Globalization and Fiscal Decentralization

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I. Introduction

The international integration of markets and the decentralization of authority within nation states are two defining trends of the contemporary era. A popular speculation is that globalization has caused a downward shift in the locus of governance by reducing the economic costs of smallness and allowing localities and regions with distinctive preferences to pursue their own political and economic strategies (Alesina & Spolaore 1997, Bolton & Roland 1997). This chapter analyzes these claims by examining the location of *fiscal* authority within states. Using a large cross-country data set composed of expenditure and revenue decentralization data for the 1980s and 1990s, it demonstrates a rather striking relationship—international market integration has actually been associated with fiscal centralization rather than decentralization.

There are several potential explanations, but we propose a straightforward argument for the globalization-fiscal centralization nexus that rests on perceptions of uncertainty and risk. First, macroeconomic conditions are perceived to be more volatile in more globally integrated countries (Rodrik 1998). Second, regional demands for insurance against asymmetric shocks increase with international market integration (following Persson and Tabellini 1996a,b). Thus, one should expect both more macroeconomic stabilization and more inter-regional risking sharing under globalization, and both objectives are better served via centralized fiscal arrangements.

It is important to note, however, that fiscal centralization does not imply the centralization of all authority—it may even be consistent with increased local discretion in choosing leaders, regulating the environment and economy, or spending centrally generated funds. For example, funds for regional assistance in the EU are generated centrally (via national VAT revenues) but administered at the sub-national level. Similarly, Scottish devolution has entailed more Scottish self-governance without the decentralization of taxation away from London. We leave these issues to others and focus on fiscal decentralization.

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[1] This is an updated version of a paper originally published in Miles Kahler and David Lake, eds., *Governance in a Global Economy: Political Authority in Transition*. 2003. Princeton University Press: 87-109. Above all, we have updated and expanded the data set used to conduct the empirical analysis.

Our measure of fiscal decentralization is simple: the sub-national (combined state and local) share of total public sector expenditures. This measure has the advantage that it is available on a yearly basis for a large number of countries around the world. Furthermore, it has been used in previous studies that do not address globalization (e.g. Oates 1972, Panizza 1999), allowing us to replicate and extend their results. While it does not capture the decentralization of tax autonomy, it does provide a comparable measure of the share of total public sector resources that pass through the hands of subnational officials.[2] Table 1 provides an overview of countries for which yearly expenditure data have been available for most of the last two decades.[3] Averages for the period from 1982 to 1989 and for 1990 to 1997 are shown in the first two columns. This cut-off is useful because several countries underwent transitions to democracy in the late 1980s, and by all accounts, global economic integration has increased substantially after 1990. The countries displayed in Table 1 demonstrate a good deal of variation in vertical fiscal structure. They range from heavily decentralized Canada and the United States, in which more than half of all government expenditure takes place at subnational levels, to countries like Paraguay or Thailand, where subnational governments undertake less than ten percent of total expenditures.

[TABLE 1 HERE]

For our purposes, the right-hand column in Table 1 is the most important. It shows that fiscal decentralization was by no means a universal phenomenon in the 1990s. Some countries—in fact nearly half of the sample—became more centralized. But on the other hand, some countries—most notably Brazil, Mexico, Peru, and Spain—considerably decentralized expenditures between the 1980s and 1990s (by more than 10 percentage points of total expenditures). The question is whether and how these differences are related to the extent of international market integration in these countries

The remainder of this chapter is divided into six sections. The second section begins with a general overview of the literature on fiscal decentralization and then elaborates arguments proposing a link between globalization and decentralization. We develop our alternative hypothesis that globalization should promote fiscal centralization in section three. Our empirical tests of these contending perspectives

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2 For a discussion of the costs and benefits of this and other measures of decentralization, see Rodden (2004).

3 All public finance data are taken from the IMF *Government Finance Statistics Yearbook*, various years. Most of the averages shown in Table 1 are for the entire period specified, but because of missing data, some of the averages reflect slightly shorter periods. Note that intergovernmental transfers are not removed from the numerator (total subnational expenditures). This would be inappropriate because the IMF's distinction between grants and own-source local taxation is quite misleading if used in cross-national analysis. It is necessary, however, to subtract

are presented in sections four (based on cross-section averages) and five (using time-series cross-sectional data). Section six discusses the results, draws out some broad lessons, and maps out an agenda for further research. The final section concludes.

II. Globalization and Decentralization: The Conventional View

The key intuition of fiscal federalism theory is that the benefits of decentralization are positively correlated with the (geographic) variance in demands for publicly provided goods (Musgrave 1959, Oates 1972). Although the political process through which demands for decentralization are transformed into policy is not made explicit, this line of argument maintains that excessively centralized systems in large, heterogeneous countries will face overwhelming pressure to decentralize, lest they fall apart through secession or civil war.[4]

The new literature on globalization and decentralization provides a simple extension of this approach. Alesina and his collaborators examine a basic tradeoff between the benefits of large jurisdictions and the costs of heterogeneity (Alesina and Spolaore 1997, Alesina and Wacziarg 1998). The benefits of size derive from scale economies in taxation, common defense, internal free trade and the decreasing per capita cost of non-rival public goods. But large size comes at a cost—the difficulty of satisfying a more diverse population.[5] As in the Musgrave-Oates formulation, sufficiently high levels of heterogeneity generate demands for decentralization or even secession. One of the original claims made in the new literature is that globalization reduces the costs of–and hence increases the supply of–decentralization. According to Alesina & Spolaore (1997: 1041):

> … a breakup of nations is more costly if it implies more trade barriers and smaller markets. On the contrary, the benefits of large countries are less important if small countries can freely trade with each other. Concretely, this result suggests that regional political separatism should be associated with increasing economic integration.

But many countries might stop short of breaking up. Instead of seceding, regionally distinct groups with strong preferences might opt for a fiscal decentralization scheme. As Bolton & Roland (1997: 1057–58) contend:

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grants from the denominator (combined central, state, and local expenditures) to avoid double-counting the grants in the expenditures of the central and subnational governments.

4 A newer literature revisits the relationship between heterogeneity and the normative case for decentralization from a political economy perspective that explicitly attempts to model government behavior. Inman and Rubinfeld (1997), Lockwood (2002), and Besley and Coate (2003) examine the costs of centralization from a distributive politics perspective that highlights the importance of legislative bargaining and legislative rules.

5 Bolton and Roland (1997) emphasize a related trade-off. In their model, the benefits of coordination and economies of scale are traded off against the benefits of setting tax rates and determining redistributive transfers locally in societies with heterogeneous income levels across regions.

