) to meet said needs. Governments with small per capita national collections have limited public functions. Ergo, in the long run, federations must increase their income as a share of GDP; achieving desired levels: between 35% and 50% of GDP.

ii.b) Second evidence: Evolution of the Global Tax Collection in Brazil 1947-2007 (% GDP)

The consolidated federalism we spoke about has been configured in such a way that in 1947 it already had a higher collection than Mexico's current one:

Annual collection in Brazil as a share of the GDP 1947-2007

YEAR	COLLECTION	YEAR	COLLECTION	YEAR	COLLECTION	YEAR	COLLECTION
1947	13.8	1961	16.4	1975	25.2	1989	24.1
1948	14.0	1962	15.8	1976	25.1	1990	28.8
1949	14.4	1963	16.1	1977	25.6	1991	25.2
1950	14.4	1964	17.0	1978	25.7	1992	25.0
1951	15.7	1965	19.0	1979	24.7	1993	25.8
1952	15.4	1966	20.9	1980	24.5	1994	29.8
1953	15.2	1967	20.5	1981	25.3	1995	29.4
1954	15.8	1968	23.3	1982	26.3	1996	29.1
1955	15.0	1969	24.9	1983	27.0	1997	29.6
1956	16.4	1970	26.0	1984	24.3	1998	29.6
1957	16.7	1971	25.3	1985	24.1	1999	31.7
1958	18.7	1972	26.0	1986	26.2	2000	32.7
1959	17.9	1973	25.0	1987	23.8	2004	35.9
1960	17.4	1974	25.1	1988	22.4	2007	36.7

Source: Serra and Afonso (2007)

Individual case: Argentina

- In Argentina, federalism in its political dimension is currently in force. Nonetheless, economic and fiscal federalism deserved to be addressed. The following data illustrates this country's reality:

  A) Approximately 24 jurisdictions have a 55.5% debt-income relationship, and in some places it reaches 100%. We are talking about severely indebted provinces. Leverage committed co-participation exceeds 60%, in some cases 97%.
  B) Participation of their own tax income in relation to total income, except in the City of Buenos Aires and the province of Buenos Aires do not go beyond 35% with severe cases that have a ratio of less than 10%.
  C) Conclusion: Argentinian provinces have a strongly depend on the contributions given to them by the Government of the Union.

Individual case: Venezuela

- In Venezuela, centralism is the Federal Government's agenda. Hugo Chavez's government yielded the following socioeconomic results in 2001 (came into power in 1999):
  i. GDP growth rate (not related to oil) per capita: -0.1%
  ii. Human Development Index: 0.778
  iii. Unemployment rate: 12.8%
  iv. Informality rate: 49.9%
  v. Households that lack of basic services: 21.8%
  vi. Undernourished population: 18.0%
  vii. Gini Index of the distribution of national income: 0.488
- The official diagnosis was development inadequacies and those elements were put forward to top fiscal competence and available resource decentralization in the Federation.
- In fact, years before Hugo Chavez (1990-2001) expenditures of regional (state) and municipal governments increased significantly, from 2.6% to 6.7% of the GDP.
- Nonetheless, income of their own only increased from 0.4% to 1.3% of the GDP; at municipal level resulting in a significant increase of the fiscal gap of the genera government from -0.9% to -4.5% of the GDP between 1990 and 2001.
- By focusing finance centralization on the gradual increase of legal contributions of collected income by central government, without explicit relationship with the administrative responsibilities that were assumed by subnational governments, the intergovernmental fiscal arrangement generated an incentive structure that promoted expenditure expansion and fiscal indiscipline.
- This created the breeding ground for centralism that currently exists in Venezuela.

Individual case: Mexico

- In Mexico, the existence of great interregional, interstate and intermunicipal economic disparities make the capacity to collect tax resources from different government units of the same level unequal.
- As a whole, municipalities and states in the country only generate 7.3% of national collection. State and municipal public administration mainly depends on federal transfers.
- Currently, 89% of municipalities collect less than 12% of what they could collect.
- 87.5% of states generate less than 9% of what they could collect.
- We lack Fiscal Responsibility on the part of State and Municipal Governments in our federalism.
- They prefer to transfer their deficit financing to the Union.

Individual case: Brazil

- States and municipalities collected directly 41.7% of all of the taxes collected in 2010.
- States are in charge of the main consumption tax (ICMS) and not the Government of the Union (this has created the so called "fiscal war").
- Up until 1995 state governments traditionally collected even local taxes on exportations, this promoted economic development in many south states.
- Regarding expenditure, states and municipalities wield undisputed dominance over government actions and services that serve the population. Central government prevails solely over the Welfare System.

