Does Federalism Imply Devolution? Local Governments in Federal Nations

Pradeep Chhibber
Department of Political Science
University of California, Berkeley
Berkeley, CA 94707
Email: chhibber@berkeley.edu

E. Somanathan
Indian Statistical Institute
7 Shaheed Jeet Singh Marg
New Delhi, 110016, India

Email: som@isid.ac.in

Abstract

While local governments are ubiquitous, local governments in some nation-states spend more than local governments in others. This paper observes that the expenditure by local governments is influenced by whether a nation-state is federal or not. The local share of all government expenditure in federal systems is, on average, half that of local governments in unitary countries. The paper argues that local governments in federal systems (where there are two levels of government -- state and national, above the local governments) have lower expenditures because the introduction of a middle tier of government reduces the grants received by local governments. This finding is contrary to our expectations that local governments are more likely to be protected in federal systems. The argument, which is developed through a model, is supported by cross-sectional analysis of government finance data.

Introduction

Local governments are ubiquitous. Almost all nation-states (except really small states) have local government (World Development Report, 2005). The strength of local government, however, varies across nation-states. Most of the empirical work on *local* governments suggests that the strength of local government (defined as the proportion of total government expenditures that are made by local governments) follows from economic development (Sharpe 1988, Bahl and Linn 1992) accompanied by democratization. Cross-sectional evidence supports the claim that local government expenditures are indeed higher in wealthier countries (figure 1).

(Insert figure 1 about here)

An examination of Figure 1, while it supports the thesis linking economic development to the strength of local government, also reveals that *every* federal country lies below the regression line (by federal we mean nation-states with constitutionally mandated provincial governments). That is, for every federal country in the data, including Switzerland, the United States, Australia, Canada, Germany, Austria, Spain, Mexico, South Africa, Peru, Brazil, Malaysia, and Bolivia, the local share of government expenditure is lower than would be predicted on the basis of its per-capita income.

The first task of this paper is to determine whether this empirical finding is robust to alternative explanations of the share of total government expenditures that are made by local governments. We find that it is. This suggests that the extent of devolution in federal systems is limited. In federal systems, which are normally seen as 'devolved', local governments are, in fact, worse off than in unitary systems. This is contrary to the common presumption that because federal systems are more decentralized than unitary systems, local governments should be stronger in federal systems.[1]

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[1] Provincial governments have been noted to be more protective of local governments than national governments largely because provincial legislators are more willing to accommodate the particular and separate views of the counties or districts in which they reside (Federalist papers; Bryce 1891). There is now a large contemporary literature in economics and political science on the economic effects of federalism (for instance, Treisman, 2001; Weingast 1995; Wibbels 2000; Rodden 2002; Rodden and Wibbels 2003). Inspired by such research, the evolution of power to subnational governments is advocated in the policy domain (Shah 1994; World Bank 1996). Devolution is promoted for a variety of reasons. Notably, Weingast (1995) has argued that competitive federalism is good for economic development and the preservation of markets. It is argued that lower levels of government are better equipped to tailor policies to meet local needs (Tiebout

The second task of the paper is to explain why local governments are worse off in federal systems than in unitary systems.

After showing that federalism lowers the share of local government expenditures quite substantially, we argue that the relative financial weakness of local governments in federal systems is a consequence of two elements that characterize many federal polities: first, that most resources are collected by the national government and transferred to the level immediately below, the provinces, which in turn are the allocative agencies for local governments. Second, the preferences of the national and provincial governments on the distribution of resources differ: Provincial politicians want to retain more direct control over spending than central politicians would like. Politicians generally like to keep financial resources and the power that goes with them for themselves and provincial politicians are no exception to this rule. This difference in central and provincial politicians' interests may be widened further by differences in policy preferences or political affiliation. It is this difference that results in local governments having a lower share of government expenditures in federal than in non-federal systems.

The argument is developed through a model of a federal system where there are three levels of government, central, provincial, and local. The national government is posited to have preferences over the allocation of resources by lower levels of government. In federal systems, however, the preferences of the provincial governments differ from those of the centre, with the former wishing to transfer less to the local level than the latter would like. Thus the allocation of resources by the provinces to localities is not optimal from the central government's perspective. We show that this prompts the central government to reduce its allocations to the provincial level compared to a situation in which it could perfectly control the spending of the provinces. This results in fewer resources being allocated to the local level. The introduction of a middle tier of government is thus likely to impoverish local governments.

An alternative, functionalist, explanation for this finding would be that state governments are substituting for some of the functions of local governments and thus local (and, of course, national) governments may be expected to be smaller in federal states. This would suggest that the introduction of a middle level of government would be efficiency enhancing by permitting an intermediate level of government to provide public goods which are regional rather than national or local in scope. But such

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1956, Oates 1972, Inman and Rubinfeld 1997, but see Gordon 1983, on possible drawbacks of decentralization). This literature does not make any distinction between the levels of subnational government.

an argument presumes, incorrectly, that if such a system exists, it must be efficient. It ignores the fact that states and their governments are formed by political processes, not competitive markets that may be expected to lead to efficient outcomes. As Mancur Olson (1986) pointed out,

> …the overwhelmingly large role of national governments…has probably arisen mainly because national governments are the jurisdictions that have had the military or final power. This has given them the capacity to claim for themselves functions that often could have been performed more efficiently by other jurisdictions...

