WP/00/129

IMF Working Paper

Can Fiscal Decentralization Strengthen Social Capital?

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INTERNATIONAL MONETARY FUND

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WP/00/129

IMF Working Paper

Fiscal Affairs Department

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July 2000

Abstract

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Countries where social and political institutions stimulate interpersonal trust, civic cooperation, and social cohesiveness tend to have more efficient governments, better governance systems, and faster growth. This paper provides cross-country evidence, based on a sample of developing and developed countries, that fiscal decentralization—the assignment of expenditure functions and revenue sources to lower levels of government—can boost social capital and therefore be integrated into second-generation reforms.

JEL Classification Numbers: H74, H77

Keywords: fiscal federalism, social capital

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[1] The author would like to thank Richard Disney, Sanjeev Gupta, Arye Hillman, Gabriela Inchauste, Luc Leruth, and Randa Sab for their helpful comments and discussions.

Contents

I. Introduction

In recent years, a growing number of countries around the world have implemented fiscal decentralization programs consisting primarily of devolving revenue sources and expenditure functions from the central government to subnational jurisdictions, such as states/provinces and communes/municipalities (Ter-Minassian, 1997; Fukasaku and de Mello, 1999). Central to the decentralization drive is the argument that local governments are closer to the people and hence better equipped to extract information on local preferences and needs at lower costs (Huther and Shah, 1998; and Oates, 1999). By corollary, decentralization is expected to boost public sector efficiency in service delivery, such that scarce public resources can be channeled into more productive, externality-generating uses nationwide (Inman and Rubinfeld, 1996). Moreover, accountability and transparency in policymaking can be enhanced by bringing expenditure assignments closer to revenue sources and hence to the electorate. Disenchantment with the ability of large central governments to provide goods and services efficiently and the aggravation of fiscal imbalances and debt-overhang problems have also motivated decentralization efforts in a number of countries (Tanzi, 1999).

The literature on the macroeconomic and public finance aspects of fiscal decentralization is increasing.[2] A large literature has emerged in recent years on the pitfalls of decentralization, particularly with respect to macroeconomic governance and policy sustainability (Prud'homme, 1995; Ter-Minassian, 1997; Fukasaku and de Mello, 1998; and Oates, 1999). Recent research on fiscal federalism has expanded the scope of the analysis and shown that the vertical structure of government may have important implications for political participation (Oates, 1999). However, the claim that decentralization, by bringing the government closer to the people, may be instrumental in strengthening social capital has yet to be validated empirically, at least from a cross-country perspective.[3]

Overall, social capital is a multidimensional concept, broadly defined as trust, norms, and network (Putnam, 1993) that foster mutually beneficial cooperation in society.[4] It involves civic virtue, interpersonal trust, social cooperation and cohesiveness, and associational engagements among social groups. Fukuyama (1999) defines social capital as informal norms that promote cooperation between two individuals. To highlight a common denominator in different definitions of social capital, Knack and Keefer (1997) suggest that

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[2] See, e.g., de Mello (1999a and 2000) for the impact of fiscal decentralization on budget balances; Davoodi and Zou (1998) and Zhang and Zou (1997) for the impact of decentralization on growth; and Tanzi (1995) for the impact of decentralization on the efficiency of government spending.

[3] The link between decentralization and civic engagement has been examined in case studies. See Beall (1997) for the case of waste disposal; and Tendler (1997) for the more general case of local government performance.

[4] Social capital should not be confused with what Hall and Jones (1999) call "social infrastructure," in their analysis of the determinants of cross-country differences in output per worker. In their analysis, the concept of social infrastructure is closer to that of governance.

"all concepts [of social capital] have in common the idea that trust and norms of civic cooperation are essential to well-functioning societies, and to the economic progress of these societies" (p. 1283).[5]

A large political science literature has focused on the relationship between social capital and public institutions (e.g., Putnam, 1993 and 1995; Muller and Seligson, 1994; Frey, 1997; and Fukuyama, 1999). Putnam's seminal work (1995) associates the performance of regional government in different Italian regions with "civic involvement," whereby social capital-rich regions outperform their social capital-poor counterparts, despite the funds transferred to the latter to finance economic growth and development programs.[6] Overall, the author shows that public spiritedness is supported when active citizen participation and constructive interactions between social groups and the government are stimulated.

An alternative strand of literature associates social capital with economic growth (Rodrik, 1998; and Temple and Johnson, 1998). Following the tradition of, for instance, Abramovitz (1986), it is argued that growth can be enhanced in countries where social and political institutions protect property rights and discourage rent-seeking behavior, thus fostering entrepreneurship and creating a proinvestment economic climate. Social capital can also lower the transaction costs associated with formal coordination mechanisms, such as contracts and bureaucratic rules, which is conducive to growth. Knack and Keefer (1997) show that a one-standard deviation increase in a measure of trust increases growth by more than one-half of a standard deviation.[7]

The determinants of social capital have been the subject of other recent research. Using U.S. General Social Survey (GSS) data collected by the National Opinion Research Center, Glaeser and others (1999) show that social capital is strongly associated with social status: people behave in a more trustworthy manner toward individuals with higher social status. Helliwell and Putnam (1999) show that (own and average) education attainment is associated with trust, and political and social engagements. Social capital has been shown to be affected by religion (Putnam, 1993; Fukuyama, 1999; and La Porta and others, 1997 and 1998), income distribution (Knack and Keefer, 1997), and ethnic polarization (Fox, 1996; and Knack and Keefer, 1997). Recent research also suggests that the characteristics of government are important determinants of social capital (Evans, 1996; and Narayan, 1999). This motivates the argument in this paper that the vertical structure of government, or fiscal federalism, has a bearing on social capital.

[5] See also World Bank (1998) for alternative definitions.

[6] See also Leonardi (1995); and Harriss and de Renzio (1997).

[7] See Kähkönen (1999), for a review of the literature on the orientation between social capital and waste and sanitation delivery; Collier (1998), for an analysis of social capital and poverty; Narayan and Pritchett (1999), for the association between social capital and income; and Guiso, Sapienza, and Zingales (2000), for the impact between social capital and financial development.

The recent developments in the social capital literature are not without policy implications. Indeed, policy measures aimed at strengthening social capital have become part and parcel of second-generation reforms in a number of developing and transition economies. The argument goes that by improving the quality and amount of cooperation among people, social capital promotes efficiency gains and encourages institutional capacity-building. These are important determinants of high-quality growth in economies that have already consolidated macroeconomic stability.[8]

Because social capital, which captures the strength of social institutions and public spiritedness, is a broad concept and hence difficult to measure, this paper focuses on three indicators that have been widely used in the literature: confidence in government, civic cooperation, and associational activity. These indicators are fully defined below.

The remainder of this paper is organized as follows. Section II reviews the general arguments for the association between fiscal decentralization and social capital; Section III describes the data used; Section IV reports the empirical evidence; and Section V provides the conclusions and the policy implications.

II. The General Argument

The arguments for decentralization are based on the fiscal federalism literature, which stresses subsidiarity as the main principle guiding the provision of public goods and services (e.g., Livingstone, 1956; Olson, 1969; and Oates, 1972 and 1999).[9] The basic argument is that the performance of the public sector can be enhanced by taking account of local differences in culture, environment, preferences and needs, endowment of natural resources, and economic and social institutions. A better match between the supply of public goods and services and local demands requires information on local preferences and needs; this information can be extracted more cheaply and accurately by local, rather than central, governments. This is because local governments are closer to the people and hence more identified with local causes, more sensitive to local problems, and more responsive to local demands. Fiscal decentralization consists, in this respect, of shortening the "informational distance" between the providers and recipients of public goods and services so as to reduce information costs and boost public sector efficiency in service delivery.

[8] The IMF recently hosted a conference on second-generation reforms, underscoring the role played in the reform process by measures aimed at strengthening social capital. Conference participants reiterated the need for further research on the second-generation reform issues that are critical for institutional development if developing and transition countries are to achieve high-quality growth. For more information, see www.imf.org/external/pubs/ft/seminar/1999/reforms/index.htm.

