Globalization and Fiscal Decentralization

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I. Introduction

The decentralization of authority to state and local governments and the international integration of markets are widely perceived as two defining trends of the contemporary era. This paper asks whether the two are causally connected: has globalization caused decentralization? Several plausible pathways have been proposed, but the most prominent and well-developed argument asserts that the international integration of markets has facilitated decentralization by reducing the economic costs of smallness (Alesina & Spolaore 1997, Bolton & Roland 1997). Larger units allow for scale economies in the production of public and private goods, but they also reduce the scope for localities and regions with distinctive preferences to pursue their own political and economic strategies. Free trade and capital movements reduce the costs of going it alone, freeing smaller units to pursue their own destinies.

The primary purpose of this paper is to show that using one natural indicator of political economic authority – the balance of taxing and spending between central governments and state and local governments – international market integration has been associated with fiscal centralization, rather than decentralization. There are several reasons why this might be the case. It may become more costly for the central

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1 Without implicating them, the authors wish to thank conference participants and UCSD, the Midwest Political Science Association, and the American Political Science Association along with the following individuals for helpful comments: Carles Boix, Kelly Chang, Lucy Goodhart, Pieter van Houten, Miles Kahler, David Lake, Robert Powell, Beth Simmons, and Richard Steinberg.
government to hold a heterogeneous country together in the global economy. Economic integration might increase demands for a) fiscal stabilization covering the entire country and b) insurance for regions adversely affected by asymmetric economic shocks. Both fiscal stabilization and inter-regional risk-sharing require a pooling of economic resources at the center. In addition, trade liberalization is a notoriously difficult political reform because it creates winners and losers, and these are often geographically concentrated. In order to mobilize votes for free trade in democracies, it may be necessary for the regions that benefit from free trade to send redistributive transfers to those that stand to lose income. Finally, we call into question the common “race to the bottom” metaphor, suggesting that enhanced competition between governments for mobile capital may not actually drive down the central government’s ability to tax.

There are significant limitations of our analysis. There is no reason to think that fiscal decentralization is an accurate indicator of all types of political decentralization. As Scottish devolution shows, for example, substantial political decentralization might take place without fiscal decentralization. Indeed, our analysis suggests that globalization may have different effects on fiscal and political decentralization. Moreover, the political economy of a fiscal federation in which spending is decentralized and taxation is not (as in the Scottish case) is very different from one in which taxation is decentralized as well (as in the US). These are important issues to which we will return in future research. But they do not detract from our central message that the common view of a tight connection between globalization and decentralization needs to be reconsidered.

The measure of fiscal decentralization we use in this paper is simple -- subnational (combined state and local) shares of total public sector revenues and
expenditures. Table 1 provides an overview of countries for which yearly expenditure data have been available for most of the last two decades.\footnote{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,} 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, for which more than half of all government expenditure takes place at subnational levels, to countries like Paraguay or Thailand, where less than ten percent of total expenditure is done by subnational governments.

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 percent of total expenditures). The question is whether and how these differences correlate with the extent of international market integration in these countries.

The remainder of the paper is divided into six sections. The second section begins with a general overview of the literature on fiscal decentralization. Section three
then reviews new arguments positing a link between globalization and decentralization. We offer a critique and alternatives to these arguments in section four, arguing that there are good reasons to believe that globalization should promote fiscal centralization. Our empirical tests of these contending perspectives are presented in sections five (based on cross-section averages) and six (using time-series cross-sectional data). The concluding section draws out some broad lessons and maps out an agenda for further research.

II. The Determinates of Decentralization

This section reviews some old and new arguments about the determinants of decentralization. We begin with existing arguments about essentially invariant factors that likely affect overall levels of decentralization. In these arguments, levels of decentralization are viewed as long-run efficient responses to demands made by investors and voters. We then move on to discuss the effects of democracy and federalism – two institutional factors that might affect both cross-national and diachronic variations in decentralization. Finally, we discuss the possibility that decentralization is a result of opportunistic attempts by central governments to balance their budgets on the backs of local governments.