Olson's argument implies that we should not expect the allocation of resources between different levels of government to be efficient. Rather, it is likely to be slanted in favour of national governments in particular, and higher-level (and, therefore, more powerful) governments in general. It follows that local governments in unitary states are likely to be smaller than desirable. Therefore, if they are smaller still in federal states, (as the evidence in Section 3 demonstrates), this effect of federalism is likely to be efficiency-reducing, not efficiency-enhancing. Olson's argument also implies that the devolution of resources from centre to provinces is likely to be efficiency-enhancing. Of course, this is the aspect of federalism that the literature has dwelt on. In this paper, we draw attention to an aspect of federalism that has been overlooked.

Evidence for our argument comes from a cross-country statistical analysis which shows that local governments in federal systems have fewer resources and lower expenditures than systems in which there are only two levels of government. The effect of federalism on local government resources is very large. Federal countries have a local share of all government expenditure which is half that of local government expenditures in unitary countries.

The paper proceeds as follows. Section 2 of the paper shows that local government expenditures are indeed lower in federal countries even when we control for a series of alternative explanations. Section 3 provides a theory and a model to explain this fact. Section 4 tests some predictions of the theory. Section 4a (relying once again on cross-national data,) confirms the prediction of the theory that grants to local governments will be smaller in federal nations. Section 4b confirms the theory's prediction that confederations behave more like unitary states than like federal states in terms of the resources they give to their local governments. Section 5 concludes.

2. Cross-national Evidence

Data: To test whether the addition of a middle tier of government does have a negative effect on local government expenditures, we analyzed the International Monetary Fund's Government Finance Statistics (GFS) 1970-1996. These contain data on grants received by local governments, their revenues and expenditures, and a breakdown of expenditures into sectors. Data on real Gross Domestic Product (GDP) at purchasing power parities and population are from the Penn World Tables of Summers and Heston (2001), while a measure of democracy is taken from the Polity 98 data set of Jaggers and Gurr (1998). The democracy measure is on a scale from 0 to 10 with higher values indicating more democratic governments. The variable ranges from 0 to 10 with a mean of 6.3 and a standard deviation of 3.5.

Federalism is represented by a dummy variable that took on the value 1 if the GFS data contain provincial-level expenditures and revenues for any of the years in question. There are 15 federal countries in the data (listed in the appendix). Spain is the only country in the data which changed its status, starting out as unitary and becoming federal.[2] Because of the stability of federalism, the variation in federalism in the data is almost wholly between countries, not over time. The year-to-year variation in the data is orthogonal to federalism, the variable of interest. For this reason, all variables except for per capita GDP were averaged over the period for which the GFS data were available for the country in question. To the extent possible for each country, per capita GDP for the year before the averaging begins was used so as to avoid possible endogeneity.

The GFS data on local governments were available for 50 countries. These are listed in the appendix, together with the years for which the data on local grants, revenue, and expenditure were available. Other controls that could influence local government expenditures include country size as measured by the logs of population and area, ethnic fractionalization, the number of local jurisdictions, and the area of local jurisdictions. Data on ethnic fractionalization is an average of five measures as reported in La Porta et. al (2000) while the number of local jurisdictions is taken from the World Development Report 1999/2000.

Table 1 reports the mean and standard deviations for all the variables used in the analysis. We measure the size of local governments by their share of total government revenues and expenditures. The share of local government revenues ranged from 2% to 64% with a mean of 15% and a standard

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[2] State-level data for Spain begin in 1980 while local data begin in 1974. The results reported treat Spain as two countries, one unitary (for the earlier period) and one federal (for the later period).

deviation of 12%. Local government expenditures ranged from 2.5% to 58% of total government expenditures with a mean of 19% and a standard deviation of 12%.

(Insert table 1 about here)

Table 2 provides clear evidence that the share of local government expenditures is lower in federal systems. In Column 1, a bivariate regression, expenditures by local governments average 8.5 percentage points less in federal countries than in unitary countries. In unitary countries, local expenditures average 22% of all government expenditures. It follows that federalism is associated with a drop in local government expenditures of almost 40 percent. The other columns in Table 2 report the partial effects of federalism on local government's share of all government expenditures controlling for local revenue shares, per capita GDP, democracy, and population. It is seen that in all the regressions, the federal dummy has a large and statistically significant negative effect, lowering the expenditure share of local government by between a half and three-quarters of a standard deviation. Democracy and per capita GDP both raise local government expenditures, with the effect of democracy being more robust than that of income.

(Insert Table 2 about here)

All the results reported so far measure the size of local government as a fraction of total government. It is possible that the total size of government in federal countries is larger than in unitary countries, so that local government resources, measured as a fraction of GDP, may be larger (or not much smaller) for federal countries as compared to unitary countries. We examined this possibility, and it proves not to be the case because the total size of government is smaller in federal nations. The regression results are essentially the same as those reported above, so for the sake of brevity, we do not report them here. The regressions were also examined for the influence of outliers and none were found.