[9] According to Oates (1999), the basic principle of fiscal federalism is "the presumption that the provision of public services should be located at the lowest level of government encompassing, in a spatial sense, the relevant benefits and costs" (p. 1122).

Although the macroeconomic and public finance literatures emphasize the allocative efficiency gains resulting from fiscal decentralization, the devolution of revenue sources and expenditure functions to lower levels of government is likely to strengthen social capital for a number of reasons. These are:

- A "closer" government is perceived as more committed to local causes, more responsive to local needs and more involved in the solution of community problems. Its policies are also more easily monitored by local communities, and closer scrutiny by the citizenry fosters transparency and accountability in public sector actions. Local government officials may also be considered more trustworthy, as a result. In this case, the delegation of expenditure functions and revenue sources to local governments is expected to reinforce people's perceptions that local governments respond to their needs and preferences faster and more effectively.

  The increased confidence in local civil servants that results from fiscal decentralization is likely to be extended to the government as a whole. This is true to the extent that fiscal decentralization promotes allocative efficiency in the economy at large. In this case, greater efficiency in the provision of goods and services by the government is expected to have a bearing on macroeconomic governance. Less severe economywide fiscal imbalances and debt-overhang problems are likely to improve macroeconomic performance. Resources can therefore be channeled from deficit financing and debt servicing toward funding growth-enhancing, externality-rich spending more attuned to local needs and preferences. A government that is associated with sound macroeconomic policies inspires confidence as much as a government that is active in the solution of local community problems.

- The development of local democratic traditions, political participation, and public spiritedness can also be enhanced by bringing expenditure assignments closer to revenue sources and hence to the electorate. When policymaking assignments are devolved to lower levels of government, citizens are encouraged to take on more responsibility for social and economic development, and for that of wider society. This is because social norms and contracts are more easily enforced in smaller jurisdictions,[10] but also because deliberations between government and citizens are more frequent at the local level, where communities are more actively involved in problem-solving/decision-making processes and empowered to manage themselves. According to Hommes (1995, p. 335), "decentralization is associate with greater participation of local citizens in government decision making." When horizontal ties among community groups are strengthened, local governments are also more likely to support associational activities; promote social cohesiveness, civic virtue, and cooperation; facilitate interactions among communities; and discourage self-interest

[10] See Putnam (1993) and Narayan (1999) for illustrations and anecdotal evidence.

(Frey, 1997). The scope for rent-seeking and of interest group payoffs are increased when the government is less identified with local needs and the monitoring of government actions is costlier. Perceived "distance" and lack of commitment to local causes breeds distrust in the government and fellow community members, and weakens kinship and social institutions.

- "Closer" governments also encourage communitywide participatory initiatives, such as the formation of groups, associations, and social/cultural activities among community members, and foster participation rights. These governments are perceived as more supportive of citizens' community participation and engagement of civil society in community problem-solving than "distant" governments. In the latter, community values and civic virtues weaken, as well as the incentives for mutually beneficial cooperative solutions to collective problems. Self-reliance and individualism strengthen social tensions and discourage participation in the form of associational activities among community members. Distrust in the government and fellow community members increases the fixed costs of cooperation and reduce the externalities associated with cooperative solutions to community problems (Putzel, 1997). The incentives for associational activities are hence reduced, which, again, encourages individualism, as problem solving is no longer perceived as a mutually beneficial enterprise.

  A "distant" government encourages self-reliance and rent-seeking, rather than cooperation among different social groups, particularly the more vulnerable ones, because social norms and contracts are not easily enforced. A well-functioning code of social norms and civic virtues provides a level playing field for social behavior, which encourages civic cooperation: citizens perceive the rewards of cooperating—acting as part of a group. Civic cooperation improves allocative efficiency as the total benefit to society of cooperation outweighs the total cost. Conversely, the payoffs associated with free-riding and illegal or illegitimate actions (e.g., tax evasion, dishonesty, and corruption) increase when civic cooperation is not adequately rewarded and citizens distrust the government, each other, and/or social institutions. In this case, the disadvantages of cooperation outweigh the advantages. "Distant" governments do not encourage public spiritedness or strengthen civic culture.

The above-mentioned elements of social capital are mutually reinforcing, and have spillover effects. In this respect, fiscal decentralization is likely to be a catalyst for overall civic development, because it may create the conditions needed for development in different aspects of social organization and institutional capacity-building. Fiscal decentralization may also lay the foundation for new formal community associations and collaborations, and forge stronger relationships between civic action and government structure, rather than performance (Evans, 1996). Moreover, it may create a mutually reinforcing collaborative system/network of social, political, and economic interactions in the community.[11] Given the significant social externalities arising from these systems and collaborative ventures, social capital should be considered a public good, the provision of which is closely related to the structure of government.

III. The Data

A. The Fiscal Decentralization Indicators

Internationally comparable data on multilevel government finances are available from the IMF's Government Financial Statistics (GFS). The GFS covers countries for which public finance data are available for at least two levels of government and for a sufficiently long time span in the period 1970–95. Appendix Table 4 provides definitions/sources of the following fiscal decentralization indicators used below: (1) subnational tax autonomy, (2) subnational nontax autonomy, (3) vertical imbalances in intergovernmental fiscal relations, (4) subnational government expenditure share, and (5) subnational government size.

The fiscal decentralization indicators above are of three types. First, in the case of revenue-based indicators—indicators (1) and (2)—subnational tax and nontax autonomy measure the extent to which subnational governments are capable of mobilizing local revenues to finance their spending assignments. Second, in the case of expenditure-based indicators—indicators (4) and (5)—the size and expenditure share of subnational governments measure their importance as providers of public goods and services in absolute terms (government size) and relative to central government spending (expenditure share). Vertical imbalances in intergovernmental fiscal relations—indicator (3)—measure the gap between subnational expenditures and own revenues. This indicator is particularly important in the fiscal federalism literature. Decentralization is closely associated with vertical imbalances in intergovernmental fiscal relations for a number of reasons. The tax bases that are efficient and simple to administer by local governments tend to be few and immobile (Bird, 1992), and nontax revenues (user charges, rents, royalties, fees) tend to be limited in scope and revenue-generating capacity. Due to the possibility of tax exportation, externalities in the provision of public goods and services, factor mobility and economies of scale, mobile tax bases are most efficiently managed by higher levels of government. As a result, if subnational governments are to be important providers of public goods and services, higher-level jurisdictions must share part of their revenues with subnational governments and thus bridge the gap between spending and revenues mobilized locally. Revenue-sharing may also be needed for equalization purposes, given that different subnational jurisdictions have different revenue-mobilization capacities.

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[11] Recent debate in international forums has favored policy ownership through participation in the reform process.

B. Social Capital Indicators

Appendix Table 5 provides definitions/sources of the following social capital indicators: (1) confidence in government; (2) civic cooperation; and (3) associational activity. These three indicators, carefully detailed and used by Knack and Keefer (1997) in their paper, are constructed using World Values Surveys data. These data cover respondents in 29 market economies surveyed in 1980–81 and 1990–91.[12]

In a nutshell, confidence in government is measured by responses to questions on four government "institutions" (education, the legal system, the civil service, and the police). Civic cooperation is measured by responses to patterns of civic culture and collective norms (such as social ethics, honesty, and interpersonal trust); alignment of individual and social goals; and perceptions of tax avoidance, and benefit distribution. Associational activity is measured by responses to the ability of social groups to self-organize and engage in collective action in pursuit of common, rather than individual, objectives. This indicator also captures the level and character of local/community participation in trade unions, sports clubs, mutual aid societies, cultural associations, charities, and social-work organizations. For all indicators, the higher the score, the greater the strength of the institutions.

C. Preliminary Evidence

Appendix Table 6 provides descriptive statistics of the decentralization and social capital indicators.

