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Fiscal Decentralization to Rural Local Governments in India: A Case Study of West Bengal State

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Rural local governments in India provide essential services to over 70 percent of the national population. Yet, little is known about the efficacy of the financing system that supports these local governments, nor is there a fiscal information system that will allow a tracking of rural local government expenditures and revenues. In this article, we describe the role of rural local governments in India's federal system, and use a database, newly gathered for West Bengal State, to present an analysis of rural local government financing patterns. We find that expenditures are significantly higher in less populated and more backward gram panchayats. At the margin, however, higher rates of literacy also are associated with higher levels of spending, suggesting an education effect.

Rural local governments are a new and potentially important part of India's fiscal federalism. They are in a position to provide essential services to over 70 percent of the national population. Yet, little is known about the efficacy of the financing system that supports these 250,000 local governments, and especially little is known about the basic unit of rural local government—the gram panchayat. The central government and the Parliament seem determined to find a stronger place for rural local governments in the intergovernmental fiscal system. A constitutional amendment calls for a strengthening of the fiscal autonomy and service delivery importance of local governments. The federal government has initiated a series of large programs designed to upgrade local public services and the quality of life in rural areas.

In the process of trying to implement the constitutional amendments and design these new programs, it has become apparent that relatively little is known about the level of service provision by rural local governments or about the intergovernmental structure that financed this service delivery. Few if any states even have a fiscal information system that will allow a tracking of rural local government expenditures. Alok (2008, 8) puts it well in commenting on the paucity of information about rural local government financing: "In fact, neither the local body, nor state directorate on panchayats or municipalities, nor local fund audit, nor accountant general of the state, nor central statistical organization, nor ministry of panchayati raj, nor ministry of urban development, nor planning commission, have consistent fiscal data on local bodies."

This article describes the system of rural local governance in West Bengal, a state with a population of 80 million, and analyzes its financing. The analysis is based on the specifics of the system in only one state, but the results here may add value to the analysis of the systems in other states. In the next two sections, we describe some of the institutional features that govern the intergovernmental fiscal system in West Bengal. We then turn to an evaluation of the fiscal outcomes, i.e., the determinants of expenditure and own source revenue levels, and the equalization features of the intergovernmental transfer system. A concluding section to this article summarizes the findings and their implications for the choice of the gram panchayat as the basic unit of local government.

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The contribution here is in the empirical work. Many observers of intergovernmental fiscal relations in India have noted the poor fiscal performance of rural local governments, the overdependence on intergovernmental transfers, and the limited capacity to increase own source revenues. However, these analyses have not been supported by hard empirical analysis that could identify actual levels of spending and revenue mobilization, and that could describe and explain fiscal disparities among rural local governments.

India's Federalism and the Rural Sector in West Bengal

India's fiscal federalism has long been a two-tier federal-state system. The tax powers and expenditure assignments of state governments are provided in the Constitution. Rao (2009, 114) notes that the Constitution recognizes that state taxing powers are inadequate to meet their expenditure needs and therefore provides for revenue sharing from central taxes. In addition, governments may borrow from the central government. There is a state government list of expenditure assignments and considerable autonomy for state governments to shape their budgets. On average, Indian state governments rely on intergovernmental transfers to finance about 55 percent of current expenditures.

The system of state-local fiscal relations is defined by the state governments, with guidance from the Constitution, and there is considerable variation among the twenty eight states and seven centrally administered territories. In West Bengal, the rural and urban local governments operate under different enabling legislation, and each is allocated a specified share of the state government revenue sharing pool. The rural stream is called the *panchayat raj institutions* or PRIs. The PRI system in West Bengal consists of a hierarchical structure of eighteen districts (zilla), 341 blocks (panchayat samatis) and 3,324 gram panchayats (GP), as described in figure 1.

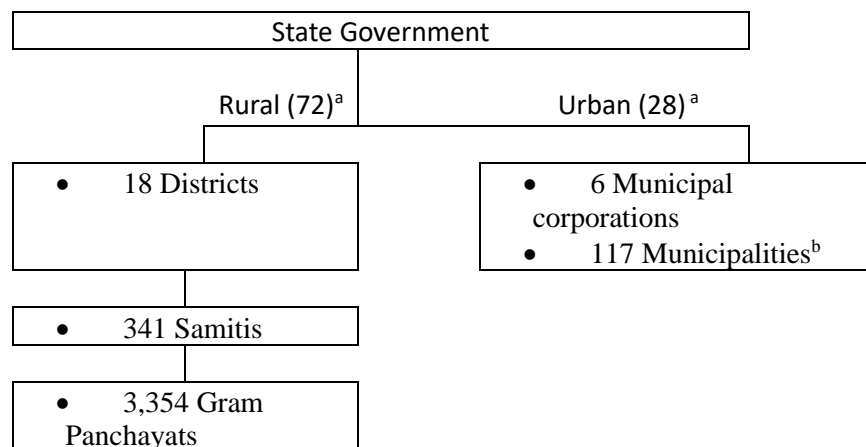


Figure 1 Government structure in West Bengal.