Preference Heterogeneity

Previous theoretical and empirical studies of decentralization have focused on basic underlying characteristics of societies that might affect the costs and benefits of adopting a decentralized fiscal system (Oates, 1972; Panizza, 1999; Diaz-Cayeros 2000). Some of the averages reflect slightly shorter periods.
The most important arguments see fiscal decentralization as an efficient response to the underlying heterogeneity of preferences in the society. A key argument of traditional fiscal federalism theory (Musgrave 1959, Oates 1972) is that the benefits of decentralization are positively correlated with the (geographic) variance in demands for publicly provided goods. Other things equal, central governments in larger, more diverse societies will find it more difficult to satisfy divergent preferences over redistribution and public goods. “In small, relatively homogeneous countries, public choices are closer to the preferences of the average individual than in larger, more heterogeneous countries” (Alesina & Spolaore 1997, 1029).

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, diverse countries will face overwhelming pressure to decentralize, lest they fall apart through secession or civil war. Indeed, Wallace Oates (1972) and Ugo Panizza (1999) find that decentralization is positively correlated with country size and ethno-linguistic heterogeneity.

**Institutions**

It follows naturally from these arguments that democracies should be more decentralized than authoritarian systems. If geographically-dispersed heterogeneous preferences over public goods are taken as a given, a rent-seeking authoritarian government that can rule without the consent of the majority should be able to sustain higher levels of centralization, while a democratic government in the same society would be more likely to succumb to demands for decentralization (Panizza 1999, Alesina & Spolaore1997). In addition, decentralization of authority plays an important part in the
descriptive political science literature on transitions to democracy (Haggard 1999). In many cases, regional elites have played important roles in the protests and negotiations that have led to democratic transitions. In such 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 2000).

Levels of fiscal decentralization might also be influenced by the presence of federal political institutions. 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 (Rodden 2000). In most cases this is accomplished through special constitutional protections and amendment procedures and an upper house that disproportionately represents the regions. It seems likely that such institutions will allow subnational officials to bargain for a larger share of the public sector’s resources than their counterparts in unitary systems.

Strategic Deficit-Shifting

Whether demands for (de)centralization come from voters, investors, or multilateral lending agencies, these demands are only transformed into policy if they are compatible with the incentives of the central government. Decentralization does not simply happen—it is a strategic choice made by self-interested politicians. Central government officials may face incentives for decentralization that have little to do with the demands of voters, investors, or lenders. A common complaint among critics of fiscal decentralization in Latin America, Africa, and Eastern Europe, for example, is that it is little more than a thinly veiled attempt to offload central government deficits onto
state and local governments by increasing subnational expenditure responsibilities
without a corresponding increase in revenues. Such critiques are not limited to poor
countries—similar complaints have been made about “new federalism” initiatives in the
U.S. federal system from Nixon to Clinton, and about recent changes in the Canadian
intergovernmental fiscal system.

III. The Conventional Wisdom: Globalization and Decentralization

Demands for Autonomy: Ethnicity and Income Distribution

Thus far we have presented distinct arguments about the demand for and supply
of fiscal decentralization. The underlying heterogeneity of preferences over
redistribution and collective goods might drive the demand for decentralization, but
ultimately the supply might be affected by the structure of political institutions. The new
literature on economic integration and the vertical distribution of governmental authority
builds on demand-driven arguments about the heterogeneity of preferences over
examine a basic tradeoff between the benefits of large jurisdictions and the costs of
heterogeneity in large populations. The benefits of size derive from the availability of
more efficient forms of taxation, common defense, free trade within the country,
economies of scale, and the decreasing per capita cost of non-rival public goods. Large
size has a political price, however—the difficulty of satisfying a more diverse population
(See also Seabright 1997). 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.

In both models, sufficiently high levels of heterogeneity—whether derived from ethnicity or income distribution—lead to demands for decentralization – or even secession. The costs and benefits of maintaining a large jurisdiction thus affect the strength of such demands, the extent of decentralization within countries, and ultimately, the number and size of nations. Economic integration can have a profound affect on these costs and benefits. “The intuition is that 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 results suggests that regional political separatism should be associated with increasing economic integration” (Alesina & Spolaore 1997, 1041).

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 (Alesina & Spolaore 1997, 1046). After all, “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” (Bolton & Roland 1997: 1057-58).