> … any benefits of decentralization that might be obtained in a world with several nations may also be achieved within a unified nation by replicating the administrative structure of the world with several nations and implementing a suitable degree of decentralization of authority among the regions.

In the globalization era, not only citizens, but investors as well, might prefer decentralization. Weingast's (1995) "market preserving federalism"–directly applied to the context of globalization by McGillivray and Jensen (2000)–argues that fiscal decentralization, by forcing governments to compete for mobile capital, creates incentives for politicians to provide market-friendly policies. If these arguments are correct, and central governments are interested in pleasing investors, they face incentives to devolve fiscal authority to subnational governments.

III. Globalization and Incentives for Fiscal Centralization

We have no quarrel with important elements of the conventional wisdom about globalization and decentralization. Economic integration seems to increase the credibility of secession threats in countries with concentrated minority groups (e.g. Russia) or high levels of income inequality between regions (e.g. Italy). When there is sufficient will to hold the country together, it may well be possible to forestall secession by instituting a decentralization program that allows regions to pursue distinctive economic and political strategies (as in Belgium). Central governments might introduce local elections, set up regional parliaments, enhance the constitutional protections of subnational governments, or improve their representation in the central government (Scotland and Wales). The central government might loosen its regulation and oversight of subnational governments, transform conditional grants into block grants, and allow local governments greater freedom over local schools and cultural institutions.

Such devolution need not translate, however, into a shift of fiscal resources into the hands of local governments. On the contrary, we believe that it is more likely for the relationship to go in precisely the opposite direction: globalization encourages the centralization of public expenditures (and even more so, taxation), even if it simultaneously enhances the political autonomy and discretion of subnational officials.[6]

The conventional view has overlooked an important benefit of centralized fiscal arrangements. Larger fiscal units are more effective at risk-sharing—pooling economic resources to provide insurance for regions adversely affected by unexpected asymmetric economic shocks (Persson and Tabellini 1996a).

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[6] Data limitations make it very difficult for us to test our argument directly on taxation. However, we would expect globalization to be associated not only with higher levels of fiscal centralization in general, but also with an increasing mismatch between more centralized taxation and more decentralized spending.

Thus all regions—whether rich and poor, or dominated by the ethnic majority or a minority group—might benefit from fiscal centralization because they cannot predict ex ante which of them will be hit by negative shocks or when this will happen. Globalization is widely perceived not only by scholars but also by citizens to increase volatility and hence aggregate economic risk (Rodrik 1997, Scheve and Slaughter 2001); thus it also increases the aggregate social utility of automatic interregional tax-transfer insurance schemes. According to Atkeson and Bayoumi (1993: 91):

> Integrated capital markets are likely to produce large flows of capital across regions or national boundaries. However, they are unlikely to provide a substantial degree of insurance against regional economic fluctuations, except to the extent that capital income flows become more correlated across regions. This task will continue to be primarily the business of government.

More specifically, the pooling of risk via national insurance schemes can only be the business of the central government, which alone has the authority over tax rates and the geographical distribution of expenditures to make such schemes work. Among other factors, capital market imperfections prevent regional and local governments from being able to provide such insurance themselves (von Hagen 1998). In fact, subnational spending is often pro-cyclical—severely so in many developing countries (IADB 1997, Wibbels and Rodden forthcoming).

Regional specialization is another likely consequence of economic integration (Krugman 1991). As regions become more specialized, they become increasingly vulnerable to the vagaries of global markets, and hence have fewer incentives to "go it alone" by relying on themselves to provide insurance. Citizens in small, vulnerable export-oriented jurisdictions with relatively undiversified economies such as "export clusters" in the Brazilian and Indian states might not be enthusiastic about fiscal decentralization if it implies a smaller risk-sharing role for the central government.

There is considerable evidence that inter-regional risk-sharing and more permanent inter-regional fiscal redistribution are prominent features of several federations–including the US. Sachs and Sala-i-Martin's (1991) influential early study of the US may well have overestimated the magnitude of inter-state redistribution (see von Hagen 1992). Nonetheless numerous subsequent studies have found evidence of significant inter-regional insurance and redistribution in response to asymmetric shocks not only in the United States, but also in Canada, France, Germany, and the UK.[7]

The logic of fiscal centralization for the purpose of inter-regional risk sharing holds in countries where regional business cycles are not highly correlated. Thus this argument is most plausible in large, diverse countries. Even in smaller countries, however, if globalization increases aggregate risk, voters may demand increased provision of stabilization by the central government. The traditional fiscal federalism literature argues that fiscal stabilization can only be successful if firmly under the control of the central government. Except perhaps for very rare cases like the U.S. states and Canadian provinces (even these are debatable), fiscal stabilization is not likely to be successful at lower levels of government.

Although risk-sharing and redistribution are distinct in theory, they blend together in practice. Persson and Tabellini (1996a,b) point out that under the realistic assumption that some regions have more favorable output distributions than others, nominal risk-sharing schemes will have long-term redistributive consequences. Indeed, many of the recent empirical studies designed to assess the short-term "insurance" quality of intergovernmental transfers find stronger evidence of outright long-term regional redistribution in response to asymmetric shocks (e.g. Kletzer and von Hagen 2000). That is, regions that suffer negative shocks are subsequently favored in the distribution of transfers and become more dependent on transfers in the long term. Although not previously seen in such a light, this evidence is consistent with the literature on globalization and the compensation of "losers" from free trade. The compensation literature argues that globalization might lead to larger government because, in order to assemble a stable political coalition in favor of free trade, it may be necessary for those who benefit from free trade explicitly to "buy off" those who lose with a more extensive safety net or other redistributive transfers (Garrett 1998).

When protectionist barriers fall and capital constraints are lifted in a country, it is often not difficult to predict some of the winners and losers ex ante. Some of the losers are often regionally identifiable, and to the extent that the effected regions are represented in the central legislature or capable of undermining the regime's support coalition, it may be necessary to pay them off with increased transfers in order to obtain their political support for the move to freer trade. Other things equal, this would lead to a larger spending role for the central government vis-à-vis subnational governments.