^aPercent of total population.

^bNot including three notified areas.

Three institutional features have a significant influence on the budget responsibilities and resources of rural local governments. Expenditure assignments are made by the state government under the guidance of the Constitution and are outlined in the West Bengal Panchayat Act. Despite the fact that the constitutional amendment calls for the creation of autonomous local government bodies, expenditure assignment for local governments in West Bengal (as in most states) remains a state government discretionary decision.

PRI finances also are impacted by the State Finance Commissions that sit once in every five year period and are charged with making recommendations for revenue sharing between the state and local government levels, and for expenditure and revenue assignment. Many analysts feel that the SFCs have not had a significant impact on the formulation of intergovernmental fiscal policy at the state level (Rao 2009; Oommen 2008). A similar conclusion was reached about the SFC impact in West Bengal (Bahl, Sethi, and Wallace 2008). The Third State Finance Commission in West Bengal has called for a higher level of transfers to urban and rural local governments.

Finally, there are direct, conditional transfers from the federal government to the PRIs and these constitute the major revenue flow to the rural local bodies (Sethi 2004). Most of these grants are for employment generation programs and the GP have little discretion to move these funds to other purposes.

Are Rural Local Governments too Small?

Theory would lead us to argue that smaller local governments will give voters more voice in budget formulation and taxing decisions, and allow a better capturing of the efficiency gains from fiscal decentralization (Oates 1972). But considering the limited capacity of small local governments to deliver services effectively, and economies of scale, the time-worn question of the optimal size of government arises. The policy issue in West Bengal is whether the smaller gram panchayats, the larger block level governments, or the still larger districts are better suited to be the primary, autonomous rural local government (see figure 1).

The "best" size for local governments in West Bengal depends on the goals that government most wants to accomplish. In terms of capturing the economic efficiency benefits of decentralization (which requires moving government decisions closer to the people), the gram panchayat seems to be the best candidate for autonomous local government. It is small enough to force elected leaders to pay attention to the preferences of voters, and this relatively small size gives the local population the sense that their vote will matter. In West Bengal, the average population size of the gram panchayat is 14,254 versus 181,000 for blocks and 4.4 million for districts. The gram panchayats in West Bengal are about three times larger than the all-India average, and are not small by world standards for local governments (Fox and Gurley 2006). Unlike the case in many Indian States, the gram panchayats in West Bengal may be small enough to move government close to the people but large enough to avoid some of the diseconomies of small size, and the efficiency losses due to spillover effects.¹

However, economic efficiency may not be the primary criterion for choosing an optimal size local government. Other choice criteria may point to the advantages of emphasizing the block or even the

district level as an autonomous local government. Four advantages of larger rural local governments would seem particularly important.

First, both districts and blocks are arguably better able to capture the cost savings from economies of scale in the delivery of services. This is especially the case for services that require large capital costs, because there is an adequate population over which to spread these costs. Unfortunately, there is little evidence on size economies in the delivery of local public services in rural areas in LDCs and the results of studies for industrialized countries likely are not relevant (Fox and Gurley 2006). Still, it seems reasonable to believe that consolidation to the block or district level would eliminate some duplication and reduce administrative costs. From the data used in this analysis, we can report that an average of 20 percent of the gram panchayat budgets in West Bengal is devoted to administration and salaries, compared to less than 3 percent for the larger districts and blocks.

Second, block and district governments have a larger benefit zone and therefore can internalize spillover effects from certain public services better than can gram panchayats. Examples are environmental and transportation services. This suggests that such services should be delivered by districts, blocks, or by the state government.

Third, many gram panchayats have shown themselves to have a weak capacity to deliver services. Districts and blocks are larger, likely could offer more specialization in work assignments, and might be able to recruit a more skilled managerial staff. The Eleventh Finance Commission of India recommended a greater level of transfers to local bodies, and technical assistance to improve their capacity to deliver services (Rao and Singh 2007).

Finally, there are 3,354 gram panchayats in West Bengal, and this is an unwieldy number to monitor from the state government level. Even in a decentralized government system, there is need for oversight in areas such as audit, enforced accounting standards, civil service rules, grant distribution formulae, and following up on compliance with mandates and tax limitations.