A final statistical test was conducted estimating an AR1 cross sectional time-series model for the variables that were significant in the cross-sectional models. The results, reported in column 1 of table 3 show that federalism still retains it negative influence over local government expenditures. In countries with federal units local government expenditures were lower by 3 percent. Not surprisingly,

local governments in wealthier countries spent more. Democracy and country size do not affect local government expenditures in this specification. Introducing the time dimension tends to swamp the effects of the variables that do not change much over time.

(Insert Table 3 about here)

It is now clear that the introduction of a middle tier of government takes resources away from local governments. Before turning to the theory, we point out that the functionalist explanation for our findings mentioned in the introduction is not supported by the evidence. First, if other levels of government in federal countries were fulfilling the functions of local governments in unitary systems, then the overall size of government should not differ between federal and unitary systems. But it is well established, and confirmed in our data, that federal governments are smaller than unitary governments. Second, to assess whether substitution of local by provincial governments is at work, we examined the influence of federalism on total government expenditures on housing and community affairs, the only category in the GFS that is unambiguously local in nature. Analysis of the GFS data shows that federalism lowers total government expenditures (i.e. of all levels of government, federal, state, and local) on housing and community amenities by about 2 percentage points. Since total government expenditures on housing average about 5 percent of all government expenditures, this is a decline of about 40 percent. Although the data on housing and community affairs are available for only 26 countries, this suggests that the simple substitution argument -- that other levels of government may be stepping in and providing local public goods in place of local government -- may be questionable. These results are consistent with the observation that total welfare expenditures are smaller in nations with federal arrangements (Cameron 1978; Castles and McKinlay 1979; Schmidt 1996).

3. The Theory

To answer the question of why local governments fare poorly in federal systems, we develop a formal model of the determinants of resource allocation in federal and unitary systems of government. We discuss the key ideas embodied in the model verbally first. The model is based on two assumptions: first, higher levels of government have control over the resources available to the level immediately below them, but cannot, by and large, control how these resources are spent, and second,

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in federal systems, provincial and central politicians have divergent interests with the provinces wanting to keep more resources for themselves than the centre would like. In a federal system then, the central government can give grants to provincial governments but not to local governments directly. This may strike some as an unusually strong assumption given that there are instances when national governments bypass provincial governments and allocate resources directly to localities. It is, however, undeniable that a transfer of resources through the middle tier of government is a structural feature of most federal nation-states. In most federal states, resources are collected by the national government and partly passed to the provincial governments, which then allocate a portion to the localities. In Ontario, Canada, for instance, external funds for local governments "come mainly from the provincial government, with a few federal transfers amounting to less than 1 percent of total revenues" of local governments (Islam 1998, 70). Not only are resources to local governments allocated by provincial governments rather than national governments, but local governments often exist at the behest of provincial governments. In the United States, local governments are creatures of provincial governments (Banfield and Wilson, 1963; Frug 1980, p.1109; Schultz 1989; Berman 2003). Burns and Gamm (1997) note that local politics is tied to provincial politics and that "local policy outcomes often occur in state legislatures" (p. 61). In India, provincial governments can change the boundaries of local governments, can dismiss local governments, and play a key role in the administration of local governments (Bagchi 1991).

In a federal system the provinces decide how much of their resources they pass down to the localities. If provincial and central interests coincided perfectly, so that the provinces acted as perfect agents of the centre, the centre would see the allocations by provincial governments to local governments as consonant with its interests, so the resources passed on to the localities through the provinces would be the same as it would be in a unitary setup. However, to the extent that the provinces' interests differ from the centre's, the centre will be reluctant to transfer resources to the provinces. Such resources will in part be spent on activities to which the centre accords a low priority. Consequently, the provinces will get fewer resources than they would have got if they had been perfect agents of the centre, and therefore, they will transfer fewer resources to the localities. The localities will, therefore, get less than they would have got in a unitary system.

However, if the states are very powerful so that our first assumption does not hold, then the states will have so much revenue of their own that the centre will not be in a position to make any transfers to the states. In such a system, better described as *confederal* rather than federal, the states

are not constrained by a lack of transfers from the centre, and accordingly, the localities will not get less revenue than in a unitary system. In effect, the states act as independent (unitary) countries. From the model we propose that ***In a federal system in which the central government's optimal transfer to the states is positive, transfers received by local governments will be lower than in a unitary system.***

This proposition shows that unless states' powers of raising revenue are sufficiently large, local governments will be left with fewer resources than they would obtain with a unitary structure of government. This suggests that confederal and federal systems are different because in confederal systems state or provincial governments do not rely on the national government to raise revenues. This may, of course, makes it difficult for the national government to raise revenue for its activities as illustrated by the experience of the Continental Congress in the US. The determination of revenues by local governments has been left exogenous in this discussion. In fact, higher-level governments typically have some control over the revenue-raising capabilities of lower-level governments. But this should not affect the conclusions of the analysis. Higher-level governments would prefer to use revenue assignments (as opposed to grants) to transfer resources if it were easy to do so, for that would place the burden of raising taxes on lower level governments. The fact that they actually use grants suggests that it is easier for them to control grants than revenues, at least in the short run. Our analysis has also assumed that the game between the central and provincial governments is static. With repeated interaction, the problem of underfunding that arises here could be mitigated. However, in practice, politicians' horizons may be too short for this to make much difference (see, for example, Sridharan 1991).