Increased spending pressure on the central government might come not only from regions who fear volatility and the loss of jobs associated with globalization, but turning the logic of Alesina and Spolaore on its head, it might also result from the demands of ethnic minorities. To the extent that some large, diverse countries like Canada, India, Russia, and Indonesia are able to stay together in spite of demands for secession, globalization might only increase the costs of staying together. Secession threats from a region with distinct preferences may not be credible in an autarchic world, but perhaps such threats gain

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[7] For literature reviews, see von Hagen (1998), Kletzer and von Hagen (2000), and Obstfeld and Peri (1998).

credibility in a world of free trade. Consider the importance of potential trading partners in bolstering the credibility of exit threats made by Estonia, Quebec, the Slovak Republic, or oil-rich Russian republics, or the importance of the European Union to Scottish and Basque independence movements.

These newly credible exit threats might be a useful bargaining chip in negotiations over the distribution of central government spending. To the extent that there are benefits to the rest of the country from keeping breakaway regions in the union (e.g. maintaining a larger risk-sharing pool), the rest of the country may be willing to send disproportionately large transfers to such regions to buy their cooperation (Fearon and Van Houten, 1998). Knowing this, of course, such regions face incentives to amplify their threats. This is a familiar story in post-Soviet Russia (Treisman 1999) and modern India. Even if subnational governments end up gaining autonomy and spending more, this effect may be overwhelmed by the larger spending role of the central government. If the central government wishes to use public spending to "buy" the loyalty of voters in would-be breakaway regions, it might try to spend the money directly rather than through general-purpose transfers to regional governments. Alternatively, the central government may decide to beef up its spending on the military and internal security forces in order to quell the threat of regional violence. Either of these possibilities would lead to fiscal centralization.

In sum, our general point is that even if one accepts the Alesina-Spolaore and Bolton-Roland arguments about the effects of globalization on the breakup of nations, it is inappropriate to argue that fiscal decentralization within an existing country is a halfway house to secession. Indeed, we believe the opposite is likely to be true. In order to hold onto political power and perhaps even forestall secession, the national government may have to centralize fiscal policy so as to deliver benefits (in the form of risk-sharing and outright fiscal redistribution) to risk-averse groups, especially those in would-be secessionist localities.[8]

IV. Analysis of Cross-Section Averages

This section examines the relationship between international market integration and the centralization of fiscal policy using data from a cross section of countries around the world. We start out by conducting separate analysis on the two periods displayed in Table 1: 1981 to 1989, and 1990 to 1997. The cases are selected based on the availability of sufficient data on the dependent variable—logged subnational expenditure (and revenue) as a share of total public sector expenditure. These data are derived from the

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8 Of course these arguments are complicated by the fact that within countries, different regions are likely to have different preferences over levels of risk-sharing and redistribution according to their output distribution. These issues will be discussed in greater detail below.

IMF's *Government Finance Statistics Yearbook*. Higher values of the dependent variable denote more decentralization. We present results of separate models for expenditure and revenue decentralization.

The independent variables follow from the discussion above. First, to test arguments about size and heterogeneity, we include the natural logs of *area* (square kilometers) and average *population*. The basic model also includes the log *of GDP per capita* in inflation-adjusted U.S. dollars, since Oates (1972) and Panizza (1999) find that wealthier countries demonstrate higher levels of decentralization.[9] Following Panizza (1999), we also include a measure of *ethnic fractionalization* as a proxy for preference heterogeneity.[10]

Next, we include averages of Gurr's 20–point measure of *democracy*.[11] According to Panizza (1999) and Alesina and Spolaore (1997), if geographically-dispersed heterogeneous preferences over public goods are taken as a given, a rent-seeking authoritarian government that can rule without consent might be more willing and able to suppress demands for decentralization than a democratically elected counterpart.[12]

We also include a simple dummy variable for political federalism.[13] Above all, federal systems are distinct from unitary systems in that they provide formal or de facto veto authority to regional politicians over all or some subset of federal policy decisions. In most cases this is accomplished through special constitutional protections and amendment procedures and an upper house that disproportionately represents the regions. All of these factors should allow subnational officials to bargain for larger shares of the public sector's resources. It is also possible that some of the variation in fiscal decentralization will be explained by urbanization rates if demands for local government services are higher in urban areas. Thus we include a variable that measures urban population as a share of the total.[14]

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9 All of the above are taken from the World Bank, *World Development Indicators*, 2000.

10 We use the standard "ethno-linguistic fractionalization" (ELF) index used by other authors, even though we are quite skeptical about this variable. Originally published in the *Atlas Narodov Mira* (1964), it is included in Taylor and Hudson (1972), and reflects the likelihood that two randomly drawn people will be from different ethnic groups. The variable is fraught with conceptual and measurement problems, and is very likely out of date (Laitin and Posner 2000). We include it in order to replicate Panizza (1999).

11 The source is the *Polity 98* data set.

12 Regional elites have also played important roles in the protests and negotiations that have led to democratic transitions. In new democracies, decentralization is often an attractive political strategy for reelection-seeking politicians who wish to build or consolidate local bases of support (O'Niell 2003).

13 This variable is taken from Rodden (2002). Cases are coded as federal if they feature constitutional protections for states and state-based representation in an upper chamber of the legislature.

14 The source is the World Bank, *World Development Indicators* 2000.

Next, we include two public finance variables calculated from the GFS. First, it is plausible that decentralization might be more advanced in countries with larger public sectors, so we include a control for the average overall scale of government spending as a portion of GDP. Finally, we consider the possibility that decentralization is little more than a thinly-veiled attempt by central governments to "offload" central government deficits onto state and local governments by increasing subnational expenditure responsibilities without a corresponding increase in revenues. This is a common complaint among critics of fiscal decentralization in a wide variety of contexts ranging from Latin America and Africa to the United States. In order to control for this in the cross-section regressions, we include the central government's average fiscal balance as a percentage of revenue.

The final group of variables addresses globalization using two simple measures. We use *trade/GDP* ratios to capture the international integration of national goods and services markets.[15] Second, *capital account openness* is a dummy variable from the IMF's annual Exchange Arrangements and Exchange Restrictions describing whether countries impose significant restrictions on capital account transactions (coded as "0") or not ("1" = open). This is a simple way to measure international capital mobility that is available for all IMF members on an annual basis.[16]

[TABLES 2 AND 3 HERE]

The results from the regressions on the first period (1981–1989) are presented in Table 2, and the results from the second period (1990–1997) are presented in Table 3. In each table, the first two columns use expenditure decentralization as the dependent variable, and the final two columns use revenue decentralization. For both cases, models are presented with and without the globalization variables.