There has long been a debate about the optimal size government, and the debate has not led to the conclusion that any one population size is "best". The optimal size government depends on what objective one wants to emphasize. If the spirit of the Indian Constitutional amendments is read as calling for more emphasis on economic efficiency-local self governance-the case is strong to upgrade the role of the gram panchayat as the primary unit of autonomous rural local government. We follow this lead from the Constitution and focus this analysis on the gram panchayat level.

Fiscal Structure in West Bengal

The fiscal structure of rural local governments in India is like that in many other low income countries.² There are minimal expenditure responsibilities and even less revenue raising power. Most finance for local government services is obtained from intergovernmental fiscal transfers. This general pattern also holds in West Bengal.

Database

The empirical analysis in this article draws heavily from a data set developed by the World Bank (Bahl, Sethi, and Wallace 2008; Government of West Bengal 2008). The database on the financial status of gram panchayats was developed from information drawn from the audited financial accounts of the local governments for the period 2003-2005. First, a standardized form was developed so that the reported data could be forced into a common set of expenditure and revenue categories. This "recasting" was followed by field visits to finalize the reports and to resolve problems. In the end, useable data were gathered on the fiscal outcomes for about 90 percent of all gram panchayats in West Bengal. Economic, social, and demographic data were gathered from the census, and from relevant state government departments. No original survey was developed to capture socio-economic data as part of the data collection exercise.

Heretofore, there has been no accurate, official record of the fiscal activities of PRIs in West Bengal. Whenever the state wanted to assess the impact of a policy, or report disparities in fiscal effort, it gathered data from a small sample of gram panchayats and carried out a statistical analysis. The reports of the first two State Finance Commissions did not include an evaluation of their recommendations. The Third State Finance Commission (2008) provided a summary evaluation of their recommendations. The results presented in this report, based on primary data for more than 90 percent of the PRIs in West Bengal, give arguably the first-ever detailed look at the overall picture of rural local government finances in West Bengal and perhaps in any Indian state.³ The 3rd SFC has called for continued development of the fiscal database.

Expenditures

Rural local governments in West Bengal are elected, and each has the power to approve their budget. However, the degree of fiscal discretion that is underneath the making of these budgets is limited by expenditure mandates and by constraints on revenue-raising powers. Local governments are given no powers to exceed their assigned complement of employees, nor do they have any power to determine the rate of pay of their employees. In addition, there are expenditure mandates and conditional grants with narrowly prescribed expenditure targets.

The gram panchayats have some features of autonomous local governments, including some independent power to levy taxes. For decades, the idea of village government with some degree of autonomy has been discussed in India. Gandhi's vision of village swaraj has influenced subsequent discussions of the need for local self-governance (Alok, 207). With the passage of the 73rd constitutional amendment in 1993, local governments were officially recognized, and more explicit provision was made for planning and service delivery responsibility and for revenue raising powers. In contrast with the gram panchayats, the district and block-level local governments appear to function more as spending agents of the state and federal governments than as autonomous local governments.

The fiscal shares of different levels of government in West Bengal are shown in table 1. Note that 72 percent of the state population is resident in rural areas, but less than 17 percent of government expenditures are made by rural local governments.⁴ In total, expenditures by rural local governments are equivalent to less than 1 percent of state GDP. Gram panchayats account for about one-third of rural local government spending and only about US \$3.12 per capita (table 1).

Table 1 Distribution of public finances among levels of government in West Bengal: 2005

	Percent of total expenditure ^a	Percent of total own source revenues	Percent of population	Exhibit: average per capita expenditures (in \$US)
State Government	75.8	95.8	100	27.62
Urban Local Governments	7.89	3.7	28.0	10.26
Rural Local Governments	16.26	0.5	72.0	3.13
Of which Districts	45.0	41.8		3.53
Blocks	21.9	14.2		2.15
Gram panchayat	33.1	44.0		3.12

^aThe last three rows are expressed as a percent

Sources: Population: Census of India, available at: Census of India, available at:

http://www.wbcensus.gov.in/DataTables/02/FrameTable4_1.htm

- Expenditures:
 - PRI-West Bengal database, The World Bank (See Annex A): accounts for 94 percent (17 out of 18) of the districts, 84.4 percent (288 out of 341) of the blocks, and 87.7 percent (2,941 out of 3,354) of the gram panchayats.
 - Urban-Administrative Report of Municipal Affairs Department, 2005, Government of West Bengal.
 - State-Finance Department, Government of West Bengal, Budget Publications 2006-07 (<http://www.wbfin.nic.in/>) total expenditure heads (revenue account) minus line 3604 compensation and assignments to Local Bodies and PRIs (page 14).

- Own Revenue:
 - PRI-West Bengal database, The World Bank (see Annex A).
 - Urban-Administrative Report of Municipal Affairs Department, 2005, Government of West Bengal (pages 25 and 26).
 - State-Finance Department, Government of West Bengal, Budget Publications 2006-07 (<http://www.wbfin.nic.in/>): tax revenue plus non tax revenue (pages 1 and 3).