3a The Model

There are three levels of government in the model: central, state, and local. In a unitary system, we can think of there being a notional state government that spends money on activities that a state would in a federal system. This notional state government is a perfect agent of the central government, and so has identical preferences. To capture the difference between the preferences of the state and central governments in a federal system, suppose the state cares about public goods g_s and money m_s spent on its particular supporters, while the central government gets utility from g_s, but not from m_s. (Subscripts are used to denote the level of government: l for local, s for state, c for central.)

Local governments get exogenous revenue R_l and a transfer T_l from the state government.

The sum of these is spent on public goods g_l.

In a unitary system, the central government allocates resources between central public goods g_c, state public goods g_s and transfers to local governments T_l to

$$\max V_s(g_s) + V_l\ (T_l) \text{ subject to } g_s + T_l = T_s + R_S \tag{1}$$

where T_S is the transfer received by the agent from the central government, R_S is the agent's tax revenue, and V_s and V_l are assumed strictly increasing and concave. (V_l is the utility from $g_{l=}\ R_l + T_l$). Assuming an interior solution (g_s^*, T_l^*) to this problem, marginal utilities of state public goods g_s and transfers to local governments T_l must be equated:

$$V_s'(g_s^*) = V_l'(T_l^*) \tag{2}$$

In a federal system, by contrast, a state government is not a perfect agent of the centre, and cares about money it spends on its supporters m_s, in addition to g_s and g_l. It chooses m_s, g_s and T_l to

$$\max U_s(m_s) + V_s(g_s) + V_l\ (T_l) \text{ subject to } m_s + g_s + T_l = T_s + R_s \tag{3}$$

where R_s denotes the state's revenue and T_s the transfer received by the state from the central government. Once again, assuming an interior optimum, the necessary conditions for a maximum imply

$$V_s'(\hat{g}_s) = V_l'(\hat{T}_l) \tag{4}$$

Throughout this discussion we use hats to denote governments' optimal levels of choice variables i federal system, while stars denote governments' optimal levels of choice variables in the unitary system.

Now we consider the central government's decision. In a unitary system the central government will

$$\max_{g_c, T_s} V_c(g_c) + V_s(g_s^*(T_s)) + V_l\ (T_l^*(T_s)) \text{ subject to } g_c + T_s = R_c, \tag{5}$$

while in a federal system it will

$$\max_{g_c, T_s} \quad V_c(g_c) + V_s(\hat{g}_s(T_s)) + V_l^*(\hat{T}_l(T_s)) \quad \text{subject to } g_c + T_s = R_c, \quad T_s \geq 0, \tag{6}$$

Proof. We prove the proposition in two steps. In the first step we show that, for a *given* amount of resources available to state-level governments, transfers to local governments will be lower in a federal system than in a unitary system. This is because, in federal systems there are competing demands which a state politician has to support that need not be supported in unitary systems where the state is assumed to be a perfect agent of the centre. The second step shows that, under the assumption that the centre *does* make a transfer to the states, the resulting resources available to the provinceswill be lower in a federal than in a unitary system. The reason for this second fact is that in a federal system, every unit of currency that is transferred by the central government to the state government provides the centre with less utility than it would if the state were a perfect agent of the centre. In other words, in federal systems the marginal utility of a transferred unit of currency falls.

We now prove the first claim:

$$\hat{T}_l(.) < T_l^*(.) \tag{7}$$

This follows from a comparison of the maximization problems of the state (3) and the central agent (1). Since the former chooses a positive level of m while the latter does not, we must have

$$\hat{g}_s(T) + \hat{T}_l(T) < g_s^*(T) + T_l^*(T) \quad \text{for any } T.$$

Since the state equates marginal utilities from $\hat{g}_s$ and $\hat{T}_l$ (4), and the central agent equates marginal utilities from g_s^* and T_l^* (2), we use the strict concavity of V_s and V_l^* to conclude that

$$V_s'(\hat{g}_s) = V_l^{*\prime}(\hat{T}_l) > V_s'(g_s^*) = V_l^{*\prime}(T_l^*)$$

By strict concavity of V_l^*, (7) now follows immediately.