The coefficients for the control variables are broadly consistent with previous studies, but with some exceptions. As expected, countries with larger *area* are significantly more decentralized. Note, however, that there is a rather high correlation between *area, population, trade/GDP*, and the *federalism* dummy. Larger countries are more likely to have the constitutional trappings of federalism, and because of their larger internal markets, they are less dependent on trade than smaller countries. Note that the coefficient for *area* loses its statistical significance when the *trade* variable is included in the regressions for the earlier period. Moreover, federalism is positively associated with fiscal decentralization in all the models,

15 Ibid.
16 For these between-effects models, this variable captures the percent of years in which open = 1.

but again, its statistical significance is sensitive to the inclusion of the *trade* and *area* variables. In more spare models, *federalism* and *area* are always highly significant.[17]

In addition, countries with higher *GDP per capita* are more decentralized, though in the models presented here, the positive coefficient does not quite attain statistical significance. In some stripped-down models resembling Panizza (1999) this variable is marginally significant. *Population* and *urbanization* have no effect on decentralization in any of the estimations.[18] Contrary to the findings of Panizza (1999), ethnic fractionalization was not significant in any of our estimations.[19] *Democracy* has the expected positive sign and is highly significant in the earlier and period, but the result does not hold up in the later period. This is not surprising, given that after many successful transitions to democracy, the later period demonstrates less variation across countries.

It appears that countries with larger public sectors are also more decentralized, though the statistical significance of this coefficient is quite sensitive to model specification. Next, the coefficients for *central government balance* are difficult to interpret. Like globalization, the offloading argument is a dynamic one. Thus it is difficult to come up with clear predictions about cross-section averages, though the large negative coefficients in Table 3, which suggest that countries with larger central government deficits are more decentralized, may be consistent with the offloading hypothesis.

Next, we add the globalization variables. While the *openness* variable never approaches statistical significance, the *trade* variable is negative and significant in the 1980s in both the expenditure and revenue decentralization equations. Other things equal, greater dependence on international trade was associated with greater fiscal centralization. A one percent increase in trade as a share of GDP is associated with greater than a one percent decrease in the share of expenditures undertaken by (or revenues at the disposal of) subnational governments. These coefficients are even larger (around -1.5) and highly significant if other correlates of trade (country size and federalism) are dropped from the regressions. However, this cross-section relationship does not hold up in the 1990s. Even if the other correlates of *trade* are dropped, the coefficients, though negative, fall short of statistical significance.

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[17] Note that federalism does not mean that states and provinces are less dependent on transfers from the central government. Our spending variable does not distinguish between expenditures funded by own-source revenue and those funded by transfers. Rodden (2002) shows that subnational units in federal and unitary systems display, on average, similar levels of reliance on transfers from higher-level governments.

[18] We have also included another variable—defense expenditures as a share of total spending—but it did not effect the results presented here and did not approach statistical significance, so we do not include it.

Tests reveal that the main results discussed above are not driven by excessively influential cases. Additionally, since the dependent variable has a lower limit of zero and an upper limit of one, we also estimated all of the models presented in Tables 2 and 3 using Tobit, and the results were virtually identical.

In sum, the cross-section analysis finds reasonable support for the most important findings of Oates (1972) and Panizza (1999) that larger and wealthier countries tend to be more decentralized. Previous findings regarding ethnic fractionalization do not hold up, but as we have noted, the quality of the data is extremely low. Moreover, there is additional support in the cross-section data for Panizza's (1999) finding that more democratic countries tend to be more decentralized. In addition, federal countries are more decentralized. Above all, the cross-section results are inconsistent with the common wisdom that globalization favors fiscal decentralization. On the contrary, at least in the 1980s, trade dependence was associated with greater fiscal centralization.

V. Pooled Time Series Analysis

Table 4 presents our analysis of spending and revenue decentralization using panel data, comprising observations for 57 countries for the period 1978–1997. The panel specification is an important in this context because some of the independent variables of interest have changed considerably in the past twenty years. Most notably, many countries in our sample have democratized, expanded their trade with the rest of the world, and opened their capital accounts. In any case, decentralization is a dynamic rather than static concept; thus the empirical specification presented in this section is a significant improvement over previous studies that, like the previous section, use cross-section averages or single-year observations. We have used a variety of different estimation techniques with largely similar results, and Table 4 reports the results of regressions using panel corrected standard errors, taking into account the unbalanced nature of our panels. We include lagged dependent variables and dummy variables for all countries (fixed effects) to take into account over time and cross-national variations that should not be attributed to any of our independent variables.[20]

[TABLE 4 HERE]

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[19] There are several potential reasons for the divergence with the earlier finding. Panizza (1999) uses single-year observations, and of the three years considered, the coefficient for ethnic fractionalization was only significant for 1985. Moreover, the sample is somewhat different.

[20] The presence of a lagged dependent variable can bias the fixed-effects estimator even if the error term is not correlated over time. But in panels where the time series dimension is long (as is the case here), the bias is rather small.

In general, the patterns of parameter estimates were very similar for both spending and revenue decentralization. For convenience, we therefore concentrate on the spending equation (the first column of Table 4), though we must compare both equations in order to interpret the relationship between decentralization and the central government's fiscal balance.

Let us begin with the basic control variables, noting that the time-invariant variables (area, ethnic fractionalization, and federalism) are not included because of the inclusion of fixed country effects. As in the between effects regressions, we do not detect a very strong relationship between *GDP per capita* and decentralization over time within countries, though the coefficient is positive and at least in the expenditure equation, marginally significant. We find no effect of democratization within countries over time, though in an earlier version of this chapter using a smaller data set, we found evidence of a small positive impact of democratization on decentralization. We also obtain a positive and statistically significant coefficient using this sample of countries if the fixed effects are dropped and cross-section variation is allowed to influence the results.

The results also provide preliminary evidence that decentralization may be, in part, a strategic attempt by central governments to shift deficits onto subnational governments. Both the level and the lagged level of the central government's surplus (deficits are negative numbers) as a percent of revenue are included in the regressions. By including the lagged level, we attempt to control for long-term trends and isolate short-term dynamics. It is important to note that the coefficients for central government balance are statistically significant, but have the opposite sign in the expenditure and revenue equations. Controlling for the previous year's level, higher surplus levels (ie. lower deficits) are associated with *higher* subnational expenditure and *lower* subnational revenue. Note that the models control for fluctuations in GDP and overall government expenditure. Other things equal, improvements in the central government's fiscal stance are associated with larger shares of total public sector expenditure taking place at the subnational level, but smaller shares of total public sector revenue flowing to state and local governments. Thus improvements in central government finances seem to be achieved, at least in part, on the backs of state and local governments. These results dovetail with frequent complaints of "offloading" or "unfunded mandates" around the world, but they are merely suggestive. Considerable further analysis is needed.