This continuing, very low level of expenditures suggests that gram panchayats are assigned very little expenditure responsibility with the result that the services they do provide may not have much effect on

the quality of life in the local government area. This means that voters might not be very interested in getting involved to influence the level and structure of local government expenditures, and the accountability goal of the fiscal decentralization might be lost.

How do gram panchayats spend their money? Their comparative advantage is in delivering services and implementing programs where the benefit zone is local.

For the most part, their expenditure assignments reflect this comparative advantage. Though there is some responsibility for education, e.g., implementing continuing education programs, the budgetary expenditures of gram panchayats are dominated by development programs (61 percent of total expenditures) that are mostly financed under centrally sponsored "schemes" (conditional grants from the federal government). There is the issue of whether these are in fact capital expenditures related to the creation of long-lived assets, or current expenditures to support an income maintenance program. The assets created by these public works projects may be more akin to maintenance and repair than to new construction.⁵

Own Source Revenues

"How do rural local governments finance their budgets, i.e., to what extent do they pay for services from own sources of revenues and to what extent do they pay from central and state grants and transfers?" Only about 6 percent of all revenue of gram panchayats in West Bengal is derived from own sources. This is less than the 20 percent estimated by Rao et al. (2004), for Karnataka State for 2001, and the 17 percent estimated by Oommen (2004) for Kerala State in 1999. Karnataka and Kerala states have a long history of decentralized governance, so their higher levels of local revenue raising are not surprising. Still the levels in West Bengal appear to be very low, e.g., panchayats account for less than 1 percent of all revenues raised in the state (table 1). Oommen (2006) notes that West Bengal ranks low among Indian States in both per capita revenues of the state and per capita transfers to local governments while Kerala and Karnataka rank high on both measures.

The Constitution provides for gram panchayats to have the power to tax, and to levy charges. However, it is left to the state governments to determine which taxes a local government may levy, as well as the nature of the autonomy that local governments will have in determining their level of taxation. States differ in terms of the revenue sources they assign to rural local governments, and there is by now a long list of taxes that are locally administered in India. In their review of the practice in Kerala, Gujarat, and Madhya Pradesh states, Subrahmanyam and Annamalai (2004, 275-276) report fourteen different categories of tax that are in use. The most important taxes assigned to local governments in West Bengal are the property tax and the entertainment tax.

The term "own source revenue" requires some explanation in the case of rural local governments in West Bengal. The definition most often used is that local governments have the power to at least set the tax rate (Bahl and Bird 2008). For property taxes and the entertainment tax in West Bengal, the rate ceiling and the legal bases are prescribed by the State Government in the Panchayat Act. Gram panchayats do have discretion in their administration of the property tax (e.g., valuation) and in setting the rates of certain non-tax fees and charges.

Administration is a major constraint on rural local government revenue mobilization. With respect to the property tax, assessment practices are ad hoc and collection rates are low. Pal and Adak (undated) estimated a ratio of collections to demand (assessed liability) of only 26 percent in 2001. In the case of Karnataka state where the collection rate is above 50 percent, Rao et al. (2004) estimate that collection costs are equivalent to roughly one-half of the amount of revenue collected. This poor record of collections also extends to urban local bodies. Karnik and Lalvani (2005) estimate the property tax collection rate in Maharashtra to be less than 60 percent.

Grants and Transfers

About 94 percent of total revenues of the gram panchayats in West Bengal come from grants and transfers from the federal and state governments. Most are conditional grants. Over two-thirds of all federal grants to gram panchayats are for housing (IAY) and employment generation (SGRY) programs.

The SGRY grant is an employment generation program for rural areas that is targeted to benefit the poorest segment of the rural population (Government of India 2006). The program is administered by the PRI, who have some discretion in deciding on the type and location of public works projects that will be carried out. The total funding for the program for each year is decided on by the central government in the course of the normal budget process. The entitlement for each rural local government is based on a formula that includes population size and the concentration of disadvantaged population.⁶

The other major federal grant (IAY) is a flagship scheme of the Ministry of Rural Development to provide construction/upgrading of dwelling units for the poor in the rural areas (Government of India 2006). The grant is distributed by formula to the district level (according to housing shortage and poverty) but is allocated to the gram panchayats by the districts on an ad hoc basis. About 20 percent of federal grants to rural local governments in West Bengal come from other centrally sponsored schemes that are targeted on various sectors.