The second step of the proof proceeds by contradiction. First, we examine the central government's maximization problem (5) in a unitary state. The first-order condition is

$$V_c'(g_c^*) = V_s'(g_s^*(T_s^*))g_s^{*\prime}(T_s^*) + V_l^{*\prime}(T_l^*(T_s^*))T_l^{*\prime}(T_s^*)$$

where g_c^* denotes the central government's optimal expenditure on central public goods and T_s^* denotes the central government's optimal transfer to the central agent in a unitary system. Using the first-order condition (2) of the central agent, this can be rewritten as

$$V_c'(g_c^*) = V_l^{*\prime}(T_l^*(T_s^*))[\ g_s^{*\prime}(T_s^*) + T_l^{*\prime}(T_s^*)\ ] \tag{8}$$

The expression in square brackets on the right-hand side is 1 because every additional dollar of resources obtained by central agent is spent on g_s or T_l. Similarly, using (6), we obtain the first-order condition of the central government in a federal system to be

$$V_c'(\hat{g}_c) = V_l^{*\prime}(\hat{T}_l(\hat{T}_s))[\hat{g}_s'(\hat{T}_s) + \hat{T}_l'(\hat{T}_s)] \tag{9}$$

Here, we use the assumption $\hat{T}_s > 0$ to guarantee an interior solution to the central government's maximization problem (6). But now, in the federal system, the expression in square brackets is less than 1 because an additional dollar of resources obtained by the state government is partly spent on m.

Now suppose, by way of contradiction, that $\hat{T}_l(\hat{T}_s) > T_l^*(T_s^*)$. Strict concavity of V_l^* now implies that the central government's marginal utility of state-level resources is lower in the federal system than in the unitary system, that is, the expressions in equation (9) are smaller than those in equation (8). Therefore, by concavity of V_c, it follows that $\hat{g}_c > g_c^*$. The central government spends more at the central level in a federal system than in a unitary system, and therefore it must transfer fewer resources to the state level in a federal system than in a unitary system: $\hat{T}_s < T_s^*$. But we can now use the conclusion from Step 1 of the proof to infer that $\hat{T}_l(\hat{T}_s) < T_l^*(T_s^*)$. This contradicts our assumption above.

To sum up, the model has the following clear implications. First, grants to local governments will be lower in federal systems. Second, in a federal country, if the provinces gained more autonomy with respect to their spending decisions, then local government expenditures would tend to fall since the states are even less perfect agents of the centre than before (provided the centre continued to make

transfers to the states). Third, in a confederal system – one in which the middle tier could raise enough resources independent of the national government, local government expenditures would be higher than in federal systems since the system would approximate a unitary state. In the remainder of this paper we provide evidence for these three implications.

4. Grants to Local Governments in Federal Systems:

Proposition 1 states that grants to local governments will be lower in federal systems. To control for total resources available to all levels of government, we work with grants to local governments as a proportion of total revenues of all government. This variable ranges from 0.1% to 33% with a mean of 8% and a standard deviation of 7% (Table 1).

Table 4 provides support for Proposition 1 which states that grants to local governments will be lower in federal systems. It is seen from Column 1, a bivariate regression, that grants to local government are 5.3 percentage points lower in federal countries than in unitary countries. In unitary countries, the grants provided to local governments average 9.6% of all revenues. It appears that federalism lowers grants to local governments as a fraction of all government revenues by over 50 percent. But local grants could be a function of local revenues, since countries in which local revenues are higher would require lower levels of grants from provincial and national governments. And, as federalism is positively correlated with democracy (r^2=0.25), and GDP (r^2=0.28), the coefficient in the bivariate regression might be picking up the effects of these other variables, which are themselves positively correlated with local revenue. Moreover, larger countries are more likely to be federal, (r^2=0.4) and size, as measured by population or area, might also affect local grants. It could also be that federalism captures the effect of ethnic fractionalization which may have adverse effects on the distribution of public goods (Alesina, Baquir, and Easterly, 2000; Banerjee and Somanathan, 2001; La Porta et al, 2000). Grants to local governments could also be influenced by the number and size of local jurisdictions.

(Insert Table 4 about here)

Columns 2 to 6 report regressions that control for these possibilities. The magnitude of the coefficient on the federal dummy in all the multi-variate regressions is larger than in the bivariate regression. In column 5, which has the largest number of cases the coefficient on the federal dummy is

-0.09. Using the regression in column 5, the predicted value, for federal countries, of grants to local governments as a percentage of total government revenue is 4 percent at the mean values of the controls for federal countries. The regression indicates that a unitary country at these levels of democracy and population would allocate more than three times as large a share of all government revenue to local grants. The statistical evidence supports Proposition 1's prediction of a negative effect of federalism on grants received by local governments, and shows that the size of the effect is large.[3] A final statistical test was conducted estimating an AR1 cross sectional time-series model for the variables that were significant in the OLS models. The results, reported in column 2 of table 3 show that federalism still retains it negative influence over local government grants. In countries with federal units grants to local government grants and local government expenditures were lower by 3 percent.

Grants have a direct bearing on local government expenditures. Gramlich (1977), for instance, examines several grant types and argues that an increase in grant funds leads to an increase in local government expenditure regardless of the type of grant. Larkey (1979), while determining a method of assessing the effect of grants, also demonstrates that grants (specifically, general revenue sharing) have a substantial influence on local spending. Wyckoff (1991) examines several explanations for the local government's increased expenditures and concludes that the increase in expenditures results from the decision making process and that grants to local government result in increasing local government expenditures.