Preliminary evidence of the associations between fiscal decentralization and social capital is illustrated in Figures 1–3. These figures reveal that increases in the size of subnational governments and their share in total government spending are associated with greater confidence in government, and more civic cooperation and associational activity. On the other hand, deeper vertical imbalances have the opposite effect in the case of confidence in government and associational activity. This may be due to the coordination problems associated with decentralized provision in the presence of sizable vertical imbalances in intergovernmental relations. These problems often arise due to the dissociation between the benefits and costs of government spending when a sizable share of local spending is financed through revenues mobilized elsewhere in the economy (see below). These coordination

[12] The sample of countries for which fiscal decentralization or social capital indicators are available is: Argentina, Australia, Austria, Belgium, Brazil, Chile, Canada, Colombia, Denmark, Finland, France, Germany, Iceland, India, Indonesia, Italy, Malaysia, Mexico, Netherlands, Norway, South Africa, Spain, Sweden, Switzerland, United Kingdom, and United States.

Figure 1. Confidence in Government and Fiscal Decentralization

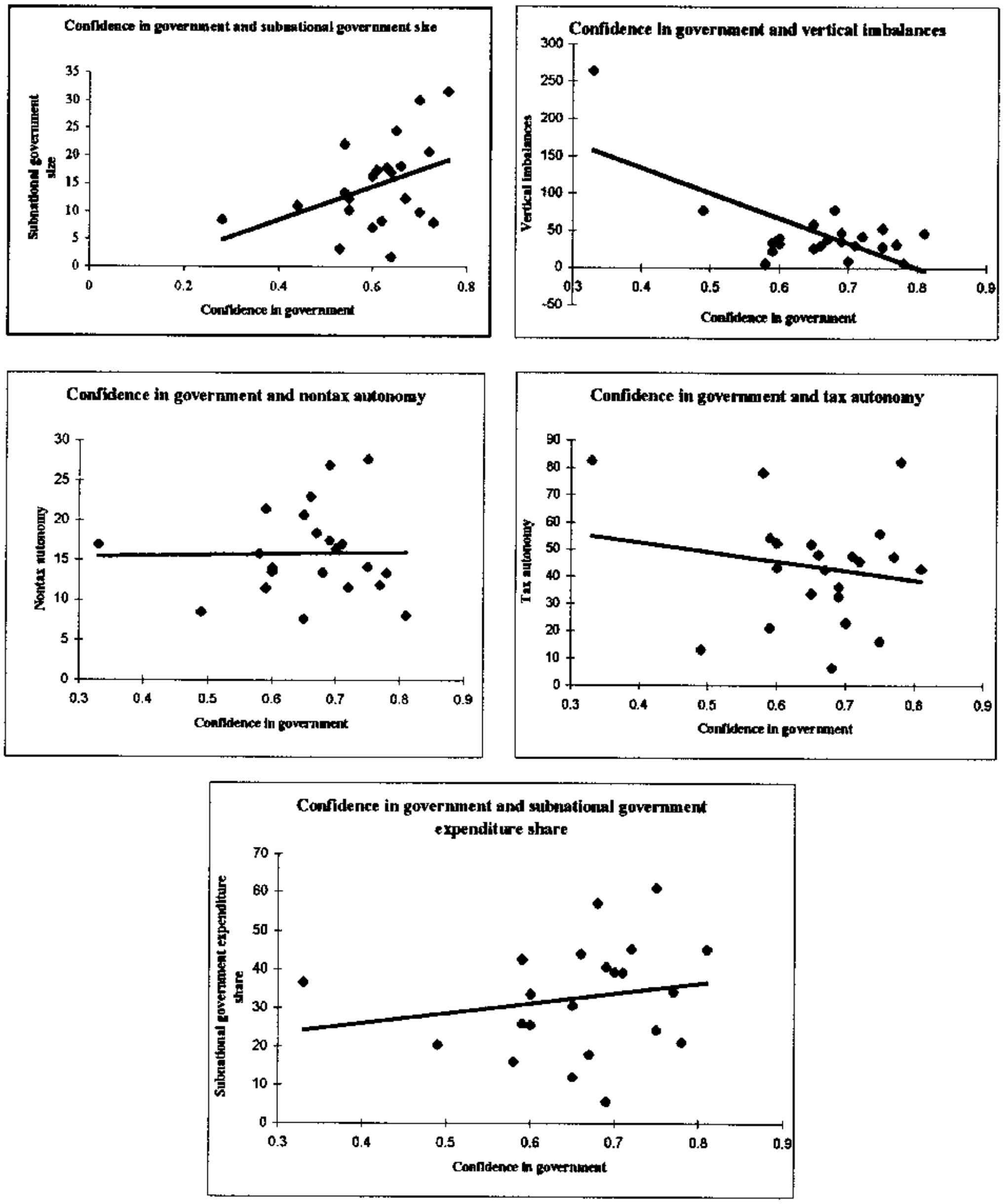


Figure 2. Civic Cooperation and Fiscal Decentralization

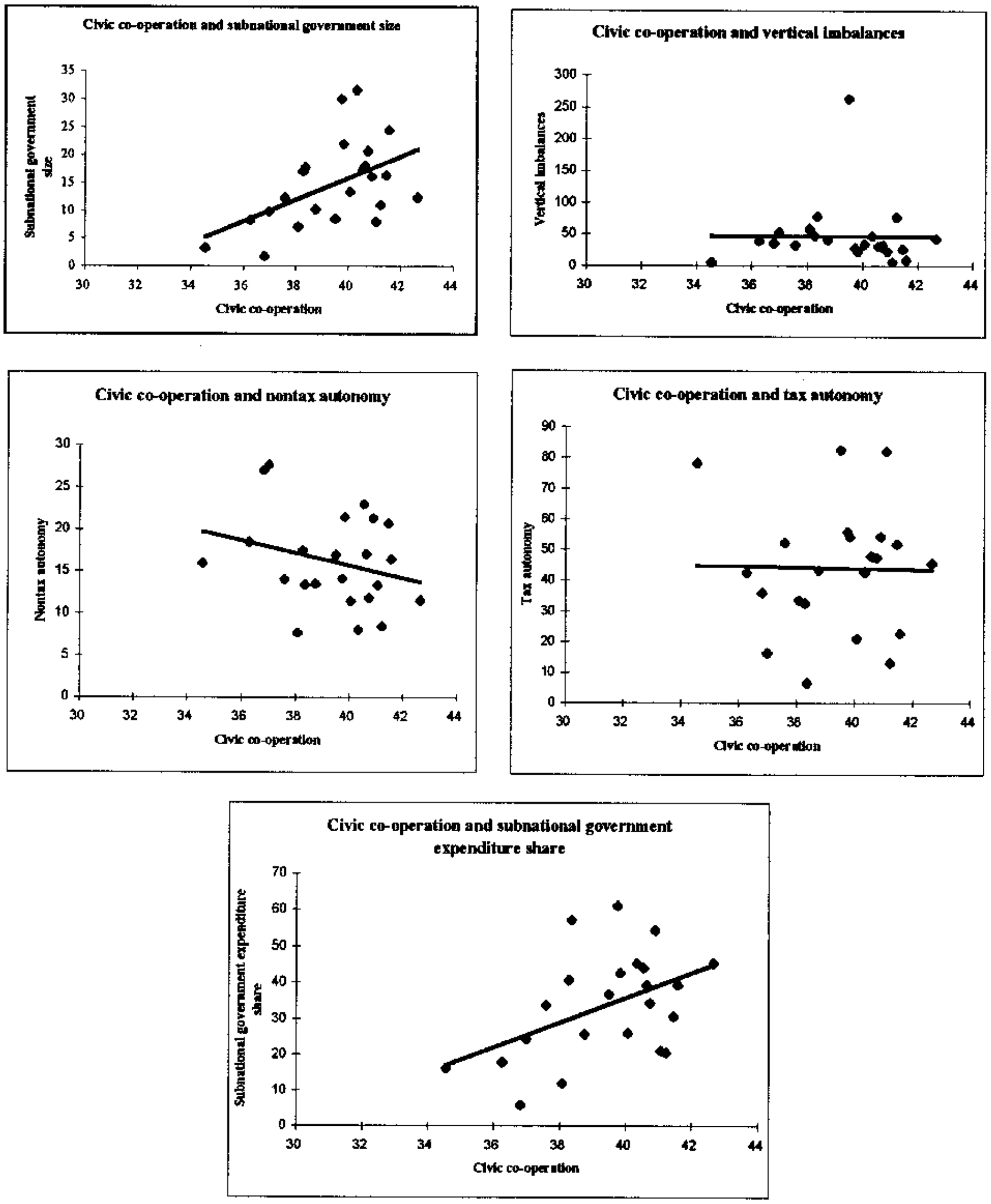
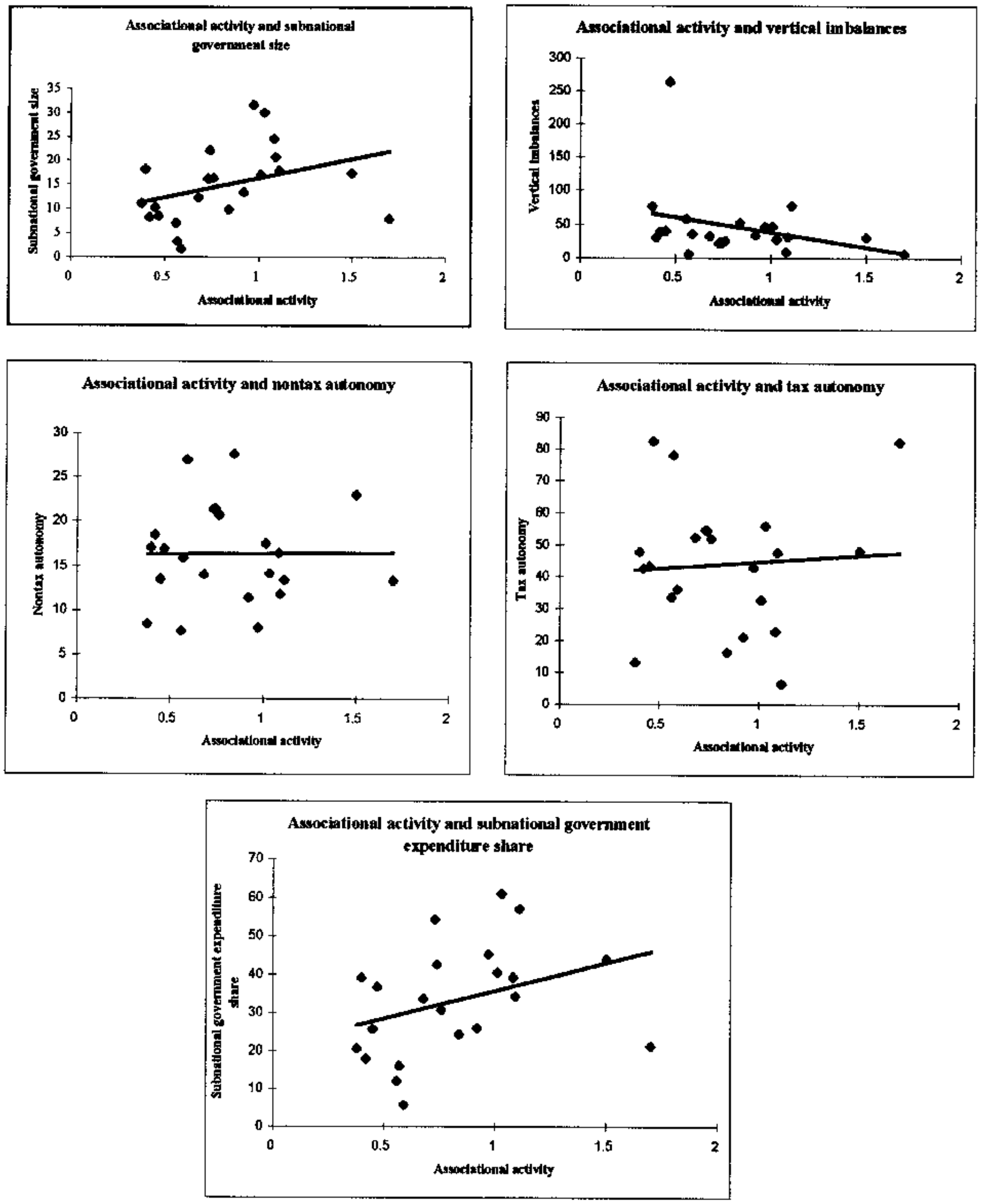


Figure 3. Associational Activity and Fiscal Decentralization



problems tend to manifest themselves in terms of a "deficit bias" in subnational jurisdictions, which erodes confidence in government.[13]

Civic cooperation seems to be unaffected by vertical imbalances in intergovernmental fiscal relations. In the case of revenue-based indicators, there does not seem to be a strong correlation between tax autonomy and civic cooperation and associational activity, or between nontax autonomy and confidence in government and associational activity. However, illustrative the relationship between fiscal decentralization and social capital, the robustness of these bivariate correlations has to be assessed in a multivariate set up. These correlations cannot be interpreted as evidence of a causal relationship between fiscal decentralization and social capital because they do not control for the likely endogeneity of the decentralization indicator or other determinants of social capital.

IV. Cross-Country Evidence

A. The Estimating Equation