The state government also provides financial transfers to the PRIs through unconditional and conditional state grants. State government transfers account for about 25 percent of gram panchayat revenues. The most important component of state grants is the salary grant. This is a cost reimbursement allocation to PRIs based on their number of approved posts. Since the state government approves posts, and sets pay grades, this transfer leaves the local governments with little discretion in terms of how the grant can be spent. The salary grant is equivalent in amount to nearly 80 percent of all state government transfers received by gram panchayats. The remainder are mostly conditional grants in areas such as irrigation and income maintenance for landless workers.⁷

Fiscal Outcomes

The variation in per capita spending among gram panchayats results from decisions made at the state and federal government levels about the distribution of grants, and at the local level from decisions made about local revenue mobilization. To the extent grants are distributed on an equalizing basis, the distribution of local expenditures will favor poorer places. To the extent higher income gram panchayats choose to make a higher tax effort, this equalization effect will be offset to some extent.

Grants and Equalization

We hypothesize that the level of intergovernmental transfers is an important determinant of rural government expenditure levels. The empirical question raised is whether the distribution of transfers is designed to be equalizing, i.e., to favor poorer rural local governments.

In particular, we want to identify the "implicit formula" for the distribution of intergovernmental transfers across gram panchayats by examining the ex post relationship between transfers received and measures of expenditure need, such as the concentration of poor families and population size. We estimate an OLS regression with per capita intergovernmental transfers as the dependent variable. We measure this as per capita total federal grants received by gram panchayats, and per capita state grants received by gram panchayats.⁸ We study the federal and state components of the transfer system in separate analyses, because they carry different objectives and are structured in different ways. In each case, the idea is to tease out an "implicit" grant formula, and in particular to see if per capita transfers are systematically allocated to favor poorer jurisdictions.

The explanatory variables in the federal grant equation include:

- *The percent of scheduled castes and scheduled tribes SC/ST in the population* is used as an indicator of the concentration of poor families. A positive association with per capita transfers would be consistent with equalization. We expect a positive association because of the poverty alleviation goal of the program and because SC/ST population is a factor that government includes in its distribution rules.⁹
- *The literacy rate* is introduced as a measure of the social and economic development of the gram panchayat. The literacy rate variable cannot be signed on an a priori basis. It may have a negative effect on the level of per capita transfers received, because it is hypothesized that a higher rate of literacy is associated with a smaller concentration of below-poverty-line population. It could have a positive effect if it indicates a stronger public administration in the gram panchayat with the result of more success in buying into the discretionary portions of these federal programs.
- *Population size* is introduced as a control variable. A negative relationship is expected, in part, because there is a required minimum allocation of Rs 25,000 to each GP for the SGRY program.
- *The percent of agricultural labor* may indicate more demand for employment generation programs, because it is significantly correlated with the percent of SC/ST population and the percent of marginal workers (those employed less than 180 days per year).
- *A district effect and a block effect.* A fixed effects model is used by introducing dummy variables for blocks and districts. These fixed effects can account for unmeasurable factors such as better program administration, more political influence, difficult to measure access to markets (including availability of roads and waterways), etc.

The results for federal grants, presented in table 2 show that the SC/ST variable has the expected positive sign and is a significant determinant in the case of gram panchayats. A one percent higher SC/ST population share, all else held constant, is associated with a 0.28 percent higher level of per capita federal transfers received. Gram panchayats with smaller populations also receive significantly more, as do GPs

with a higher percent of agricultural labor. These results are in line with the null hypotheses and are consistent with equalization. The literacy rate is significant and positive, suggesting a counter-equalizing influence in the distribution. To the extent a higher literacy rate is associated with a stronger public administration, the ability to complete projects and attract federal grants may be enhanced. There are significant district and block effects, suggesting the presence of some unmeasurable factors, e.g., a more "connected" political or bureaucratic leadership that can attract more federal funds.

Table 2 OLS estimation of the determinants of variations in per capita total-federal and state government grants to gram panchayats: 2005^a (Log of Dependent Variable)

	Federal Grants ^b	State Grants ^b
Constant	8.22** (25.48)	12.19** (32.46)
Log Population	-0.277** (10)	-0.921** (27.22)
Log Percent SC/ST Population	0.277** (15.78)	-0.001 (0.07)
Log Literacy Rate	0.248** (3.62)	0.236* (2.62)
Log Percent Agricultural Labor	0.098** (6.87)	0.049** (2.85)
R-2	0.79	0.59
N	2,097	2,022

^aCoefficients on district and block dummy variables not reported; t-statistics in parenthesis. Sixteen of the 18 district dummy variables are significant. The block dummy variable is significant for 45 blocks.

^bVariables in logarithms.

*Significant at the 95% level or higher.

**Significant at the 99% level or higher.

In total, we can explain about 80 percent of the variation in per capita SGRY receipts across gram panchayats.