4a. Changes in the authority of Provincial Governments and the Financial Authority of Local Governments

The second implication of the model developed in this paper is that if a system became more federal over time, i.e. provincial governments garnered more authority over time from the federal government local government expenditures would drop provided that the national government was still transferring resources to the middle tier. It would be easy to assess this independent impact of federalism if federal arrangements varied and nation-states moved from federal to unitary and vice versa. Federal structures, however, rarely vary. In the rare cases in which federal arrangements have

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[3] We also controlled for the land area of the nation state for this and all subsequent analysis and found that it has no effect.

changed in the later part of the twentieth century (Spain is an example) the introduction of federalism has been accompanied by other large political transitions (such as transition to democracy and joining the European Union). There is some preliminary evidence to suggest, in consonance with the cross-country data, that as provincial governments gain more power they look to gain resources from other levels of governments and local governments are one easy place. Zhuravskya (2000) notes that ``Russian localities never became financially independent from regional governments and ... [the] revenue sharing relations between local and regional governments hinder local government incentives for providing infrastructure for private business development'' (p.365).[4] In addition, Zhuravskya argues that ``the fiscal dependence of local government on the region has a negative effect on the efficiency of local public goods provision (p.365). Similary, in Belgium where provincial governments were introduced in 1993, provincial governments are taking away some of the authority of local governments (Downs, 1999).

4b. Confederalism and local government expenditures

The other clear implication of the model is that confederal systems (ones in which provincial units have independent sources of revenue - which could be constitutionally guaranteed as well) are different - in that each of the 'constituent states' can then be seen as a unitary state and local government expenditures can indeed be higher than in federal systems. Yugoslavia, after the reforms in fiscal relations in the federation in 1975 and before its final disintegration in the 1990's, provides a good example. ``Yugoslavia ... by the second half of the 1970's (displayed) a clear pattern that was to characterize the political economy of that system ... an ever weakening economic and political centre that was forced to work through the republics in order to make and implement virtually all policies, to gather revenues...'' (Bunce 1999, 111). Not surprisingly, as Yugoslavia moved from a federal to a confederal system with a sharp increase in provincial government revenues, local government expenditures also rose sharply.

(Insert Figure 2 about here).

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[4] Russia is not in our sample, since fiscal data for the regions is not provided separately from local data, although the regions are effectively a middle tier of government.

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The Yugoslav case also suggests that the functionalist explanation for why local governments are smaller in federal countries is not correct. There is nothing in the functionalist hypothesis that distinguishes between federal and confederal systems, so it does not explain why a shift to confederalism should have expanded the size of local government in Yugoslavia.

5. Conclusion

This paper has shown that, contrary to expectations, local governments receive fewer grants in federal than in unitary systems. Federalism does not imply devolution at all levels. We argued, using a formal model, that this is because central governments are less likely to make fiscal transfers to a lower-level government if there is a "middleman", a provincial government that may not pass on as much of the funds to the local government as the centre would want. The model implies that local governments will *not* face a fiscal squeeze in confederal systems, that is, those in which the states have sufficient resources to be financially independent of the centre.

A functionalist could argue that local expenditures are lower in federal systems because the middle tier takes over many of the functions that local governments carry out in unitary systems. We provided three pieces of evidence that suggest that this is not the case. First, federal governments are smaller than unitary governments, which would not happen if provincial governments were fully compensating for the fall in the size of local and central governments. Second, expenditures on housing and community affairs, (the only unambiguously local category in the GFS data), are about 40 percent lower in federal countries than in unitary countries. Third, this argument does not explain why the move from federalism to confederalism in Yugoslavia resulted in an expansion in the size of local government while our theory does.

The paper has dealt only with financial relations between the three levels of government. There is, of course, more to federalism than financial transfers. Regulations governing the administration of the various levels of government and other dimensions are deserving of attention. Local government's freedom of action varies across countries. However, there is no evidence to suggest that local government discretion is negatively correlated with local government expenditures. So we have no reason to believe that local governments in federal states have more freedom of action than those in unitary states.

In this paper, we have not investigated the determinants of federalism. Clearly, larger countries are more likely to be federal. While federalism may be a suitable political system in such cases, this paper has shown that it could have its disadvantages. We leave these issues for future research.

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Appendix 1

	Country	Code	Federal Dummy	Time span of data
1	Albania	ALB	0	1995-95
2	Australia	AUS	1	1970-96
3	Austria	AUT	1	1970-95
4	Belgium	BEL	0	1978-95
5	Bulgaria	BGR	0	1988-96
6	Bolivia	BOL	1	1985-96
7	Brazil	BRA	1	1982-94
8	Canada	CAN	1	1971-93
9	Switzerland	CHE	1	1910-95
10	Chile	CHL	0	1974-88
11	Congo	COG	0	1970-76
12	Columbia	COL	1	1974-86
13	Czechoslovakia	CSK	0	1989-91
14	Czech Republic	CZE	0	1993-96
15	Germany	DEU	1	1970-96
16	Denmark	DNK	0	1970-95
17	Spain	ESP	0,1	1970-79(0) 1980-94(1)
18	Estonia	EST	0	1991-96
19	Finland	FIN	0	1970-95
20	France	FRA	0	1972-96
21	United Kingdom	GBR	0	1970-95
22	Honduras	HND	0	1972-76
23	Hungary	HUN	0	1981-90
24	Ireland	IRL	0	1970-94
25	Iran	IRN	0	1970-89
26	Iceland	ISL	0	1972-93
27	Israel	ISR	0	1974-94
28	Italy	ITA	0	1973-96
29	Luxembourg	LUX	0	1970-96
30	Mexico	MEX	1	1970-94
31	Mongolia	MNG	0	1992-96
32	Malaysia	MYS	1	1973-97
33	Nicaragua	NIC	0	1989-95
34	Netherlands	NLD	0	1975-96
35	Norway	NOR	0	1970-95
36	Peru	PER	1	1990-96
37	Poland	POL	0	1982-96
38	Portugal	PRT	0	1974-95
39	Paraguay	PRY	0	1973-93
40	Romania	ROM	0	1970-96