The association between fiscal decentralization and social capital can be estimated by regressing the above-described social capital indicators on a set of regressors of two types: fiscal decentralization indicators and control variables. The basic equation to be estimated is as follows:

$$S_i = \beta_0 + \beta_1 D_i + \beta_2 C_i + \varepsilon_i, \qquad (1)$$

where i indexes the countries in the sample, S_i denotes the social capital indicator, D_i denotes the fiscal decentralization indicator, C_i is a vector of control variables, and ε_i is an error term.

The basic hypothesis to be tested here is whether $\beta_1 \neq 0$, in Equation (1). The set of controls comprises the initial primary and secondary school enrollment ratios and the initial GDP per capita, as in Knack and Keefer (1997).[14] The rationale for the use of these control variables is simple: wealthier and more educated societies tend to be richer in social capital, to have more solid and mature institutions, and hence to provide stronger incentives for civic cooperation and community members' engaging in associational activities.

Seven alternative control variables will be considered for the purpose of testing the robustness of the parameters estimated using Equation (1). These are (1) the ethnolinguistic

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[13] See de Mello (1999a and 2000), for more details, including a survey of the literature, and empirical evidence.

[14] Helliwell and Putnam (1999); and Glaeser and others (1999) also show that education attainment is associated with trust and associational activity.

fragmentation index, measuring the probability that two randomly selected persons from a given country do not belong to the same ethnolinguistic group (Taylor and Hudson, 1972; Fox, 1996; and Knack and Keefer, 1997);[15] (2) the stock of public debt as a share of GDP, which is associated with the long-term sustainability of fiscal policy; (3) the age-dependency ratio, which is associated with the long-term demand for public sector provision, particularly social security and health care; (4) the UNDP Human Development index; (5) the Transparency International Index of Corruption;[16] (6) the Gini coefficient of income inequality; and (7) a dummy variable taking value 1 for the developing countries in the sample, and 0 otherwise.

B. The Results

The baseline regressions

The baseline regressions are reported in Tables 1 to 3. Among all fiscal decentralization indicators, the strongest and most significant association with social capital was found in the case of vertical imbalances. Unlike civic cooperation, confidence in government and associational activity are found to be negatively affected by vertical imbalances. By and large, the multivariate analysis confirms the correlations depicted in Figures 1–3.