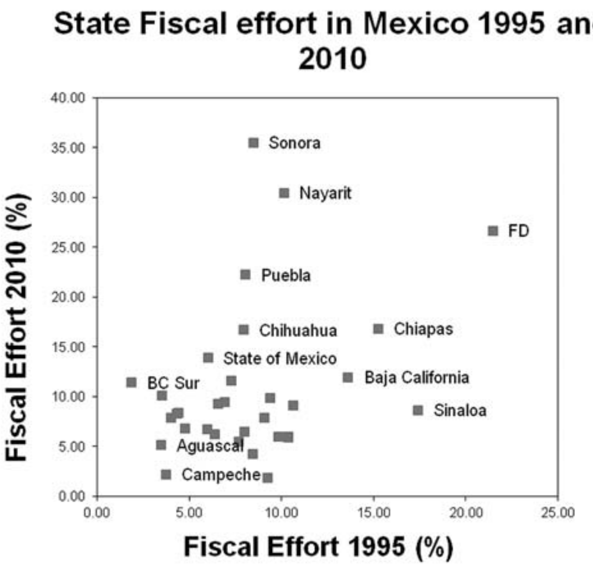
To what do we owe this?

Since the seventies federalism, fiscal decentralization and weakening of central power were very important in the ideology of Brazil.

- Federalism, fiscal decentralization and tax responsibilities have been important throughout Brazil's history and were reasserted in the 1988 Constitution.
- Fiscal federalism in Brazil is vertical and horizontal: on the one hand states and municipalities have greater fiscal powers.
- On the other hand, distribution of centrally collected resources is strongly progressive, greatly benefiting less developed states. There is strong empirical evidence to this respect (Serra, op cit).
- As a result, fiscal decentralization indicators measures through participation indexes of subnational governments in income and total expenditure; besides great autonomy in the collection of their taxes and budget development; this places Brazil in close proximity to more developed federations.
- In regards to Latin American countries, Brazil has made the most progress in terms of state and municipal autonomy; this is why we consider it as the only consolidated federalism in Latin America.

V. Fiscal efforts in the states of Mexico

The following graph shows fiscal effort done by the states of Mexico in the 1995-2000 period. We can clearly appreciate that the Federal District belongs to the top three states whose fiscal effort is greater throughout the period. States that have received more resources via federal contributions and grants are not necessarily the ones that have the greatest fiscal efforts. For example, the State of Mexico holds middle to low position, a smaller fiscal effort than that of the Federal District.



V.1 How do you measure the impact of federal transfers over the States' Fiscal Effort?

To measure the impact federal transfers (conditioned and unconditioned) have over the states' fiscal effort level, a data matrix was created, it includes the following variables: states' own income, GDP, contributions, transfers and states' total income; according to the following equation adapted from the proposal made by Sour (2004):

$$\frac{ingprop_i}{pibentidad_i} = \frac{part_i}{ientidad_i} + \frac{transf_i}{ientidad_i}$$

A model was made using data from the 32 states of Mexico for the 1995-2010 period. A panel of 512 (32*16) observations was made, using the following data: the state's own income, state GDP, federal contributions, total state income and grants received by each state.

V.2 Model Results

The following chart shows the results of the fiscal effort model made using the data panel of the 32 states of Mexico for the 1995-2010 period.

EF= C(1) + C(2)* RPART + C(3)* RTRANS

	Coeficient	Standard Error	T-statis	P
CONSTANT	-0.01773389	0.00106198	16.70	0.000
Rpart	-0.009208	0.002013	-4.574195	0.000
Rtrans	-0.01127487	0.00119241	-9.46	0.000
R2=0.2	Akaike=-7.87			

V.3 Interpretation of results

If we look at the previous chat, we see that the coefficient of contributions and grants has the expected sign: negative and significant. This means that federal unconditioned and conditioned transfers that the states received have a negative impact over the fiscal effort of the country's states.

VI. Conclusions

The thesis that supports greater efficiency in the decentralized provision of public goods was formulated based on the initial developments of the fiscal federalism theory and on the perfect inter-jurisdictional competence postulation (Tiebout, Musgrave, Oates).

Given the heterogeneity of Latin American jurisdictions, being close to citizens would allow local governments to adjust tax collection and the provision of public goods to citizens' needs and preferences. Based on the voter-taxpayer- demander of public goods connection, inter-jurisdictional competition would lead to tax collection efficiency and the provision of public goods that Mexico needs.

The federal issue has been practically abandoned in the current fiscal debate in Mexico. The states' and municipalities' fiscal crisis is reaching its highest level with the current interest rates. Acceleration of indebtedness paired with the loss of local finances' margin of maneuver, the current plan of pushing the crisis into the future and make use of the federal government's help to meet unavoidable financial obligations is becoming unsustainable.

A comprehensive fiscal reform which in the recent past had been seen as strategic in development policy was cast aside and the obligation of producing primary surplus defined the handling of tax policy in Mexico. The idea of altering the inequitable tax system was forgotten, the task of creating a fiscal cushion took precedence despite the increase in taxes paid by captive taxpayers and the deterioration of the system and the commitment to the federative pact. We are in desperate need for a Fiscal Responsibility Law that sanctions tax inefficiency of public employees in charge of collecting them in the three levels of government in Mexico.

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