For present purposes, the most interesting parameter estimates concern the two globalization variables. Put simply, as countries became more exposed to trade and opened their capital accounts, their fiscal systems became more centralized. This is wholly inconsistent with the logic of the Alesina-Spolaore or

Bolton-Roland arguments, in which decentralization is a compromise on the way to secession, made more likely by globalization because of the reduced costs of small size in open markets. Our results suggest that a ten percentage point increase in trade as a share of GDP (a typical year for Malaysia, or roughly the increase in Canada over the last 5 years) is associated with a 2 percent decrease in the share of total public sector expenditures undertaken at the subnational level. The *openness* coefficient suggests that removing all significant restrictions on capital account transactions is associated with a 4 percent decrease in the state and local share of total expenditures.

In order to check the robustness of these results, we have used a variety of additional estimation techniques. Similar results were obtained using AR1 correction rather than a lagged dependent variable. A model with a lagged dependent variable and no fixed effects yielded a similar result for trade, but the coefficients for "openness" fell below traditional levels of statistical significance. We also estimated the model in first differences, and estimated an "error correction" model using both first differences and lagged levels of the independent variables. We also included a panel of year dummies. These models yielded similar results for trade though again, the statistical significance of the coefficient for "openness" is sensitive to the model specification. In general, the coefficients are slightly larger and less sensitive in the expenditure equations. In every single equation, however, the signs for trade and openness are negative, and both are significant in most.[21]

VI. Discussion

It is commonly assumed that globalization has had two effects on political systems around the world. On the one hand, globalization has reduced the minimum efficient scale of politics, resulting in the proliferation of nations. On the other hand, globalization has also been associated–on the same logic–with fiscal decentralization within nations. We do not wish to debate the merits of the first proposition, but the empirical analysis above calls into question the globalization-decentralization nexus. We have discovered a modest but robust, significant relationship between trade integration and expenditure centralization.

One might respond that this finding is wholly consistent with the Alesina/Spolaore argument because globalization has facilitated secession and the creation of new sovereign states. If the impetus for secession were heterogeneity within old national boundaries, both new states and what remains of

[21] When one or more of the control variables is dropped (including GDP per capita, area, and total expenditures, none of which ever attains statistical significance), the trade and openness variables are highly significant using either dependent variable and virtually all estimation techniques. We also obtain higher levels of

existing states would be more homogenous than the polyglots that preceded them. Given the increased homogeneity of preferences in all states after secession, there would be less reason to decentralize authority in any of them. This argument relies on asserting that globalization has been causally implicated in cataclysmic events such as the end of African colonialism in the 1960s and the breakup of the Soviet Union. No political boundaries, however, changed in any of the countries in our study during the period we analyze. Thus there must be another explanation for the fiscal centralization we observe.

We have argued that globalization, by increasing perceptions of aggregate and region-specific risk within countries, might actually undermine the credibility of regional exit threats and create powerful new demands for fiscal centralization. Decentralization of taxation increases economic competition among regions, and all else equal, this is likely to result in smaller government–and hence less cushioning of adverse economic shocks through fiscal policy. In more integrated economies, these shocks are perceived to be larger and less predictable, exacerbating the demands for governmental redistribution of wealth and risk. Regional governments know that centralized fiscal systems are likely to deliver the most stabilization and fiscal redistribution in favor of their citizens. Moreover, we have argued that the central government may get more involved in regional redistribution as a way of placating regions that stand to lose from trade integration.

Undoubtedly there are some regions for which globalization has raised the costs of fiscal centralization. The median voter in a relatively wealthy region is likely to prefer a more decentralized fiscal system than the median voter in a poor region (Bolton and Roland 1997), and the median voter in a persistently disadvantaged region will prefer less insurance than the median voter in a more productive, diversified region (Persson and Tabellini 1996b). Indeed, in accordance with the logic of Bolton and Roland (1997), the Italian North and the wealthy German states like Baden-Württemberg and Bavaria are growing increasingly weary of paying into centralized risk-sharing and redistribution schemes that benefit others. They prefer fiscal decentralization, and apparently are willing to push hard for it. It is unlikely, however, that they will win. As we have argued, the stakes have also been raised for the poorer, less diversified, or smaller and more vulnerable jurisdictions (e.g. Sicily, Saarland and Bremen) whose residents believe they have more to fear in a world of integrated markets.

Moreover, there is considerable support for our argument in the evolution of the European Union. In the 1985 deal to complete the internal market, the member states agreed to introduce a new system of

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significance for trade and openness when using a larger data set of over 60 countries, but we do not include these additional countries here because the GFS only provides very limited, non-overlapping year coverage.

development assistance to poorer regions of Europe. The 1992 Masstricht treaty that set the European Union on the course to the creation of the euro was accompanied by a large increase in this development assistance. The combination of 1992 and the euro render Europe the closest example we have of a completely open international market. But its creation generated risks, particularly for less well off areas. As a result, the *central* EU budget was expanded considerably to pay for these fiscal transfers. Of course, the EU's budget is still only a tiny portion of European output. Our argument predicts that, in the future, demands for a larger EU fiscal authority will grow appreciably, especially from the most vulnerable.

Of course, the EU's budget has been the subject of considerable debate and acrimony among member governments in recent years, and strife over the renegotiation of intergovernmental fiscal contracts is growing in other countries ranging from Brazil, Argentina, and India to Germany and Canada. The fault lines are the same—poor and vulnerable jurisdictions desire increased risk-sharing and redistribution while wealthy or well-positioned jurisdictions desire less. This fact is consistent with both the conventional wisdom about increased credibility of exit threats and our countervailing argument about increased perception of risk. But neither the existing literature nor our paper provides a satisfactory positive theory of the conditions under which the wealthy or poor regions are likely to win these battles. The next step in a positive theory of globalization and the vertical movement of fiscal authority is a more careful examination of (1) the geographical distribution of risk, and (2) the political institutions through which such battles are fought.

First, consider some simple demographic facts. Regional income disparities within countries around the world are often staggering, and in developing countries especially, regional inequality is on the rise (Shah and Shankar 2000). Poor regions almost always vastly outnumber the wealthy, and small rural jurisdictions are very frequently over-represented in legislatures (Samuels and Snyder 2000). In most developing countries, the lion's share of economic activity is concentrated in only one or two "urban giants" (Ades and Glaeser 1995, Henderson 2000). Unless the relatively wealthy (often urban) jurisdictions can threaten to bring down the regime through riots or credibly threaten to secede, there are few reasons to expect that vastly outnumbered wealthy regions can defeat the poor regions who prefer higher levels of risk-sharing and redistribution.