Drawing on arguments by Anthony Giddens (2000), Shahid Yusuf (2000) makes a more general argument about globalization and demands for decentralization. Gains in communication technology might provide individuals with better information and expose them to a broader range of opinions. This allegedly undermines trust in distant,
centralized governments and enhances demands for government accountability and responsiveness, which can presumably be achieved more easily at the local level.\(^3\)

*Demands from Investors*

Decentralization might not only be preferred by voters in the global economy, but by international investors as well. The “market preserving federalism” literature argues that under the right conditions, fiscal decentralization forces governments to compete more fiercely for mobile capital, which creates incentives for politicians to provide good investment environments, keep taxes (and rents) low, and ultimately preserve markets (Weingast 1995). In the same vein, McGillivray and Jensen (2000) argue that political and fiscal decentralization allows countries to make more credible commitments to foreign investors. Moreover, fiscal decentralization found the favor of the World Bank and IMF in the late 1980s and early 1990s, creating an additional external demand for decentralization in some developing countries. If these arguments are correct, and central governments are interested in pleasing investors and multilateral lending agencies, they may face incentives to devolve fiscal authority to subnational governments.

Such an argument is intimately related to discussions of globalization and the “race to the bottom.” Globalization is said to increase pressure on central governments to make themselves attractive to creditors and investors, which might induce tax competition and incentives to balance budgets. In a sense, by entering a world of integrated markets and the free flow of capital and finished goods across borders, central

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\(^3\) Though long accepted in the traditional fiscal federalism literature, this latter assumption has recently been challenged by several authors. See, e.g. Bardhan and Mookherjie (1999) and Rodden and Rose-Ackerman (1997).
governments are entering a world to which subnational governments are already accustomed. Thus one might hypothesize that trade integration leads to downward pressure on central government spending without significantly affecting subnational governments. Or returning to an argument made above, in the interest of political expedience, central governments may attempt to deal with these new fiscal pressures by “offloading” responsibilities to subnational governments. Either of these possibilities would lead to a positive relationship between openness and fiscal decentralization.

IV. Globalization and Fiscal Centralization

These arguments in favor of a globalization-decentralization nexus are impressive in numerous respects – the logic underpinning them is straightforward, they have been propounded by influential political economists, and they accord with the stylized fact of increasing decentralization in recent decades. We have no quarrel with some of them. Indeed, 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. 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. 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 an increase in subnational expenditures as a portion of the total public sector. On the contrary, globalization might lead to powerful, countervailing demands for the centralization of public expenditures—especially revenue-raising—even if simultaneously enhancing the political autonomy and discretion of subnational officials.

The Demands of Voters: Inter-Regional Risk-Sharing and Stabilization

Thus far, an important benefit of centralized fiscal arrangements has been overlooked. 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). 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 which shocks or when this will happen. To the extent that globalization increases economic volatility and unpredictability, as claimed by Cameron (1978) and Rodrik (1997), globalization increases aggregate risk, and hence enhances the importance of automatic governmental tax-transfer insurance schemes. According to Atkeson and Bayoumi (1993), “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” (p. 91).

More specifically, it can only be the business of the central government, which must have wide-ranging authority over tax rates and the geographical distribution of expenditures in order for such schemes to 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).

Regional specialization is another likely consequence of economic integration. 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. Voters in small, exporting jurisdictions with relatively un-diversified economies (hence, more vulnerable to asymmetric shocks) might not be enthusiastic about fiscal decentralization if it implies a smaller role for the central government. Consider the plight of newly formed “export clusters” in the Brazilian and Indian states. Or consider the U.S. states and Canadian provinces that are dependent on exports of farm products and natural resources. Alternatively, consider the plight of the new East German Länder and the poor “old” Länder like Bremen and the Saarland; in fact a majority of the German states favors a larger, rather than a smaller spending role for the central government (Rodden 1999). The same can probably be said of the Australian states, which have the authority to tap a variety of revenue sources but decline to do so. We believe these examples may be the rule rather than the exception.
A large current literature attempts to trace out with empirical evidence the extent of temporary risk-sharing insurance and more permanent inter-regional fiscal redistribution within countries in response to asymmetric shocks. The motivation for these studies has been to criticize or defend the need for a risk-sharing scheme in the context of the European Monetary Union. While early studies, like Sachs and Sala-I-Martin (1991), may have overestimated the insurance effect in the United States (see the critique of von Hagen 1992), several more recent studies have found evidence of significant inter-regional insurance and redistribution in response to asymmetric shocks in the United States, Canada, France, Germany, and the UK.4

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. Trade integration reduces the attractiveness and usefulness of monetary policy as a stabilization tool, making fiscal policy more important. 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. If anything, fiscal decentralization might undermine the center’s ability to provide fiscal stabilization.