The results above can be interpreted as follows. By broadening the expenditure mandates of subnational governments, fiscal decentralization brings the government closer to the people. However, the sources of finance for greater subnational spending affect the relationship between social capital and fiscal decentralization. The confidence in government regressions suggests that people tend to trust governments that exhibit more autonomy in revenue mobilization, rather than power to tap resources from revenue-sharing funds, as in the case of significant vertical imbalances in intergovernmental fiscal relations.

As suggested above, distrust in government may be attributed to the wedge vertical imbalances create between the benefits and costs of decentralized provision. Resources mobilized locally—such as local taxes, fees, and user charges paid to local governments—are expected to be spent locally, thereby generating benefits to be internalized by local taxpayers. In the case of sizable vertical imbalances in intergovernmental fiscal relations, however, the costs of government spending may not be matched by its benefits, as resources mobilized locally may finance spending in other jurisdictions. Likewise, confidence in government is

[15] Ethnic fragmentation has become a common regressor in studies of the determinants of economic performance. For example, Easterly and Levine (1997) and Alesina, Baqir, and Easterly (1997) show that more heterogeneous societies spend less on public goods, particularly health and education, and have lower growth rates.

[16] This is a 0–10 index. The higher the score, the lower the perceived level of corruption.

Table 1. Fiscal Decentralization and Social Capital
(Dependent Variable: Confidence in Government)

	Decentralization Indicator				
	Tax Autonomy	Nontax Autonomy	Vertical Imbalances	Subnational Government Size	Subnational Government Expenditure Share
			Baseline Regressions		
Decentralization indicator	-0.74	5.69	-1.28**	3.50	0.12
	(-0.513)	(1.624)	(-6.789)	(1.406)	(0.082)
Initial per capita income	0.01	0.01*	0.05	0.05	0.01
	(1.274)	(2.035)	(0.812)	(0.604)	(1.259)
Initial primary school enrollment	-2.21	2.87*	-1.19	-1.40	-2.05
	(-1.681)	(-2.205)	(-1.326)	(-0.991)	(-1.520)
Initial secondary school enrollment	-0.19	-0.32	0.30	0.24	-0.04
	(-0.111)	(-0.243)	(0.206)	(0.159)	(-0.003)
Adj. R^2	0.05	0.11	0.47	0.08	0.02
F Test	1.25	1.61	5.47	1.36	1.11
			Sensitivity Analysis		
1	-0.25	5.53	-1.22**	7.18*	0.36
	(-0.122)	(0.942)	(-9.272)	(2.650)	(0.219)
2	-1.95	2.86	-4.19**	2.17*	-4.56*
	(-0.877)	(0.091)	(-33.134)	(2.938)	(-2.403)
3	-2.36	-1.52	-1.41**	9.04*	0.74
	(-1.677)	(-0.297)	(-5.495)	(3.114)	(0.579)
4	-2.08	1.78	-1.89**	9.88*	1.52
	(-1.061)	(0.328)	(-5.286)	(3.674)	(1.097)
5	-0.31	4.57	-1.25**	7.21*	0.35
	(-0.133)	(0.945)	(-9.071)	(2.576)	(0.218)
6	0.22	-1.87	-0.96**	1.60	-1.11
	(0.152)	(-0.503)	(-13.208)	(0.459)	(-0.778)
7	-3.98	-2.06	-1.83**	-8.21	-1.00
	(-1.256)	(-0.077)	(-3.722)	(-0.560)	(-1.224)
8	2.11	4.76	-1.21	7.18*	1.66
	(1.598)	(1.064)	(-1.010)	(3.293)	(1.503)
9	-0.37	4.63	-1.23	6.73*	0.21
	(-0.202)	(0.976)	(-1.110)	(2.822)	(0.122)

Note: All equations include an intercept. Statistical significance at the 1, 5, and 10 percent levels denoted by, respectively, (*), (**), and (***). The t-ratios in parentheses are heteroscedasticity-consistent. The coefficients are multiplied by 1,000. The number of observations is 22. In the sensitivity analysis, the coefficients reported are those of the decentralization indicators. Model 1 includes all the baseline regressors plus the ethnolinguistic fragmentation ratio; Model 2 is Model 1 plus the (log of) the public debt-to-GDP ratio; Model 3 is Model 2 plus the (log of) the age-dependency ratio; Model 4 is Model 3 plus a dummy taking value 1 for the developing countries in the sample, and 0 otherwise; Model 5 substitutes the (log of) UNDP's Human Development Index for the age dependency ratio and the developing country dummy; Model 6 substitutes the (log of) the Transparency International Corruption Index for the Human Development Index; Model 7 adds an interaction term between the decentralization indicators and the corruption index; Model 8 includes the Gini coefficient of income inequality in the baseline regression; and Model 9 treats the decentralization indicator as endogenous and uses the initial value of the indicator and the ethnolinguistic fragmentation ratio as instruments.

Table 2. Fiscal Decentralization and Social Capital
(Dependent Variable: Civic Cooperation)

	Decentralization Indicator				
	Tax Autonomy	Nontax Autonomy	Vertical Imbalances	Subnational Government Size	Subnational Government Expenditure Share
			Baseline Regressions		
Decentralization indicator	-0.26	-3.14	0.88***	4.42	2.27
	(-0.126)	(-0.581)	(1.918)	(1.057)	(0.828)
Initial per capita income	0.02**	0.02**	0.02**	0.02**	0.02**
	(7.366)	(8.208)	(7.938)	(5.397)	(3.553)
Initial primary school	-7.76**	-7.36*	-8.31**	-6.95*	-6.78*
enrollment	(-3.029)	(-2.730)	(-3.339)	(-2.336)	(-2.444)
Initial secondary school	0.81	0.68	0.87	0.62	1.09
enrollment	(0.636)	(0.448)	(0.646)	(0.536)	(0.747)
Adj. R^2	0.35	0.35	0.40	0.37	0.37
F Test	3.78	3.87	4.51	4.04	4.07
			Sensitivity Analysis		
1	-1.15	-2.89	-1.05*	6.87	2.14
	(-0.436)	(-0.479)	(-2.757)	(1.775)	(0.768)
2	0.54	-3.50	0.93**	22.18*	0.82
	(0.198)	(-0.660)	(-3.828)	(2.789)	(0.306)
3	-1.95	8.63*	-0.32	4.11	0.52
	(1.224)	(2.436)	(-0.885)	(1.578)	(0.193)
4	1.92	9.68*	-0.99*	4.73	0.36
	(1.053)	(2.242)	(-2.363)	(1.676)	(0.133)
5	-0.65	-2.30	1.01*	6.38	2.15
	(-0.242)	(-0.402)	(2.742)	(1.656)	(0.767)
6	-1.43	0.24	0.94*	9.90*	3.00
	(-0.619)	(0.045)	(2.018)	(2.157)	(1.078)
7	-8.67	-36.89	4.68**	63.40*	20.76
	(-1.461)	(-0.859)	(4.248)	(2.056)	(1.445)
8	-3.15	1.45	1.01	7.02	1.01
	(-1.096)	(0.221)	(0.421)	(1.237)	(0.376)
9	-0.25	-3.15	1.70	6.98	1.86
	(-0.126)	(-0.489)	(0.677)	(1.689)	(0.697)

Note: As in Table 1, the coefficients are multiplied by 100. The number of observations is 23.