To better understand the conditions under which globalization leads to fiscal centralization or decentralization, it is necessary to examine more carefully the institutions through which regions are represented in the central government's decision-making process. For example, at one extreme, a country like Israel has no territorial aspect to representation and policy-making at all—it is a unitary system with one national electoral district and an integrated national party system. At the other extreme are Brazil and the European Union, federations in which small states are vastly over-represented in both chambers of the legislature, and political parties do little to create incentives for cross-jurisdiction cooperation. Fiscal policies in the latter type of system are more likely to be chosen through a process of regional intergovernmental bargaining than simple majority rule (Cremer and Palfrey 1999). Persson and Tabellini (1996a) hypothesize that this type of intergovernmental bargaining will lead to lower levels of centralized insurance than systems where risk-sharing schemes are chosen by majority rule with one-person-one-vote.

The European Union provides a good example of the importance of representation schemes in mediating battles over risk-sharing and redistribution. In contrast to other federations, the EU has not developed a full blown centralized risk-sharing scheme to rival other large federations (notwithstandings its innovations with respect to fiscal support for poorer regions). Under the current highly confederal configuration, however, the creation of such a system would require the consent of every state, including the wealthy states that are net contributors. It would be much more difficult for wealthy states to rebuff demands for greater risk-sharing and redistribution, however, if for example the European Parliament, using a simple majority decision rule, had exclusive authority over fiscal policy.

Future research might build from our findings, drawing on more refined institutional arguments to pinpoint the demographic and institutional conditions under which demands for more centralized risk-sharing overwhelm demands from wealthy states for greater fiscal decentralization. Such studies might try to improve on the blunt measure of fiscal decentralization used in this paper. Detailed cross-national data for a large number of countries on the size, conditionality, and distribution of intergovernmental transfers would be extremely helpful. Additionally, improved efforts should be made to conceptualize and measure political decentralization across countries.[22]

Our arguments about risk sharing and redistribution may or may not be the driving force behind the observed relationship between trade integration and fiscal centralization. We have also addressed the argument that globalization leads to decentralization by enhancing the credibility of secession threats of ethnic and linguistic minorities. While this seems plausible, we point out that the price would-be secessionist regions demand to stay within the federation might result, if anything, in fiscal centralization. Of course our empirical results do not prove this conjecture. These arguments should only apply in countries with regionally concentrated groups with distinctive preferences who make secession threats that are taken seriously. In the vast majority of our cases, however, such groups either cannot easily be identified, or their exit threats would not be viewed as credible by the central government. The best way to examine arguments about exit threats and fiscal (de)centralization is to limit the analysis to a smaller group of countries where such concentrated groups exist and their threats are taken seriously (see, e.g. Fearon and Van Houten 1998).[23] Future work might use disaggregated regional fiscal, political, and demographic data to examine the interaction of trade, exit threats, and distributive politics in such countries.

VII. Conclusion

Along with several other chapters in this volume, this chapter departs from previous studies of globalization and shifting locations of governance by considering not only a binary choice between secession and staying together, but also the distinct possibility of (de)centralization within countries. It also contrasts the likely effects of globalization on political and fiscal authority. The conventional wisdom that globalization strengthens the credibility of regional autonomy movements and puts pressure on central governments to cede *policy* control and *political* autonomy to local officials is quite plausible, though Van Houten (2003) finds no evidence of this in his European sample. But this chapter has argued that globalization may also encourage regions that choose to stay within countries to push for fiscal arrangements that better mitigate market risk for citizens within their borders. Consistent with this argument, the data analyzed above suggest that increased trade integration is associated with mild fiscal centralization.

While this finding presents an interesting challenge to a common hypothesis, it is probably most useful as an invitation to further research. Future studies should continue to distinguish between globalization's effects on political and fiscal decentralization, and explore more carefully the varieties of each. This chapter also points toward several mediating factors that deserve more rigorous analysis, including the distribution of income and risk across jurisdictions, and the roles of constitutions, legislative rules, and partisan incentives.

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22 For a good start, see Henderson (2000). For an overview of other attempts, see Rodden (2004).

23 It is worth noting that when we estimate the model presented in Table 4 including only the cases from our data set in which secession threats seemed reasonably credible—Belgium, Canada, India, Indonesia, Italy, Spain, and the UK—the "trade" coefficient was negative, similar in magnitude, and significant at the 10 percent level.

References

Ades, Alberto and Edward Glaeser. 1995. "Trade and Circuses: Explaining Urban Giants," *Quarterly Journal of Economics*, 110(1): 195–227.

Alesina, Alberto and Enrico Spolaore. 1997. "On the Number and Size of Nations," *Quarterly Journal of Economics* 112 (4): 1027–56.

Alesina, Alberto Romain Wacziarg. 1998. "Openness, Country Size and Government," *Journal of Public Economics* 69(3): 305–21.

Arellano, Manuel and Stephen Bond. 1998. "Dynamic Panel Data Estimation," unpublished paper, Institute for Fiscal Studies, London.

Atkeson, Andrew and Tamim Bayoumi. 1993. Private Capital Markets in a Currency Union," in Paul Masson and Mark Taylor, eds., *Policy Issues in the Operation of Currency Unions* (Cambridge: Cambridge University Press).

Bardhan, Pranab and Dilip Mookherjee. 2000. "Relative Capture of Local and Central Government: An Essay in the Political Economy of Decentralization," Dept. of Economics, U. of California, Berkeley, Dept. of Economics, Boston University.

Besley, Timothy and Stephen Coate. 2003. "Centralized versus Decentralized Provision of Local Public Goods: A Political Economy Approach." *Journal of Public Economics* 87, 12: 2611-37.

Bolton, Patrick and Gerard Roland. 1997. "The Breakup of Nations: A Political Economy Analysis," *Quarterly Journal of Economics* 112 (4): 1057–1090..

Cameron, David. 1978. "The Expansion of the Public Economy: A Comparative Analysis," *American Political Science Review* 72: 1243–61.

Cremer, Jacques and Thomas Palfrey. 1999. "Political Confederation." *American Political Science Review* 93: 69–93.

Diaz-Cayeros, Alberto. 2000. "Decentralization of Taxation and Expenditure: A Latin American Phenomenon?" Paper prepared for the Conference, "Decentralization in Latin America," University of Minnesota, February 11–12, 2000.