The results of the analysis of per capita state government grants show that the distribution favors those gram panchayats with smaller populations and larger shares of agricultural employment (table 2). The sign of the population variable is not a surprising finding, given that about 80 percent of state grants are allocated according to the salary paid to workers in approved local government posts. The SC/ST coefficient is not significant. The literacy coefficient is significant and positive and of similar magnitude to the literacy coefficient in the federal grants equation.

We may compare these results for state grants with that for federal grants. The SC/ST coefficient is not a significant determinant in the case of state transfers but is significantly positive in the case of federal grants, hence we conclude that the central schemes are more equalizing. That is, if a gram panchayat has a ten percent greater concentration of SC/ST population (all else held constant) it does not receive a significantly greater amount of per capita state transfers, but it does receive about a three percent higher amount of per capita central scheme transfers. The bias in state (versus federal) grants is in their

heavier distribution toward local governments with a smaller population, perhaps due to the fixed cost component of the employment grant.

Own Source Revenue

Rural local governments in West Bengal raise very little revenue from own sources. The average for gram panchayats is well less than \$1 per capita. However, the variation is great. Some gram panchayats raise twenty to thirty times the average amount, while 200 GPs report raising no own source revenue.

We might turn to a more systematic approach to explain the considerable variation in per capita own source revenues across gram panchayats, i.e., to estimate an OLS regression of the determinants of per capita own source revenues. The result of such analysis may be important to helping formulate an incentive policy for stimulating revenue mobilization. The dependent variable in this analysis is per capita own source revenues, including tax and non-tax sources. The independent variables are included based on the following a priori reasoning:

- The expected sign of the population size variable is indeterminate. It should be positively related to per capita own source revenues because agglomerations of population suggest greater taxable capacity. Moreover, if larger GPs draw less intergovernmental transfers, this may increase the demand for revenue mobilization. On the other hand, a larger population does not necessarily indicate that a greater per capita revenue mobilization will occur, and the relationship may be negative. There may be economies of size on the expenditure side and, at the margin, this reduces the demand for own source revenue mobilization.
- A larger percent of SC/ST population, *cet. par.*, suggests a larger concentration of poor households, less taxable capacity, and a negative relationship with per capita own source revenues. This might be reinforced if the concentration of SC/ST population draws more transfers, and further reduces the incentive to mobilize more revenues.
- A higher literacy rate suggests a greater taxable capacity and a positive relationship with the level of own source revenue. This hypothesis is based on the premise that more education leads to higher wages on the part of the local population, and arguably to a greater willingness to pay taxes.¹⁰
- District and block fixed effects are included to control unmeasurable factors such as general proximity to more taxable capacity (e.g., more productive agricultural land, nearness to larger cities, etc.)

The results of the analysis are reported in table 3. About 55 percent of the variation in per capita revenues across 2,067 gram panchayats can be explained by this model. The literacy rate variable is significant and has the expected positive sign. This would appear to measure the positive marginal effect of economic development and voter awareness on the mobilization of own source revenues. The elasticity is relatively high, i.e., if the literacy rate is ten percent higher, the level of per capita own source revenue collections will be about ten percent higher.

The population effect is negative, i.e., there is no evidence of agglomeration effects on revenue mobilization. However, the "population effect" may have been obscured by district and block effects as

noted above. The district effects are positive for two districts located relatively close to Kolkata (Bankura and Hugli). It may be the case that the proximity to the urban area provides these two districts with positive externalities in terms of commerce that is reflected in higher per capita own source revenues. The block effects do not display a discernable pattern.

Expenditure Disparities

The result of the distribution of transfers and the choices made about own source revenue mobilization has led to significant disparities in per capita expenditures across gram panchayats. The data in table 4 describe the pattern of this variation in spending levels across gram panchayats.

Table 3 OLS estimation of the determinants of variations in per capita own source revenue of gram panchayats: 2005 (Log of dependent variable)

Level of government	Gram panchayat ^a
Constant	4.57** (5.70)
Log Population	--0.197** (2.67)
Log Percent SC/ST Population	0.071 (1.45)
Log Literacy Rate	1.043(5.61)
R ⁻²	0.54
N	2,067

^aCoefficients on district and block dummy variables not reported; *t*-statistics in parentheses

*Significant at the 95% level or higher.

**Significant at the 99% level or higher.

Notes:

Significant District Effects:

Positive effects: Bankura and Hugli

Negative effects: Birbhum, Darjiling, Haora, Purba Medinipur, Purulia

The omitted district is Uttar Dinajpur.

Significant Block Effects:

The block dummy variable is significant for 55 blocks-approximately 17 percent of the cases, split almost evenly between negative and positive coefficients. A random block was omitted for each district.