4 For literature reviews, see von Hagen (1998), Kletzer and von Hagen (2000), and Obstfeld and Peri (1998).
The Demands of “Losers”: Trade and Compensation

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 (See 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 might be supportive of 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 to explicitly “buy off” those who lose with a more extensive safety net or other redistributive transfers (Cameron 1978, Rodrik 1997).

When protectionist barriers fall and capital constraints are lifted in a country, it is often not difficult to predict 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, 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.
The Demands of Minority Groups

Turning the logic of Alesina and Spolaore on its head, regional heterogeneity of preferences might actually create increased spending pressure on the central government in the context of globalization. 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 such threats become much more credible 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, 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). 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 will 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 might lead to fiscal centralization.

The point of these conjectures is that even if one accepts the Alesina-Spolaore logic about the effects of globalization on the likely breakup of nations, it may well be inappropriate to argue that fiscal decentralization within an existing country is a halfway house to secession. The opposite may be true – in order to forestall secession, the national government may have to centralize fiscal policy so as to deliver benefits (in the form of guaranteed fiscal redistribution) to would-be secessionist localities.5

Battles Between Rich and Poor Regions

Relatively wealthy and poor regions are likely to have different preferences over the level of fiscal decentralization. Following Persson and Tabellini (1996a), we have argued that to the extent that globalization increases regional risk, wealthy and poor regions alike might be able to benefit from maintaining their membership in a larger risk-sharing pool. Furthermore, we have argued that wealthy regions may prefer national-level stabilization, and in particular may find it beneficial to compensate those who lose from freer trade. Nevertheless, the median voter in a relatively poor region is likely to prefer a more centralized, redistributive fiscal system than the median voter in a relatively

5 Our argument about fiscal centralization and globalization should be distinguished from a suggestion made by Diaz-Cayeros (2000), building from Dahl and Tufte (1973) about trade and decentralization. Diaz-Cayeros conjectures that countries that trade more internally (and hence less with other countries as a portion of GDP) require a greater role for subnational governments. It is not clear, however, why more active local governments would enhance internal trade. On the contrary, strong subnational governments often distort and undermine rather than facilitate internal trade (see Rodden and Rose-Ackerman 1997).
wealthy region (Bolton and Roland 1997). In a related matter, more productive regions may prefer lower levels of risk-sharing than persistently disadvantaged ones (Persson and Tabellini 1996b).

Such political battles over redistribution and risk-sharing might pose a complication for our argument about globalization and fiscal centralization. Increasing cross-border trade and capital mobility and improved access to foreign markets might cause relatively wealthier, more productive regions to prefer lower levels of inter-regional redistribution. If they win out over poor regions, this could arguably lead to fiscal decentralization. Under autarky, inter-regional redistributive transfers might make sense to voters in wealthy jurisdictions if they help prop up a common internal market. With increasingly free access to international markets, however, voters in wealthy regions may run out of reasons to sustain their generosity. Indeed, as a European free trade zone takes shape, demands for reduced inter-regional transfers are gaining strength in regions like Baden-Wuerttemberg and Bavaria in Germany, and the Northern regions of Italy.

But there are few reasons to believe that the preferences of wealthy regions will translate easily into policy outcomes, since transfer-receiving regions are likely to go to great lengths to protect the transfer system, and for practical political reasons, exit threats of wealthy regions may not be very credible (e.g. Baden-Wuerttemberg). Moreover, there are good reasons to think that in most countries, if transfers are determined through any kind of democratic process, poor regions have a distinct political advantage.