Dahl Robert and Edward Tufte. 1973. *Size and Democracy*. Stanford, CA: Stanford University Press.

Fearon, James and Pieter van Houten. 1998. "The Politicization of Cultural and Economic Difference: A Return to the Theory of Regional Autonomy Movements," paper presented at the Annual Meeting of the American Political Science Association, Boston, MA.

Fornasari, Francesca, Steven Webb and Heng-fu Zou. 1999. "The Macroeconomic Impact of Decentralized Spending Deficits: International Evidence." Latin American and Caribbean Sector, Poverty Reduction and Development Economic Research Group, World Bank: Washington, D.C.

Garrett, Geoffrey. 1998a. Global markets and national politics: collision course or virtuous circle? *International Organization*, 52: 787–824.

Giddens, Anthony. 2000. *Runaway World.* New York: Routledge.

Haggard, Stephan. 1999. "The Politics of Decentralization in Latin America." Unpublished paper. UCSD.

Inman, Robert and Daniel Rubinfeld. 1997. "The Political Economy of Federalism," in Dennis Mueller, ed., *Perspectives on Public Choice* (Cambridge: Cambridge University Press).

Inter-American Development Bank. 1997. "Fiscal Decisionmaking in Decentralized Democracies," in *Latin America After a Decade of Reforms, Economic and Social Progress in Latin America Report*, Washington, D.C., Johns Hopkins.

Henderson, Vernon. 2000. "The Effects of Urban Concentration on Economic Growth," NBER Working Paper W7503/

Kletzer, Kenneth and J✧rgen von Hagen. 2000. “Monetary Union and Fiscal Federalism,” Working Paper B1, Zentrum fur Europaische Integrationsforschung, Bonn.

Krugman, Paul. 1991. *Geography and Trade*. Cambridge: MIT Press.

Laitin, David and Daniel Posner. 2000. “The Implications of Constructivism for Constructing Ethnic Fractionalization Indices,” *APSA-CP* 12, 1: 13–17.

Lockwood, Ben. 2002. “Distributive Politics and the Costs of Centralization,” *Review of Economic Studies* 69:1-25.

McGillivray, Fiona and Nathan Jensen. 2000.”The Political Determinates of Foreign Direct Investment,” paper presented at the annual meeting of the American Political Science Association, Washington, D.C.

Musgrave, Richard. 1959. *The Theory of Public Finance: A Study in Public Economy*. New York: McGraw-Hill.

Oates, Wallace. 1972. *Fiscal Federalism*. New York: Harcourut Brace Jovanovich.

Obstfeld, Maurice and Giovanni Peri. 1998. “Regional Non-adjustment and Fiscal Policy,” *Economic Policy* 26.

O’Neill, Kathleen. 2003. “Decentralization as an Electoral Strategy,” *Comparative Political Studies* 36, 9.

Panizza, Ugo. 1999. “On the Determinants of Fiscal Centralization: Theory and Evidence,” *Journal of Public Economics* 74: 97–139.

Persson, Torsten and Guido Tabellini. 1996a. “Federal Fiscal Constitutions: Risk Sharing and Redistribution,” *Journal of Political Economy* 104, 5: 979–1009.

_____. 1996b. “Federal Fiscal Constitutions: Risk Sharing and Moral Hazard,” *Econometrica* 64.

Rodden, Jonathan. 2002. “The Dilemma of Fiscal Federalism: Grants and Fiscal Performance Around the World.” *American Journal of Political Science* 46, 2: 670-687.

_____. 2004. "Comparative Federalism and Decentralization: On Meaning and Measurement." *Comparative Politics* 36,4: 481-500.

Rodden, Jonathan and Susan-Rose-Ackerman. 1997. “Does Federalism Preserve Markets?,” *Virginia Law Review* 83:7, 1521–1572.

Rodrik, Dani. 1998. “Why Do More Open Economies Have Bigger Governments?” *Journal of Political Economy* 106, 5: 997–1032.

Sachs, Jeffrey and Xavier Sala-I- Martin. 1992. “Fiscal Federalism and Optimum Currency Areas,” in Matthew Canzoneri, Paul Masson, and Vittorio Grilli, eds., *Establishing a Central Bank: Issues in Europe and Lessons from the U.S.* Cambridge: Cambridge University Press.

Samuels, David and Richard Snyder. 2000. “The Value of a Vote: Malapportionment in Comparative Perspective.” *British Journal of Political Science*. Forthcoming.

Seabright, Paul. 1996. “Accountability and Decentralisation in Government: An Incomplete Contracts Model,” *European Economic Review* 40, 1: 61–89.

Shankar, Raja and Anwar Shah. 2000. “Bridging the Economic Divide within Nations: A Scorecard on the Performance of Regional Policies in Reducing Regional Income Disparities,” unpublished paper, World Bank.

Taylor, C. and M. Hudson. 1972. *World Handbook of Political and Social Indicators*. New Haven, CT: Yale University Press.

Triesman, Daniel. 1999. “Fiscal Transfers and Fiscal Appeasement,” Chapter 3 from *After the Deluge: Regional Crises and Political Consolidation in Russia*. Ann Arbor: University of Michigan Press.

Van Houten, Pieter. 2003. "Globalization and Demands for Regional Autonomy in Europe," in Miles Kahler and David Lake, eds., *Governance in a Global Economy: Political Authority in Transition*. Princeton University Press: 110-135.

Von Hagen, Juergen. 1998. "Fiscal Policy and Intranational Risk-Sharing," Working Paper B13, Zentrum für Europäische Integrationsforschung, Bonn.

Weingast, Barry. 1995. "The Economic Role of Political Institutions: Market-Preserving Federalism and Economic Development," *Journal of Law, Economics, and Organization* 11, 1–31.

Wibbels, Erik and Jonathan Rodden. Forthcoming. "The Political Economy of Pro-cyclical Decentralised Finance" (with Erik Wibbels), in Peter Wierts, ed., *Fiscal Policy Surveillance in Europe*. Edward Elgar (forthcoming).

Yusuf, Shahid. 2000. "Where the World is Heading Toward: Globalization, Localization, and the Pattern of Development," unpublished paper, World Bank.