41	Sweden	SWE	0	1970-96
42	Thailand	THA	0	1972-96
43	USA	USA	1	1972-95
44	South Africa	ZAF	1	1977-95
45	Zimbabwe	ZWE	0	1976-91
46	Belarus	BRS	0	1992-92
47	Croatia	CRO	0	1994-96
48	Latvia	LAT	0	1994-96
49	Yugoslavia	YUG	1	1970-90
50	Netherlands Antilles	NLA	0	1974-95

Table 1: Summary Statistics

Variable	Obs.	Mean	St. Dev.	Min	Max
Local Grants	51	0.079	0.074	0.001	0.328
Local Expenditure	51	0.189	0.119	0.025	0.577
Local Revenue (LocRev)	51	0.143	0.114	0.019	0.643
Democracy (Democ)	50	6.758	3.653	0	10
ln GDP (lnGDP)	48	8.813	0.743	6.956	9.894
ln Population (lnPop)	49	9.178	1.388	5.359	12.272
Local Housing Exp (lhousr)	31	0.596	0.228	0.019	0.992
Ethnic Fractionalization (ethfrag)	42	0.207	0.207	0.0017	0.831
Number of Local Jurisdictions (NoLocal)	39	6.78	1.612	4.382	11.16
Mean Area Local Jurisdictions (AreaLocal)	37	0.01	0.017	0.001	0.076

Table 2: Explaining Local Government Expenditures
(OLS Regressions)

Dep Var	Local Government Expenditure Share					
Ind Var↓	(1)	(2)	(3)	(4)	(5)	(6)
Fed Dum	-0.085 (0.00)	-0.102 (0.00)	-0.051 (0.00)	-0.057 (0.00)	-0.069 (0.00)	-0.057 (0.01)
InGDP		0.041 (0.11)	0.016 (0.08)	-0.003 (0.35)	-0.010 (0.39)	-0.003 (0.84)
LocRev			1.001 (0.00)	0.943 (0.00)	0.971 (0.00)	0.945 (0.00)
Democ				0.006 (0.02)	0.007 (0.00)	0.006 (0.05)
InPop					0.009 (0.01)	0.008 (0.28)
EthFrag						-0.051 (0.12)
AreaLocal						-0.005 (0.04)
NoLocal						-0.000 (0.59)
# Obs	51	48	48	48	48	36
R^2	0.11	0.23	0.84	0.86	0.87	0.88

P-values in brackets computed with robust standard errors. Expenditures are proportions of total government expenditures, revenues are proportions of total government revenues.

Table 3: Local Government Expenditures and Grants to Local Governments
(Cross-Sectional Time Series Regression (ARI))

| Dep Var	Local Exp Share	Local Grants Share
Ind Var↓	(1)	(2)
Fed Dum	-0.036	-0.031
	(0.00)	(0.00)
Local Rev	0.747	-0.096
	(0.00)	(0.01)
InGDP	0.0091	0.0037
	(0.09)	(0.63)
InPop	-0.0034	0.0027
	(0.36)	0.64
Democ	0.000	0.000
	(0.77)	(0.65)
rho	0.75	0.82
# Obs	712	712
R^2	0.84	0.09

Note: P values in Parentheses.

Table 4: Grants to Local Governments
(OLS Regressions)