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6 Bolton and Roland point out, however, that income distribution within regions is important as well—the median voter in a relatively poor region might still prefer decentralization if, by voting for fiscal centralization, he would empower a national median voter who prefers “too much” redistribution.
Regional GDP data have been collected for a sample of 26 countries by Shah and Shankar (2000), who show that regional incomes are quite skewed in virtually every country regardless of levels of fiscal and political decentralization, and regional inequality is growing in most of the developing countries in the sample. The distance between wealthy and poor regions is often staggering, especially in developing countries, and the latter almost always greatly outnumber the former. In many developing countries in fact, the lion’s share of the economic activity is concentrated in the “urban giants” (Ades and Glaeser, 1995), and this urban concentration has not been reversed by increasing economic integration (Henderson 2000). Add to this the fact that the poor, rural regions are almost always over-represented in the legislature (Samuels and Snyder, 1999), and one has strong reasons to suspect that poor regions can, under a variety of plausible political conditions, expropriate the rich. But even if wealthy regions win the political battle with poor regions and implement a more decentralized fiscal structure, it is not clear that this would result in higher subnational expenditures as a percent of the total. The central government’s spending would likely go down with the reduction in transfers, but under capital mobility, all local governments might be forced to lower their expenditures as well, thus lowering the value of the numerator and the denominator simultaneously.

Rethinking the Race to the Bottom

7 If the “urban giant” towers over the rest of the country in population as well as GDP, this relatively wealthy jurisdiction might expropriate the hinterlands through the political process, as expected by Ades and Glaeser (1995), but if the key capital or port cities are not dominant in population or they are underrepresented (e.g. Sao Paulo in Brazil), they may be exploited by the hinterlands.
In addition to arguments about demands for decentralization related to ethnic and income heterogeneity, the previous section also pointed out a potential link between globalization and increasing fiscal pressure on the central government. We wish to call this hypothesis into question as well. Empirical studies have not shown unambiguously that increasing financial openness and trade have created substantial downward pressure on taxation. In fact, it is entirely plausible that even if fiscal competition forces governments to lower tax rates, increases in trade lead to higher private income, and thus unaltered or even faster growth in certain kinds of government revenue. It seems particularly plausible that revenue from income taxes might grow. With only a few exceptions (e.g. the United States, Switzerland, and Canada), income taxation is the domain of the central government. On the whole, subnational taxation is more often limited to property taxes and user fees, which would not likely be affected one way or the other by increasing trade. Though certainly not consistent with the prevailing wisdom, it is plausible that increased trade actually strengthens the fiscal hand of the center in this way.

Summary

This section has made a very simple argument: on balance, globalization should lead to increased pressure for fiscal centralization. Economic integration may lower some of the costs of “going it alone” and hence improve the bargaining position of would-be secessionists. But in the vast majority of cases in which secession does not take place, this need not translate into fiscal decentralization. On the contrary, central governments may have to pay more to hold the union together. More generally,
economic integration may actually raise the costs of “going it alone” by increasing both aggregate and region-specific risk, creating greater demands for insurance and stabilization that only the central government can provide. In addition, fiscal centralization might result from increased transfers flowing through the central government from districts who stand to gain to those who fear to lose income through freer trade. Much more conjecturally, we have suggested that increasing trade might strengthen the central government’s tax base vis-à-vis that of local governments.

To be sure, a more complete account of globalization and the movement of fiscal authority might attempt to model the complex interplay of factors including income distribution between and within regions, the size and political strength of wealthy versus poor regions, the central government’s political decision-making process, and the relative credibility of regional exit threats. A good deal of basic theoretical work remains to be done. Nevertheless, the basic logic linking economic integration to fiscal centralization is straightforward and sound. Moreover, unlike more intricate arguments, it can be evaluated empirically with the rather blunt existing data on revenue and expenditure decentralization around the world.

V. Analysis of Cross-Section Averages

This section examines the propositions laid out in the previous sections with OLS regression analysis 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: 1982 to 1989, and 1990 to 1997. The cases are selected based on the availability of sufficient
data on the dependent variable—subnational expenditure as a share of total public sector expenditure. These data are derived from the IMF’s Government Finance Statistics Yearbook. Higher scores on the dependent variable denote more 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. Following Panizza (1999), we also include a measure of ethnic fractionalization as a proxy for preference heterogeneity. Next, we include averages of Gurr’s 20-point measure of democracy. We also include a simple dummy variable for political federalism.

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.

The next group of variables address globalization using two simple measures. We use trade/GDP ratios to capture the international integration of national goods and services markets. Second, capital account openness is a dummy variable from the

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8 A promising effort is Fearon and Van Houten (1998).
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 This variable is taken from Rodden (2000). Cases are coded as federal if they feature constitutional protections for states and state-based representation in an upper chamber of the legislature.
13 The source is the World Bank, World Development Indicators 2000.
14 Ibid.
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.