Table 1

State and Local Share of Total Government Expenditure

	1981-1989 Average	1990-1997 Average	Change
Peru	0.10	0.25	0.15
Mexico	0.12	0.26	0.14
Spain	0.23	0.36	0.13
Brazil	0.29	0.41	0.12
Argentina	0.35	0.44	0.09
Bolivia	0.14	0.21	0.07
Guatemala	0.04	0.10	0.05
Nicaragua	0.03	0.08	0.05
United States	0.48	0.53	0.05
Israel	0.10	0.14	0.04
India	0.46	0.49	0.03
Luxembourg	0.15	0.17	0.02
France	0.17	0.19	0.01
Indonesia	0.12	0.13	0.01
Austria	0.33	0.34	0.01
Norway	0.34	0.35	0.01
Portugal	0.08	0.09	0.01
United Kingdom	0.28	0.29	0.01
Ireland	0.28	0.29	0.01
Bulgaria	0.19	0.19	0.01
Germany	0.45	0.45	0.00
Kenya	0.05	0.04	0.00
Thailand	0.07	0.07	-0.01
Belgium	0.12	0.12	-0.01
Philippines	0.09	0.08	-0.01
Iceland	0.24	0.23	-0.01
Denmark	0.55	0.54	-0.01
Canada	0.67	0.65	-0.02
Netherlands	0.32	0.30	-0.02
Australia	0.52	0.50	-0.02
New Zealand	0.12	0.10	-0.02
Paraguay	0.04	0.02	-0.02
Botswana	0.06	0.03	-0.03
Sweden	0.40	0.37	-0.03
Finland	0.45	0.41	-0.04
South Africa	0.26	0.22	-0.04
Switzerland	0.59	0.55	-0.04
Malaysia	0.19	0.15	-0.04
Italy	0.30	0.23	-0.07
Nigeria	0.54	0.46	-0.07
Romania	0.20	0.11	-0.09
Zimbabwe	0.21	0.12	-0.09

Source: GFS

Table 2: Between-effects decentralization models, 1981-1989

	Dependent Variable:											
	State and Local Expenditure as Share of Total Government Expenditure (Average)						State and Local Revenue as Share of Total Government Revenue (Average)					
	Coef.	S.E.		Coef.	S.E.		Coef.	S.E.		Coef.	S.E.	
Control Variables												
Area (log)	0.19	0.09	**	0.07	0.11		0.15	0.08	*	0.02	0.09	
Population (log)	0.03	0.09		-0.03	0.10		0.05	0.09		-0.02	0.09	
GDP Per Capita (log)	0.13	0.24		0.09	0.24		0.23	0.23		0.18	0.22	
Ethnic Fractionalization	0.003	0.004		0.004	0.005		0.003	0.004		0.004	0.004	
Urbanization	0.001	0.01		-0.001	0.01		-0.002	0.01		-0.004	0.01	
Democracy	0.08	0.02	***	0.07	0.02	***	0.07	0.02	***	0.06	0.02	***
Federalism	0.38	0.28		0.53	0.28	*	0.33	0.26		0.45	0.25	*
Total Expenditure/GDP	1.04	0.98		1.79	1.05	*	0.93	0.91		1.94	0.99	*
Central Balance/Revenue	0.44	0.47		0.83	0.50		-0.18	0.45		0.26	0.46	
Globalization Variables												
Trade/GDP				-1.12	0.61	*				-1.32	0.60	**
Open capital accounts				0.13	0.29					0.18	0.27	
Constant	-6.83	2.36		-3.39	2.95		-7.28	2.22		-3.58	2.70	
R Square	0.69			0.72			0.67			0.72		
Observations	42			42			43			43		

*** Significant at .01
** Significant at .05
* Significant at .10

Table 3: Between-effects decentralization models, 1990-1997

	Dependent Variable:										
	State and Local Expenditure as Share of Total Government Expenditure (Average)						State and Local Revenue as Share of Total Government Revenue (Average)					
	Coef.	S.E.	Coef.	S.E.		Coef.	S.E.		Coef.	S.E.	
Control Variables											
Area (log)	0.05	0.07	0.04	0.09		0.03	0.08		0.04	0.09	
Population (log)	-0.0001	0.07	-0.01	0.08		0.0027	0.08		0.004	0.09	
GDP Per Capita (log)	0.20	0.20	0.15	0.23		0.20	0.21		0.20	0.24	
Ethnic Fractionalization	0.002	0.004	0.002	0.005		0.004	0.004		0.003	0.005	
Urbanization	0.01	0.01	0.01	0.01		0.01	0.01		0.01	0.01	
Democracy	-0.01	0.03	-0.01	0.03		-0.01	0.03		-0.01	0.03	
Federalism	0.75	0.21	0.77	0.23	***	0.76	0.22	***	0.75	0.24	***
Total Expenditure/GDP	1.59	1.08	1.74	1.28		1.78	1.13		1.63	1.33	
Central Balance/Revenue	-1.99	0.94	-1.87	1.12	*	-2.30	0.98	**	-2.44	1.16	**
Globalization Variables											
Trade/GDP			-0.10	0.44					0.11	0.45	
Open capital accounts			0.10	0.22					0.08	0.23	
Constant	-5.67	1.77	-5.01	2.61		-5.52	1.84		-5.67	2.70	
R Square	0.70		0.70			0.69			0.69		
Observations	39		39			39			39		

*** Significant at .01
** Significant at .05
* Significant at .10

Table 4: Time-series cross-section decentralization models, 1981-1997

	Dependent variable: State and Local Expenditure as Share of Total Government Expenditure			Dependent variable: State and Local Revenue as Share of Total Government Revenue		
	Coef.	P.C.S.E.		Coef.	P.C.S.E	
Control variables						
Lagged Dependent Variable	0.65	0.07	***	0.68	0.07	***
Population (log)	0.30	0.07	***	0.27	0.07	***
GDP Per Capita (log)	0.08	0.05	*	0.06	0.05	
Urbanization	-0.01	0.003	***	-0.004	0.003	
Democracy	-0.001	0.003		-0.001	0.004	
Total Expenditure/GDP	-0.23	0.15		-0.25	0.11	**
Lagged Central Balance/Revenue	-0.08	0.09		0.23	0.06	***
Central Balance/Revenue	0.18	0.10	**	-0.31	0.05	***
Globalization Variables						
Trade/GDP	-0.20	0.08	***	-0.14	0.07	**
Open capital accounts	-0.04	0.02	**	-0.04	0.02	**
Constant	-3.99	0.91				
R Square	0.98			0.98		
Countries	57			57		
Observations	540			540		

*** Significant at .01

** Significant at .05

* Significant at .10

OLS with panel corrected standard errors

Fixed effects; coefficients for country dummies not reported.