Table 4 Per capita expenditures by population size for gram panchayats: 2005

Population Size	Per capita expenditures ^a (in \$US)	Minimum (in \$US)	Maximum (in \$US)	Coefficient of Variation
Gram panchayats				
Less than 15,000	4.16	0.70	32.27	83.5
15,001-20,000	2.85	0.44	13.15	59.8
20,000-25,000	2.66	0.40	12.20	67.1
Greater than 25,000	2.33	0.33	8.46	61.4
Total N=2,961	3.12	0.33	32.27	78.2

^aunweighted mean.

Source: Updated from Bahl, Sethi, and Wallace, 2008

Per capita expenditures by the highest spending gram panchayat are nearly 100 times greater than that of the lowest. Over 80 percent of all GPs spend \$4 or less per person. The distribution has a "long tail" meaning that there are a number of individual GPs that spend well more per person. The higher spending amounts range up to US \$32. In such cases, the services delivered are likely to be meaningful. Understanding the reasons for these wide disparities may be the key to developing a strategy to increase the fiscal importance of gram panchayats.

To explain this variation, we estimate OLS regressions for gram panchayats, where per capita total expenditures is the dependent variable, and the independent variables are justified as follows:¹¹

- *Population size* should be negatively related to per capita spending, because for smaller local governments, the fixed cost effects will weigh heavily on budgets. Moreover, both federal and state grants recognize this special need of smaller jurisdictions with larger per capita allocations.
- *The percent of SC/ST population* should be positively related to per capita expenditures because this implies a heavier concentration of poor citizens that are more costly to serve, and because increased intergovernmental transfers will follow the concentration of poor families.
- The effect of *the literacy rate* on per capita expenditures should be positive if literacy signals more willingness to pay for services on the part of residents and a greater capacity to deliver services and attract grants on the part of government.
- *The share of workers in the agricultural sector* might indicate more need for services because services currently provided in the more remote areas may be more deficient and more costly to provide. It also may be positively related to the level of per capita expenditures because of the likelihood that larger shares of agricultural workers indicate a more agrarian economy and more demand for employment generation programs.
- *Dummy variables are included to take account of district and block of location* of gram panchayats. This should pick up the impact of some qualitative factors such as location, political power, and different attitudes and levels of efficiency at the district and block levels.

The results of this OLS analysis are presented in table 5. Over 80 percent of the variation in per capita expenditures among the 2,098 gram panchayats in the sample can be explained by these variables. Population size exerts the expected significant and negative scale effect. The proxy measure for the concentration of poverty (SC/ST population) is significant in leading to higher levels of per capita expenditures.¹² This is an expected result because higher proportions of SC/ST population draw in more intergovernmental transfers to address the greater expenditure needs. All else held constant, a ten percentage point higher share of SC/ST population may be associated with a 1.8 percent higher level of per capita spending by a gram panchayat.¹³ The literacy rate exerts a positive marginal effect on spending. Better education leads to more demand for public resources and at the margin to a greater

willingness to pay for services. A larger share in agricultural employment leads to significantly higher levels of per capita expenditures, as hypothesized. The district and block location effects are significant, suggesting that there are important economic, management, and political factors to be considered in explaining inter-GP variations in per capita expenditures.

Table 5 OLS estimation of the determinants of variations in per capita total expenditures of gram panchayats: 2005^a

Level of government	Gram panchayat ^b
Constant	9.96** (41.64)
Log Population	--0.432** (14.62)
Log Percent SC/ST Population	0.184** (13.7)
Log Literacy Rate	0.291** (5.50)
Log Percent of Agricultural Labor	0.090** (7.81)
R ⁻²	0.81 (7.81)
N	2,098

^acoefficients on district and block dummy variables not reported. Fourteen of the 18 districts and Seventy four of the 325 block dummy variables were significant. This indicates that they are important, indicating that there are differences in spending levels within districts and blocks, even after we account for socio-economic characteristics.

^bvariables in logarithms.

*Significant at the 95% level or higher.

**Significant at the 99% level or higher.

Conclusions and Policy Implications

The federal system as practiced in West Bengal State seems out of balance by comparison with one that would emphasize autonomy for rural local governments. Over 70 percent of the population in the state lives in rural areas, yet rural local governments account for less than 17 percent of total state and local government spending. Much of this amount is funded by conditional grants which limits the fiscal autonomy of rural local governments.

The empirical analysis carried out here identifies a large variation among rural local governments in the level of per capita spending. We are able to explain 80 percent of this variation in a regression analysis of a sample of over 2,000 local governments. The conclusion is that spending is higher in less populated and more backward rural local governments, suggesting both a fixed cost effect, and that a considerable amount of equalization is built into the system. At the margin, higher rates of literacy also are associated with higher levels of spending, suggesting an "education effect." We test the equalization hypothesis more directly by studying the determinants of per capita intergovernmental transfers and find that federal grants are equalizing, but state grants are not. Gram panchayats with a 10 percent higher concentration of poverty receive a 3 percent higher level of federal grants. We also find evidence that district or block of location matters to fiscal outcomes. We speculate that this might be due to, for example, generally better management skills, political connection, or even special economic circumstances.