Finally, we include two public finance variables calculated from the GFS. First, it seems possible 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, in order to examine the plausibility of the offloading hypothesis, we include the central government’s average fiscal balance as a percentage of revenue.

**Results**

The results from the regressions on the first period (1982-1989) are presented in Table 2, and the results from the second period (1990-1997) are presented in Table 3.

[TABLES 2 AND 3 ABOUT HERE]

First we estimate a basic model using the variables that have been analyzed by others along with the urbanization variable. As expected, countries with larger area are significantly more decentralized. In addition, countries with higher GDP per capita are more decentralized. Population and urbanization have no effect on decentralization in any of the estimations, so we drop them from subsequent analysis.\textsuperscript{15} We do the same for

\textsuperscript{15} 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.
ethnic fractionalization, which contrary to the findings of Panizza (1999), was also not significant in any of our estimations. However, the main findings of previous studies hold up: decentralization is positively correlated with area and wealth in both the earlier and later periods. They also survive the inclusion of several control variables not included in previous studies.

Next, we add the two institutional variables. Democracy has the expected sign in both the earlier and later periods, though it is only significant in the earlier period. This is not surprising, given that after many successful transitions to democracy, the later period demonstrates less variation across countries. Thus it appears that democracy is positively correlated with decentralization, but the pooled time series analysis below provides a much better test. Second, the federalism variable clearly accounts for a good deal of cross-national variation in fiscal decentralization. As expected, state and local governments are responsible for a much larger share of public spending in formally federal systems. This finding is especially strong in the later period.

Next, we add the globalization variables. Capital account openness and trade had no significant effects on decentralization in either period in any specification. Thus we find no support using cross-section averages for either the conventional wisdom or our alternative argument. This is not very surprising, however, since globalization and decentralization are processes that unfold over time within countries. We must exploit the time-series cross-section data before discarding these arguments.

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16 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 slightly different.

17 Note that this 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 (2000) shows that federal and unitary systems are, on average, equally reliant on central government transfers.
Finally, we add the public finance variables. The coefficient for total government expenditure (as a share of GDP) is positive in each estimation, and even significant in the full model for the earlier period, but it is not significantly different from zero in the later period. Thus if anything, we have very tentative evidence that countries with larger public sectors tend to be more decentralized.

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. During the 1980s, there appears to have been a positive relationship between central government fiscal balance and levels of decentralization, but during the 1990s, countries with large central government deficits tended to be significantly more decentralized.

Similar models were also estimated using state and local share of total government revenue, and the results were virtually identical to those presented here. The main results were not affected by case-wise deletion, revealing that the results are not driven by any individual cases. Additionally, since the dependent variable has a lower limit of zero and an upper limit of one, OLS results are potentially biased. For this reason, 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 limited
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.

VI. Pooled Time Series Analysis

Table 4 presents our regression analysis of spending and revenue decentralization using panel data, comprising observations for 47 countries for the period 1978-1997. We believe the panel specification is 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 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 a conservative approach—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.  

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18 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.
The first thing to note about the regression estimates is that patterns of decentralization were sticky over time (the coefficients on the lagged dependent variables were around .7 and highly statistically significant). Furthermore, the battery of country dummy variables (not reported) was highly significant over time (the null hypothesis of common intercepts for all countries can be rejected with extremely high levels of confidence). As a result, the $R^2$ for both of the estimated equations were also very high, above .99. 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 effects of the central government's fiscal balance.

**TABLE 4 ABOUT HERE**

*Control Variables*

Let us begin with the basic control variables. It is not surprising that area does not enter significantly since fixed effects are included. In contrast with previous studies and the simple cross-section results presented above, we detect no relationship between GDP per capita and decentralization over time within countries. Not surprisingly, countries with formal federal political structures tended also to be fiscally more decentralized. Consistent with normative views about democracy, more democratic countries tended to be more decentralized (though this effect was not significant in the revenues equation). We also estimated models including the ethnic fractionalization index, population, urbanization, and defense expenditures. None of these approached
statistical significance, and none affected any of the results reported in Table 4, so we do not report them here.