Table 3. Fiscal Decentralization and Social Capital
(Dependent Variable: Associational Activity)

	Decentralization Indicator				
	Tax Autonomy	Nontax Autonomy	Vertical Imbalances	Subnational Government Size	Subnational Government Expenditure Share
			Baseline Regressions		
Decentralization indicator	0.21	0.16	-0.11*	0.23	0.39
	(0.605)	(1.682)	(-2.010)	(0.182)	(0.676)
Initial per capita income	0.01*	0.01***	0.01***	0.01	0.01
	(1.995)	(2.029)	(1.775)	(1.116)	(0.754)
Initial primary school enrollment	-0.86*	-0.10*	-0.84***	-0.86	-0.79
	(-2.167)	(-2.621)	(-2.034)	(-1.606)	(-1.604)
Initial secondary school enrollment	0.62	0.67	0.57	0.55	0.60
	(1.410)	(1.578)	(1.397)	(1.296)	(1.509)
Adj. R^2	0.20	0.25	0.22	0.19	0.21
F Test	2.29	2.70	2.37	2.16	2.32
			Sensitivity Analysis		
1	0.25	2.76**	-8.78*	0.14***	1.06**
	(0.824)	(3.710)	(-2.200)	(1.910)	(3.737)
2	0.19	1.95*	-5.57***	0.89	0.59*
	(0.710)	(2.452)	(-1.917)	(0.867)	(2.065)
3	4.20	2.49*	-8.28	1.53*	1.33**
	(0.154)	(2.673)	(-1.088)	(2.100)	(5.073)
4	-0.13	2.91*	-0.25*	1.71*	1.30**
	(-0.465)	(2.429)	(-3.180)	(2.238)	(5.047)
5	0.20	2.71**	-8.21*	1.51***	1.06**
	(0.631)	(3.554)	(-2.177)	(1.952)	(3.618)
6	0.31	2.55*	-5.35	1.12	0.97**
	(1.151)	(2.701)	(-1.112)	(1.574)	(3.211)
7	0.23	1.84	2.95	5.67	0.99
	(0.533)	(0.698)	(0.135)	(1.716)	(0.785)
8	8.35	2.97*	-0.26	1.97*	1.16**
	(0.203)	(3.267)	(-0.801)	(2.313)	(5.569)
9	0.19	2.73**	-0.40	1.40***	1.02**
	(0.691)	(3.891)	(-1.260)	(1.841)	(3.484)

Note: As in Table 1, the coefficients are multiplied by 100. The number of observations is 22.

reduced in the presence of sizable vertical imbalances, because the wedge between spending and local revenue mobilization may reduce transparency in the budget-making process and accountability in government operation, foster inefficiency in the allocation of public funds, and breed corruption.[17]

Unlike confidence in government and associational activity, civic cooperation is boosted when sources of finance are shared across government levels, rather than mobilized locally. The results also suggest that the size of subnational governments, as well as their expenditure share, is positively associated with all social capital indicators, although statistical significance is not obtained. A sizable subnational government, in terms of its spending assignments, inspires more confidence as the recipients of public sector provision believe that they are more likely to benefit from expenditures carried out by the governments that are considered as more perceptive of their needs and preferences. The parameter estimates of the relationship between social capital and the revenue autonomy indicators (tax and nontax autonomy) are not statistically significant.

With regard to the controls, initial per capita income is positively associated with all social capital indicators, as expected, but the association is not always statistically significant at classical confidence levels. As in Knack and Keefer (1997), the effect of secondary school enrollment is positive but insignificant.[18] The parameter estimates for primary school enrollment are almost always negative and significant.

Robustness checks

Sensitivity analysis is carried out by the piece-wise inclusion of the control variables that are expected to affect the social indicators used as the dependent variable. Further sensitivity analysis is carried out by changes in the set of controls. The results are also reported in Tables 1–3. To maximize the sample size, only one variable is included in each regression.

The results of the sensitivity analysis provide some evidence of robustness in the relationship between fiscal decentralization and social capital. In most model specifications, significance levels and the estimated coefficients are robust to the inclusion of additional regressors in the estimating equation and to changes in the original set of controls. In the cases of confidence in government and civic cooperation, the coefficient of the vertical imbalances indicator is robust to the inclusion in the set of controls of the ethnolinguistic fragmentation ratio, the ratio of public debt to GDP, the age-dependency ratio, the developing-country dummy, the Human Development Indicator, the corruption indicator, and the interaction term between the

[17] See, for example, Weingast, Shepsle, and Johnsen (1981), for further details.

[18] This can be attributed to the overrepresentation of developed countries in the sample. These countries do not exhibit significant variation in secondary school enrolment rates.

decentralization indicator and the corruption index.[19] The relationship between subnational government size and confidence in government is less robust: significance is lost at classical levels when the corruption index is included in the regressions. Unlike government size, the vertical imbalances indicator loses significance when the Gini coefficient of income inequality is included in the set of controls.

In the case of civic cooperation, a positive association with government size is obtained if the ethnolinguistic fragmentation ratio, the ratio of public debt to GDP, the corruption indicator, and the interaction term between the decentralization indicator and the corruption index are included (not jointly) in the set of controls. Again, as in the case of confidence in government, the interaction term between decentralization indicator and corruption suggests that civic cooperation is boosted by decentralization, particularly if the country is perceived as less corrupt. The associations between government size and vertical imbalances and civic cooperation are not robust to the inclusion of the Gini coefficient of income inequality in the set of controls.

In the case of associational activity, the negative coefficient of the vertical imbalances indicator is robust to the inclusion of the ethnolinguistic fragmentation ratio, the ratio of public debt to GDP, the developing-country dummy, and the Human Development Indicator. Significance is lost when the corruption indicator, the interaction term between the decentralization indicator and the corruption index, and the Gini coefficient are included (not jointly) in the set of controls. Unlike confidence in government and civic cooperation, nontax autonomy and subnational government expenditure shares are positively related with associational activity for almost all controls used in the sensitivity analysis.

Reverse causality

The statistical association between social capital and fiscal decentralization can be affected by reverse causality: decentralization is found to be a determinant of social capital but it is also likely to be affected by it. It is not easy to deal with the endogeneity of the decentralization indicators in these cross-sectional regressions, given the level of aggregation of the data, the limited degrees of freedom, and the lack of good instruments for fiscal decentralization that are not strongly correlated with social capital. In Model 10 (Tables 1–3), a conservative approach was taken and the instruments used in the IV estimations are the initial values of the fiscal decentralization indicator and the ethnolinguistic fragmentation ratio. The latter was included in the set of instruments because, in ethnically diverse or

[19] The interaction term between the corruption index and the decentralization indicator tests the hypothesis that the decentralization of spending mandates and revenue sources to lower-level jurisdictions breeds corruption. In the case of the confidence in government equation, the evidence suggests that vertical imbalances are associated with distrust in government the higher the level of corruption.

polarized societies, fiscal decentralization has been an important measure to satisfy the minorities' demands for self-governance.[20]

By and large, the results of the IV regressions confirm the findings reported above. In particular, associational activity is boosted by greater nontax autonomy and larger subnational governments, both in terms of size and expenditure share. Confidence in government is also boosted by large subnational governments. The estimated impact of decentralization on civic cooperation was not found to be statistically significant at classical levels of significance.

Alternative social capital indicators

Because the three social capital indicators used above do not cover all aspects of social capital, alternative indicators were experimented with, such as: (1) the "efficiency of the judicial system" indicator available in La Porta and others (1997), which is a 0–10 scale produced by the Business International Corporation; (2) the "rule of law" indicator, also available in La Porta and others (1997), which is a 0–10 scale produced by the International Country Risk Group; and (3) two gender empowerment indicators: the "women in parliament" and "women in government" indicators, produced by the UNDP, measuring, respectively, the share of seats in parliament and government posts (including heads of state and governors of central banks) held by women.

Indicators (1) and (2) are business perception indicators, measuring, respectively, business perception of the "efficiency and integrity" of a country's legal environment, and "law and order tradition." It has often been suggested that civil society is generally reluctant to trust the market in the absence of safeguards, such as well-functioning legal institutions. Indicator (3) measures gender empowerment, which is considered to be an important aspect of social capital development.

All these indicators performed less satisfactorily than the three social capital indicators used above and the results of the estimations were therefore omitted. A possible explanation is the fact that the values in indicators (1) and (2) tend to be clustered around the maximum value and exhibit little variation in the case of more developed industrialized countries, which outnumber the developing countries in the sample. Likewise, the data exhibit little variation, and significant clustering around low scores, in the case of indicator (3). Rather than dismissing the association between fiscal decentralization and these alternative social capital indicators, these poor results may be reflecting data inadequacies and the limited number of countries in the sample.