The spirit of India's constitutional amendments would seem to push toward pursuing efficiency goals and stressing accountability at the local level. The degree of poverty in rural areas, the deplorable level of local public services and the weak capacity of rural local governments are factors that push in the direction of more central and state government control over the budgets of rural local governments. Indian policy makers and academics are understandably divided on the question of which way to move, and about whether the potential gains from policy reform are worth the disruption of the institutional structure for rural finance that would be required. Those who would reform the system of rural government finance must take on this choice and must face up to some difficult public policy questions.

One of these policy questions is whether the "right" size of rural local government in India is in fact the gram panchayat (average population of about 15,000). If this is to remain the basic unit, then the spending level (which now averages about US \$3) needs to be ratcheted up in order to draw voters more directly into the fiscal governance process. This might be done by a combination of factors such as increased assignment of expenditure responsibilities to rural local governments, a shift to unconditional grants that would give more discretion to local voters, and some additional capacity for local revenue mobilization. The danger in this strategy is the possible increase in fiscal disparities, which this research has shown to be already very large.

There are perhaps three broader lessons from the West Bengal experience with rural public finance. First is the value of having hard data to describe and track the pattern of spending and revenue raising, and the spatial impact of intergovernmental transfers. Without an empirical analysis, the extent of equalization could not have been determined, or the evaluation of alternative designs of these transfers could not be evaluated. Yet it is the case that in many developing countries, there is no database on local government finance. Second, this examination of rural local government finances can demonstrate how difficult it would be to move from an "agency" function for local government budgets to an autonomous spending role.

Finally, this case study suggests that one cost of having a large number of rural local governments who are "close to the people" is that the resulting level of fiscal activity may be too small to draw voter interest in the budget.

¹ In some districts of West Bengal, there has been an increased use of a fourth level (not a government)-the "gram sansad". These village councils are used to identify expenditure needs from the ground up and to help inform gram panchayat budget decisions.

² For a discussion of rural local government financing in transition and developing countries, see Wong (1997), Boex and Martinez-Vazquez (2006), Schroeder (2003), and Sethi (2004).

³ Statistical analysis of a sample of gram panchayats was carried out in Karnataka (Rao et al. 2004) and Kerala (Oommen 2004).

⁴ The 17 percent share of expenditures managed through panchayats in West Bengal is not so far out of line with that in at least some other Indian states where data are reliable. Based on a sample drawn from four districts, Rao et al. (2004) estimate that about 20 percent of expenditures are channeled through panchayats in Karnataka State, while Oommen et al. (2004) estimate the share at closer to 30 percent in Kerala.

⁵ The temporary nature of many of these projects is suggested by the fact that the use of machinery in the work is prohibited, as is the use of contractors (Government of India, 2006).

⁶ In 2007, the SGRY was replaced by a National Employment Guarantee Grant.

⁷ There also is provision for an unconditional state finance commission grant, but it was not distributed in the time period under study here.

⁸ Federal grants and transfers include funds for centrally sponsored schemes (IAY, SGRY, the National Social Assistance Program, Midday Meal Program, Provident Fund, and other smaller schemes) and Union Finance Commission grant. State grants and transfers include funds for state sponsored schemes (Minideep tubewell program, Provident fund for agricultural workers, and other smaller funds) and salary grants.

⁹ Ideally, we would have used the percent of families below the poverty line. Unfortunately, these data were not available for gram panchayats. Certain tribes and castes have been singled out as suffering extreme social, economic and educational backwardness. These groups have been named in Articles 341 and 342 of the constitution as "scheduled castes and tribes." The percent of scheduled castes and tribes seems a reasonable proxy, and in fact is used by the federal government in its formula to allocate poverty grants. It has been similarly used in other empirical analysis, e.g., Rao et al. (2004).

¹⁰ In the case of districts in West Bengal, there is a very strong positive correlation between the literacy rate and the level of per capita gross state product.

¹¹ Data for the independent variables are taken from the 2001 census

¹² Rao et al. (2004) working with about a twelve percent (nonrandom) sample of gram panchayats in Karnataka found a significant positive relationship between per capita spending for public works and the percent of SC/ST population. Oommen's (2004) study of about two-thirds of Kerala's gram panchayats shows per capita total expenditures to be significantly (positive) related to poverty and significantly (negative) to population.

¹³ An alternate poverty measure, the percent of females in the population, was not significant, so was dropped from the regression.

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