**Deficit-Shifting**

The results provide evidence that decentralization should not only be understood as a response to demands of voters and investors, but also as 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 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 (i.e., 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 round the world, but they are merely suggestive. Considerable further analysis is needed. The rather straightforward OLS model presented here, while useful
for assessing the other theoretical claims under analysis, may not be an optimal way to
address the dynamics of strategic deficit-shifting.¹⁹

**Globalization**

For present purposes, the most interesting parameter estimates concern the two
globalization variables. Put simply, countries that were more exposed to *trade* and that
had *open capital accounts* had more centralized fiscal systems. This is wholly
inconsistent with the logic of Alesina-Spolaore or Bolton-Roland argument 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. But it is
completely consistent with our counter-arguments.

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. 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

¹⁹ Future work might use an error correction set-up with dynamic panel estimation techniques to examine
the relationship between central and subnational deficits (see Arellano & Bond 1998). Such analysis might
consider more carefully the opposite causal relationship as well—subnational governments are often able to
shift their own deficits onto the central government (Fornasari, Webb, & Zou 1999; Rodden 2000).
in the “expenditure” equations. In every single equation, however, the signs for trade and openness are negative, and both are significant in most.20

Of course we should not overestimate the magnitude of these effects. The coefficient of -0.005 on open capital account variable in the spending equation, for example, suggests that removing all significant restrictions on capital account transactions only increases the state and local share of total expenditure by .5 of one percent of total government spending. In the same equation, a 10 percent 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 estimated to have reduced the state and local share of expenditures by .32 percentage points. Moving from the United States or Brazil, where trade is on average around 20 percent of GDP, to Belgium, where it is around 120 percent, is associated with a 3.2 percent increase in the central government’s share of expenditures.

VII. Conclusion

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 decentralization within

---

20 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 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.
nations. We do not wish to debate the merits of the first proposition, but this paper calls seriously into question the globalization-decentralization nexus.

We have argued that if regional threats of secession are more credible in countries that are more integrated into international markets (which seems eminently plausible), this increases the bargaining power of some regions within extant nations. In turn, we expect that the price would-be secessionist regions demand to stay within federations might result, if anything, in fiscal centralization. It should be stressed that our empirical results do not necessarily 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 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. Van Houten, this volume, Fearon and Van Houten 1998).21 Future work might build on the framework of Triesman (1999) and use disaggregated regional fiscal, political, and demographic data to examine the interaction of trade, exit threats, and distributive politics in such countries.

We have also made some arguments linking trade and fiscal centralization that do not dwell on the demands of concentrated groups with distinct preferences. We have articulated a broader assertion that globalization might actually undermine the credibility

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21 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,
of exit threats. Fiscal federalists argue that the decentralization of taxation increases economic competition among regions, and all else equal this is likely to result in smaller governments – and hence less cushioning of adverse economic shocks through fiscal policy. In more integrated economies, these shocks are likely to be larger and less predictable, exacerbating the demands for governmental redistribution of wealth and risk. Powerful regions know that it is centralized systems of taxing and spending that are likely to deliver the most stabilization and fiscal redistribution in favor of their citizens. Moreover, we have also 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.

Our paper thus contrasts the likely effects of globalization on political and fiscal authority. Globalization may strengthen the credibility of regional autonomy movements and put pressure on central governments to cede policy control to local officials. But it 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. It may be a combination of political decentralization and fiscal centralization that best achieves these objectives.

It is somewhat surprising that these conjectures have not made it into the literature until now. After all, as political and regulatory authority have shifted upward in the European Union while taxing authority has lagged behind, a large body of theoretical and comparative empirical work has asserted that stabilization and inter-regional risk sharing are important components of central government fiscal policy in other currency unions.

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Italy, Spain, and the UK— the “trade” coefficient was negative, similar in magnitude, and significant at the 10 percent level.
Some European “fiscal federalists” cite these results and assert that EMU requires a stronger role in Europe-wide risk-sharing and redistribution. If citizens have come to expect certain levels of stabilization, inter-regional risk-sharing and redistribution, it is unclear why they would desire less protection in a more integrated economy.