[20] The political science literature argues that ethnic fragmentation acts as a "centripetal force" in decentralized federations in which the political process has to accommodate the minorities' demands for greater autonomy in the policymaking process. See, e.g., Stepan (1997).

V. Conclusions

The social aspects of development and reform have gained wide currency in the international policy debate in recent years. A wide range of empirical studies, originally confined to the political science literature, have dealt with the relationship between social capital and economic phenomena, such as output growth and government performance. The literature on the determinants of social capital is nevertheless more limited. To bridge this gap in the literature, in this paper, the structure of multilevel governments—the allocation of expenditure functions and revenue sources across levels of government—is shown to be associated with social capital.

The results reported here are based on cross-country data for a sample of industrialized and developing countries, and focus on three widely used social capital indicators: confidence in government, civic cooperation, and associational activity. The findings suggest that social capital can be boosted by fiscal decentralization, which brings the government closer to the people. The sources of finance for greater subnational expenditures were also found to affect social capital. The findings reinforce the subsidiarity principle of public finance—often justified in terms of allocative efficiency—on the grounds that social capital can be boosted when local differences in needs and preferences are taken into account in the policymaking and expenditure management processes.

For the purpose of drawing policy lessons from the empirical evidence reported above, caution must be exercised. The empirical findings are suggestive, rather than conclusive, of an association between social capital and fiscal decentralization. Data inadequacies, the relatively small sample of countries used in the cross-sectional regressions, a bias in sample selection toward industrialized countries, and the problem of how to deal with the likely endogeneity of some of the explanatory variables are common weaknesses of this type of analysis, and preclude more sophisticated econometric modeling and hypothesis testing. Moreover, cross-country empirical research on social capital is in its infancy and more sophisticated indicators are needed to capture different, broader aspects of social capital, particularly in developing and transition economies, where social capital development is to be pursued more vigorously in the reform process.[21]

More importantly, the empirical findings support the view that policy measures aimed at fiscal decentralization could be integrated into the second-generation reform package in developing and transition economies. To the extent that social capital development boosts participation of the citizenry in the policymaking process and empowers the poor through political participation, fiscal decentralization may be an integral part of poverty reduction and

[21] See Ter-Minassian (1997), Mercer-Blackman and Norregaard (forthcoming), and de Mello (1999b) for more information on fiscal decentralization in transition economies.

development strategies.[22] By affecting governance in the public sector, the empirical results reported above are supportive of the use of measures of fiscal decentralization as governance indicators.

However, the recent literature discussed above also shows that decentralization is not without pitfalls, particularly in developing and transition economies. For instance, institutional capacity may be limited at lower levels of government to formulate and execute decentralized budgets. Also, weak budget oversight and poor governance may breed corruption and encourage rent-seeking on the part of the local elite and civil service. In the developing world, the risks associated with delegation of expenditure mandates and revenue functions to subnational jurisdictions need to be properly weighed against the benefits of strengthening social capital by means of decentralized provision and policymaking.

[22] A number of Highly Indebted Poor Countries (HIPCs) expected to request debt relief under the HIPC Initiative, as well as other countries eligible for assistance under the IMF's new Poverty Reduction and Growth Facility (PRGF), have included measures aimed at fiscal decentralization in their poverty reduction strategies.

Table 4. Decentralization Indicators: Summary

Indicator	Description
Subnational tax autonomy	Ratio of tax revenue to total revenue of subnational governments (tax, nontax, intergovernmental transfers, and capital revenue net of grants).
Subnational nontax autonomy	Ratio of nontax revenue (e.g., rents and fees) to total revenue of subnational governments.
Vertical imbalances	Ratio of intergovernmental transfers to total tax revenue of subnational governments.
Government size	Ratio of total government spending to GDP, per government level.
Subnational expenditure share	Ratio of subnational government spending to total government spending.

Note: Sample 1970–95.

Source: Government Financial Statistics, IMF.

Table 5. Social Capital Indicators: Summary

Indicator	Description
Confidence in government	Four government "institutions" were examined (education, legal systems, civil service, and the police); respondents were given four options to scale their trust in these institutions, ranging from "none at all" to "a great deal." The variable in use is the average percentage of "a great deal" or "quite a lot" responses.
Civic cooperation	Fifty-point maximum score (5 questions, scaled 1 to 10 points each), where the higher the score, the greater the strength of civic cooperation. The questions are (1) "claiming government benefits that you are not entitled to"; (2) "avoiding a fare on public transport"; (3) "cheating on taxes if you have the chance"; (4) "keeping money that you have found"; and (5) "failing to report damage you've done accidentally to a parked vehicle."
Associational activity	Measure of membership such as in trade unions, charities, and political and/or social work organizations. These groups or organizations are (1) social welfare services for elderly, handicapped, or deprived people; (2) religious or church organizations; (3) education, arts, music, or cultural activities; (4) trade unions; (5) political parties or groups; (6) local community action groups on issues like poverty, employment, housing, racial equality; (7) third world development and human rights groups; (8) conservation, the environment, ecology organizations; (9) professional associations; and (10) youth groups (e.g., scouts and guides).

Source: Knack and Keefer (1997).

Table 6. Descriptive Statistics

	Mean	Standard Deviation	Minimum	Maximum	Number of Observations
Decentralization indicators (in percent)					
Subnational tax autonomy	42.8	20.2	6.7	82.6	25
Subnational nontax autonomy	15.4	5.8	5.9	27.7	25
Vertical imbalances	46.8	48.5	6.0	264.0	26
Subnational government expenditure share	32.0	14.6	5.8	61.0	26
Subnational government relative size	13.6	7.9	1.8	31.7	26
Social capital indicators					
Confidence in government	0.6	0.1	0.3	0.8	22
Civic cooperation	39.4	2.0	34.5	42.6	23
Associational activity	0.8	0.3	0.4	1.7	22

Note: Sample 1970–95.

References

Abramovitz, Moses, 1986, "Catching-up, Forging Ahead, and Falling Behind," *Journal of Economic History*, Vol. 46 (June), pp. 385–406.

Alesina, Alberto, Reza Baqir, and William Easterly, 1997, "Public Goods and Ethnic Divisions," NBER Working Paper No. 6009 (Cambridge, Massachusetts: National Bureau of Economic Research).

Beall, Jo, 1997, "Social Capital in Waste—A Solid Investment?" *Journal of International Development*, Vol. 9 (November–December), pp. 951–61.

Bird, Richard M., 1992, *Tax Policy and Economic Development* (Baltimore, Maryland: Johns Hopkins University Press).

Collier, Paul, 1998, "Social Capital and Poverty," *Social Capital Initiative Working Paper No. 4* (Washington: World Bank).

Davoodi, Hamid, and Heng-fu Zou, 1998, "Fiscal Decentralization and Economic Growth: A Cross-Country Study," *Journal of Urban Economics*, Vol. 43 (March), pp. 244–57.

de Mello, Luiz R., 1999a, "Intergovernmental Fiscal Relations Coordination Failures and Fiscal Outcomes," *Public Budgeting and Finance*, Vol. 19 (Spring), pp. 3–25.

———, 1999b, "Fiscal Federalism and Government Size in Transition Economies: The Case of Moldova," IMF Working Paper 99/176 (Washington: International Monetary Fund).

———, 2000, "Fiscal Decentralization and Intergovernmental Fiscal Relations: A Cross-Country Analysis," *World Development*, Vol. 28 (February), pp. 365–80.

Easterly, William, and Ross Levine, 1997, "Africa's Growth Tragedy: Policies and Ethnic Divisions," *Quarterly Journal of Economics*, Vol. 112 (November), pp. 1203–50.

Evans, Peter, 1996, "Government Action, Social Capital and Development: Reviewing the Evidence on Synergy," *World Development*, Vol. 24 (June), pp. 1119–32.