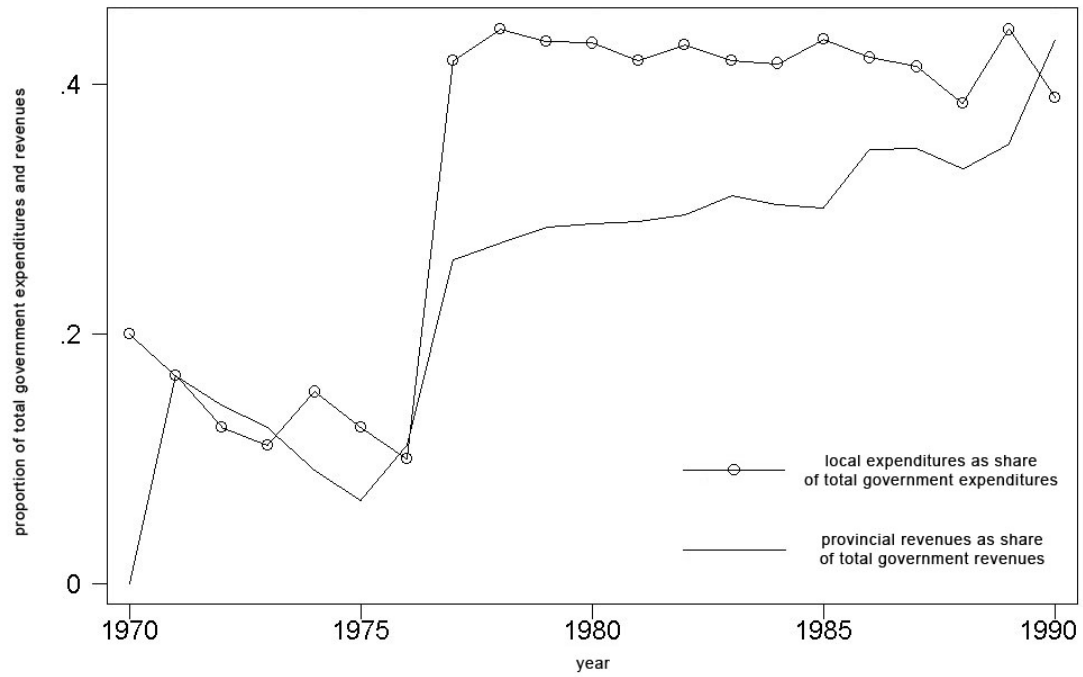| Dep Var	Grants to Local Government					
Ind Var↓	(1)	(2)	(3)	(4)	(5)	(6)
Fed Dum	-0.053 (0.00)	-0.062 (0.00)	-0.059 (0.00)	-0.071 (0.00)	-0.092 (0.00)	-0.070 (0.01)
InGDP		0.029 (0.04)	0.028 (0.05)	-0.004 (0.79)	-0.017 (0.33)	-0.008 (0.77)
LocRev			0.049 (0.74)	-0.048 (0.76)	0.001 (0.99)	0.029 (0.88)
Democ				0.010 (0.01)	0.013 (0.00)	0.010 (0.03)
InPop					0.017 (0.00)	0.011 (0.48)
EthFrag						-0.077 (0.19)
AreaLocal						-0.00 (0.06)
NoLocal						-0.004 (0.71)
# Obs	51	48	48	48	48	36
R^2	0.11	0.19	0.19	0.31	0.38	0.46

P-values in brackets computed with robust standard errors. Grants and revenues are proportions of total government revenues.

Figure 1: Global Local Government Expenditures
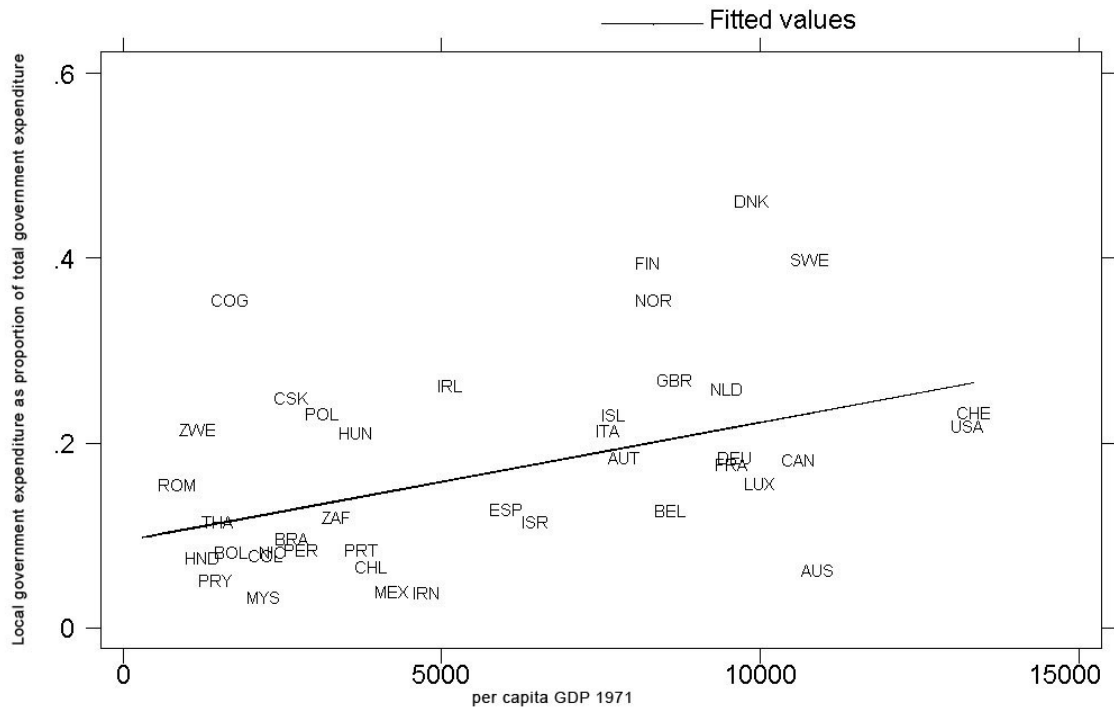
Source: IMF General Financial Statistics

Figure 2: Provincial Revenues and Local Government Expenditures in Yugoslavia

Source: IMF General Financial Statistics