The arguments presented in this paper linking globalization and (de)centralization are rather narrow—they focus only on the demand side. But we have also shown that the vertical organization of the public sector is much more than an efficient institutional response to shifting demands of voters and investors. More attention must be given to the role of political incentive structures. We have shown that democracy and political federalism affect fiscal decentralization. Moreover, we have presented preliminary evidence suggesting that decentralization can be explained as an attempt by central governments to shift deficits onto subnational governments. Future research should attempt to fill in the institutional supply side of the link between trade integration and demands for (de)centralization. Future work might build from the findings presented above and establish the political and institutional conditions under which integration is most likely to facilitate fiscal centralization, perhaps using more finely tuned data to distinguish between our alternative arguments. Theory and the analysis of country case studies might explore in greater detail the affects of globalization on games between central government politicians on the one hand, and voters and politicians in wealthy and poor, minority and majority regions on the other. Such studies should consider not only a binary choice between secession and staying together, but also the distinct possibilities of political and fiscal (de)centralization. Future 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.\textsuperscript{22}

In short, we believe that a number of important issues linking globalization and the movement of authority between central, subnational, and even super-national governments remain unresolved. We believe that the most important work on the horizon will emphasize the role of political goals and institutions.

\textsuperscript{22} For a good start, see Henderson (2000).


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<th>1990-1997 Average</th>
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Source: GFS
### Table 2: Determinates of Expenditure Decentralization, 1982-1989

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<tr>
<td>R Square</td>
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<td>Observations</td>
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**Significant at .10**

**Significant at .05**

***Significant at .01

R Square: 0.44, 0.38, 0.46, 0.46, 0.69

Observations: 40, 42, 41, 42, 41
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<td>38</td>
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</tr>
</tbody>
</table>

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

Table 3: Determinates of Expenditure Decentralization, 1990-1997
Dependent Variable: State and Local Expenditure as Share of Total Government Expenditure (Average)
**Table 4: Determinates of Expenditure and Revenue Decentralization**

<table>
<thead>
<tr>
<th>Dependent Variable:</th>
<th>State/Local <em>Expenditure</em> Share</th>
<th>State/Local <em>Revenue</em> Share</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coef. P.C.S.E.</td>
<td>Coef. P.C.S.E.</td>
</tr>
<tr>
<td><strong>Basic Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagged Dependent Variable</td>
<td>0.679  0.06 ***</td>
<td>0.730  0.06 ***</td>
</tr>
<tr>
<td>Area (log)</td>
<td>0.006  0.01</td>
<td>0.003  0.01</td>
</tr>
<tr>
<td>GDP Per Capita (log)</td>
<td>0.005  0.01</td>
<td>0.010  0.01</td>
</tr>
<tr>
<td><strong>Institutional Variables</strong></td>
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<td></td>
</tr>
<tr>
<td>Democracy</td>
<td>0.001  0.0004 **</td>
<td>0.001  0.001</td>
</tr>
<tr>
<td>Federalism</td>
<td>0.084  0.02 ***</td>
<td>0.078  0.02 ***</td>
</tr>
<tr>
<td><strong>Globalization Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade/GDP</td>
<td>-0.032  0.01 ***</td>
<td>-0.020  0.01 *</td>
</tr>
<tr>
<td>Open capital accounts</td>
<td>-0.005  0.003 *</td>
<td>-0.007  0.004 *</td>
</tr>
<tr>
<td><strong>Public Finance Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Expenditure/GDP</td>
<td>-0.019  0.02</td>
<td>-0.0053  0.02</td>
</tr>
<tr>
<td>Lagged Central Balance/Revenue</td>
<td>-0.052  0.02 ***</td>
<td>0.035  0.01 ***</td>
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<tr>
<td>Central Balance/Revenue</td>
<td>0.096  0.02 ***</td>
<td>-0.0308  0.01 ***</td>
</tr>
<tr>
<td>R Square</td>
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<td>0.99</td>
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<td>48</td>
</tr>
<tr>
<td>Observations</td>
<td>564</td>
<td>576</td>
</tr>
</tbody>
</table>

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

OLS with panel corrected standard errors (Stata 6.0 xtpcse)
Fixed effects with constant suppressed
Unbalanced panels (number of years varies by country), using "pairwise" option in Stata
Coefficients for country dummies not shown

- **Dependent Variable:**
  - Coef.: Coefficient
  - P.C.S.E.: Panel Corrected Standard Error

- **Basic Variables**
  - Lagged Dependent Variable
  - Area (log)
  - GDP Per Capita (log)

- **Institutional Variables**
  - Democracy
  - Federalism

- **Globalization Variables**
  - Trade/GDP
  - Open capital accounts

- **Public Finance Variables**
  - Total Expenditure/GDP
  - Lagged Central Balance/Revenue
  - Central Balance/Revenue