Fox, Jonathan, 1996, "How Does Civil Society Thicken? The Political Construction of Social Capital in Rural Mexico," *World Development*, Vol. 24 (June), pp. 1089–1103.

Frey, Bruno, 1997, "A Constitution for Knaves Crowds Out Civic Virtues," *The Economic Journal*, Vol. 107 (July), pp. 1043–53.

Fukasaku, Kiichiro, and Luiz R. de Mello, 1998, "Fiscal Decentralization and Macroeconomic Stability: The Experience of Large Developing Countries and Transition Economies," in *Democracy, Decentralisation and Deficits in Latin America*, ed. by Kiichiro Fukasaku and Ricardo Hausmann (Paris: Inter-American Bank/Development Centre of the Organization for Economic Cooperation and Development).

———, 1999, *Fiscal Decentralisation in Emerging Economies: Governance Issues* (Paris: Inter-American Bank/Development Centre of the Organization for Economic Cooperation and Development).

Fukuyama, Francis, 1999, "Social Capital and Civil Society," paper presented at the IMF Conference on Second Generation Reforms, Washington, November.

Glaeser, Edward, David Laibson, Jose A. Scheinkman, and Christine L. Soutter, 1999, "What is Social Capital? The Determinants of Trust and Trustworthiness," NBER Working Paper No. 7216 (Cambridge, Massachusetts: National Bureau of Economic Research).

Guiso, Luigi, Paola Sapienza, and Luigi Zingales, 2000, "The Role of Social Capital in Financial Development," Centre for Economic Policy Research Discussion Paper, No. 2383, pp. 1–56 (London: CEPR).

Hall, Robert E., and Charles I. Jones, 1999, "Why Do Some Countries Produce So Much More Output Per Worker Than Others?" *Quarterly Journal of Economics*, Vol. 114 (February), pp. 83–116.

Harriss, John, and Paolo de Renzio, 1997, "'Missing Link' or Analytically Missing?: The Concept of Social Capital," *Journal of International Development*, Vol. 9 (November), pp. 919–37.

Helliwell, John F., and Robert D. Putnam, 1999, "Education and Social Capital," NBER Working Paper No. 7121 (Cambridge, Massachusetts: National Bureau of Economic Research).

Hommes, Rudolf, 1995, "Conflicts and Dilemmas of Decentralization," paper prepared for the World Bank's Annual Bank Conference on Development Economics, Washington, May.

Huther, Jeff, and Anwar Shah, 1998, "Applying a Simple Measure of Good Governance to the Debate on Fiscal Decentralization," Policy Research Working Paper No. 1894 (Washington: World Bank).

Inman, Robert P., 1997, "Rethinking Federalism," *Journal of Economic Perspectives*, Vol. 11 (Fall), pp. 43–64.

———, and Daniel L. Rubinfeld, 1996, "Designing Tax Policy in Federalist Economies: An Overview," *Journal of Public Economics*, Vol. 60 (June), pp. 307–34.

Kähkönen, Satu, 1999, "Does Social Capital Matter in Water and Sanitation Delivery?: A Review of Literature," *Social Capital Initiative Working Paper No. 9* (Washington: World Bank).

Knack, Stephen, and Philip Keefer, 1997, "Does Social Capital Have an Economic Payoff? A Cross-Country Investigation," *Quarterly Journal of Economics*, Vol. 112 (November), pp. 1251–88.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Schleifer, and Robert W. Vishny, 1997, "Trust in Large Organizations," *American Economic Review*, Vol. 87 (May), pp. 333–38.

———, 1998, "The Quality of Government," NBER Working Paper No. 6727 (Cambridge, Massachusetts: National Bureau of Economic Research).

Leonardi, Robert, 1995, "Regional Development in Italy: Social Capital and the Mezzogiorno," *Oxford Review of Economic Policy*, Vol. 11 (Summer), pp. 165–79.

Livingstone, W.S., 1956, *Federalism and Institutional Change* (London: Oxford University Press).

Mercer-Blackman, Valerie, and John Norregaard, forthcoming, "Recent Trends in Fiscal Federalism in Former Socialist Economies," IMF Working Paper (Washington: International Monetary Fund).

Muller, Edward N., and Mitchell A. Seligson, 1994, "Civic Culture and Democracy: The Question of Causal Relationships," *The American Political Science Review*, Vol. 88 (September), pp. 635–52.

Narayan, Deepa, 1999, *Bonds and Bridges: Social Capital and Poverty* (Washington: World Bank).

———, and Lant Pritchett, 1999, "Cents and Sociability: Household Income and Social Capital in Rural Tanzania," *Economic Development and Cultural Change*, Vol. 47 (July), pp. 871–97.

Oates, Wallace, 1972, *Fiscal Federalism* (New York: Harcourt Brace Jovanovich).

———, 1999, "An Essay on Fiscal Federalism," *Journal of Economic Literature*, Vol. 37 (September), pp. 1120–49.

Olson, Mancur, Jr., 1969, "The Principle of 'Fiscal Equivalence': The Division of Responsibilities Among Different Levels of Government," *American Economic Review*, Vol. 59 (May), pp. 479–87.

Prud'homme, Remy, 1995, "Dangers of Decentralization," *World Bank Research Observer*, Vol. 10 (August), pp. 201–10.

Putnam, Robert, 1995, "Bowling Alone: America's Declining Social Capital," *Journal of Democracy*, Vol. 6 (January), pp. 65–78.

———, Robert Leonardi, and Raffaella Nanetti, 1993, *Making Democracy Work: Civic Traditions in Modern Italy* (Princeton, New Jersey: Princeton University Press).

Putzel, James, 1997, "Accounting for the 'Dark Side' of Social Capital: Reading Robert Putnam on Democracy," *Journal of International Development*, Vol. 9 (November), pp. 939–49.

Rodrik, Dani, 1998, "Where Did All the Growth Go? External Shocks, Social Conflict and Growth Collapses," NBER Working Paper No. 6350 (Cambridge, Massachusetts: National Bureau of Economic Research).

Stepan, Alfred, 1997, "Toward a New Comparative Analysis of Democracy and Federalism: Demos Constraining and Demos Enabling Federations" (unpublished).

Tanzi, Vito, 1995, "Fiscal Federalism and Decentralization: A Review of Some Efficiency and Macroeconomic Aspects," paper prepared for the World Bank's Annual Bank Conference on Development Economics, Washington, May.

———, 1999, "The Changing Role of the State in the Economy: A Historical Perspective," in *Fiscal Decentralization, Inter-Governmental Fiscal Relations and Macroeconomic Governance*, ed. by Luiz R. de Mello and Kiichiro Fukasaku (Paris: Organization for Economic Cooperation and Development).

Taylor, Charles Lewis, and Michael C. Hudson, 1972, *World Handbook of Political and Social Indicators* (New Haven, Connecticut: Yale University Press).

Temple, Jonathan, and Paul A. Johnson, 1998, "Social Capability and Economic Growth," *Quarterly Journal of Economics*, Vol. 113 (August), pp. 965–90.

Tendler, Judith, 1997, *Good Government in the Tropics* (Baltimore, Maryland: Johns Hopkins University Press).

Ter-Minassian, Teresa, ed., 1997, *Fiscal Federalism in Theory and Practice* (Washington: International Monetary Fund).

Weingast, Barry R., Kenneth A. Shepsle, and Christopher Johnsen, 1981, "The Political Economy of Benefits and Costs: A Neoclassical Approach to Distributive Politics," *Journal of Political Economy*, Vol. 89 (August), pp. 642–64.

World Bank, 1998, "The Initiative on Defining, Monitoring and Measuring Social Capital: Text of Proposals Approved for Funding," *Social Capital Initiative Working Paper No. 2* (Washington: World Bank).

Zhang, Tao, and Heng-fu Zou, 1997, "Fiscal Decentralization, Public Spending, and Economic Growth in China," *Journal of Public Economics*, Vol. 67 (February), pp. 221–40.