

# Does Participation Improve Development Outcomes?

MUCH OF THE IMPETUS FOR INVESTMENT IN PARTICIPATORY poverty reduction projects and decentralization efforts has come from the hope that greater civic engagement will lead to faster and more equitable development. In line with this notion, many countries have shifted the provision of basic public services to the local level, and there has been much greater emphasis on citizen engagement in service delivery through community health groups, school management committees, and similar groups. Common-pool resources are also increasingly managed more locally, and small-scale infrastructure is often provided through decentralized poverty reduction programs, social funds, and community-driven development projects. Community-based livelihood programs, which focus more directly on increasing income and employment, have also become an important component of large-scale poverty reduction programs.

This chapter assesses the extent to which this shift toward the local has enhanced the pace of development, increased equity in access to public programs, and improved the sustainability of development efforts. The first section reviews efforts to decentralize the identification of beneficiary households and communities for poverty reduction and social insurance programs. The second section reviews efforts to devolve the management of common-pool resources and summarizes the evidence for greater resource sustainability and equity. The third section examines local infrastructure delivered through participatory mechanisms. The fourth section reviews efforts to induce greater community oversight in the delivery of health and education services. The fifth section assesses the evidence on the poverty impacts of participatory projects. The last section sums up the broad lessons learned.

## Identification of Beneficiaries

A common approach to evaluating the relative efficiency of alternative targeting mechanisms has been to compare leakage and undercoverage rates. Much of the literature focuses almost exclusively on leakage and the extent to which it reflects resource capture by elites.<sup>1</sup> Although this aspect of targeting is important, an exclusive focus on the identity of beneficiaries can draw attention away from what is ultimately of greatest interest: whether the poverty reduction objectives of targeted programs are achievable given the size and distribution of the budget (see Ravallion 2009b).

Participatory poverty reduction programs typically use a combination of targeting methods to identify beneficiary households and communities. When the government manages and implements programs, the center may allocate resources to subnational jurisdictions, using administrative criteria to satisfy broad political economy concerns, such as support to the poorest areas or the need to ensure horizontal equity. Local governments may then be required to identify the poor, or the most poorly served by public services, within their jurisdiction. Geographic and poverty targeting at higher levels is often combined with a demand-driven process at the community level to generate beneficiary lists for infrastructure projects. Community-driven development and social fund programs often do this by working with local nongovernmental organizations (NGOs) and community activists. Elected or selected local leaders are usually responsible for identifying beneficiaries when programs are implemented through local governments.

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The process of beneficiary identification at the local level also varies substantially, both within and across projects, and is often left fuzzy. Critics worry that this leaves the process open to rent-seeking. One response to the problem has been to use poverty monitoring tools to select beneficiaries at the very local level.<sup>2</sup> The use of such tools is not without costs, however, as it devalues the relevance of information at the local level—precisely the level at which such information is likely to be most valuable. The evidence reviewed below sheds some light on this issue.

Participatory programs that invest in local public goods also rely on community and household self-selection. All social funds, for example, require community co-financing, with or without competition for funds. Communities as a whole, or specific community groups, must decide whether or not to submit a proposal for a project based on the

implied level of benefits and the cost of participation. The assumption for targeted social funds is that the level of benefits is too low to make participation advantageous for the better-off.

Co-financing has long been seen as a cornerstone of participatory development. It can be in the form of free or low-wage labor, cash, or materials. It is believed that community co-financing ensures community engagement in all aspects of the project, at construction and after, thereby ensuring that investments are sustainable. As the community, along with the government or donor agency, decides on the level of provision of the good or service, co-financing is sometimes seen as a lump-sum tax on public good provision.

However, many observers view co-financing as an egregious aspect of participatory projects, one that forces people with the least to either pay more for their development needs than the better-off do or to opt out and be excluded altogether from project benefits. Free labor provision by community members has even been compared with forced or *corvée* labor (see chapter 1).<sup>3</sup>

When communities compete for funds, with or without co-financing requirements, the overall targeting performance of projects also depends on the capacity of eligible communities to submit adequate proposals. Communities that have low capacity or cannot meet co-financing requirements are often unable to submit projects for consideration. Even the best-intentioned implementing agencies cannot prevent this type of initial exclusion: although the use of administrative criteria, such as the number of poor households served, can improve targeting among applicants, it cannot reverse exclusion in the pool of submitted projects.

Program conditions such as the resources allocated to building community capacity or the information available to potential beneficiaries can therefore determine who applies for benefits as well as who gets approved. Many community-based projects have remedial mechanisms that are intended to ensure that all eligible communities can submit feasible projects. Nonetheless, there is a pervasive concern in the literature about the extent to which better-off communities—communities with greater capacity, political networks, or wealth—are more likely to propose and win subprojects. This issue is addressed in the review that follows, as far as is possible, by examining the targeting strategy and its outcomes at different stages of the targeting process—that is, by looking at factors such as program reliance on administrative targeting, a

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competitive fund allocation process, self-selection to determine eligibility, and the extent to which program participation entails costs such as co-financing or a challenging application process.

### Central versus Local Targeting of Private Transfers

Some studies suggest that local co-financing requirements can exacerbate horizontal inequities, particularly when eligibility thresholds are also decentralized.

Most studies that have examined the relative targeting performance of the center versus local areas in assigning private benefits find support for more pro-poor targeting at the local level. However, the increase in targeting performance is small, with programs only mildly pro-poor on balance. Moreover, some evidence suggests that the local targeting of poor areas or households is substantially improved when the center provides stronger incentives for pro-poor targeting by local governments or implementing agencies, often by retaining control over key design features of the program, such as eligibility thresholds. Some studies suggest that local co-financing requirements can exacerbate horizontal inequities, particularly when eligibility thresholds are also decentralized.

Evidence from an Albanian economic support program (the Ndihme Ekonomika) indicates that local officials were able to target recipients better than the center could have done using proxy entitlement indicators (Alderman 2002). The program provided social assistance to some 20 percent of the population through a block grant to communes. Local officials determined eligibility and the amount of the transfer to beneficiary households.

Galasso and Ravallion (2005) find similar evidence for a decentralized poverty program in Bangladesh. The Food-for-Education program distributed fixed food rations to selected poor households conditional on their school-age children attending at least 85 percent of classes. The center was responsible for identifying eligible *union parishads*, the lowest level of local government. Villages in eligible *union parishads* were then made responsible for identifying program beneficiaries. The program was mildly pro-poor (slightly more poor than nonpoor households received rations). Although the targeting differential was small—the program achieved about one-fifth the maximum targeting differential—almost all of it occurred because beneficiaries were well targeted within villages.<sup>4</sup>

The center is often better at targeting poor communities than identifying poor households within such communities.

A series of other studies broadly supports these findings. Coady (2001) examines a large Mexican cash transfer program (Progres),

which selected poor households on the basis of census data without any community involvement. He finds some support for the center's ability to target eligible communities but, in line with other studies, finds that the center is far less able to identify poor households within targeted poor communities.

In their study of the Trabajar 2 program in Argentina, Ravallion (2000) and Jalan and Ravallion (2003) demonstrate the center's role in providing incentives for more pro-poor targeting by local governments. This World Bank-supported program, introduced in 1997, expanded an earlier workfare program, Trabajar 1, in order to provide an additional period of short-term work to poor households and to locate socially useful projects in poor areas. Under Trabajar 2, the central government allocated funds to the provinces, making an effort to provide more program funding to poorer provinces. Provincial governments then allocated funds to projects within the provinces. Local governments and NGOs proposed subprojects and bore their nonwage costs. The results show that self-targeting in the program worked well, with participants overwhelmingly drawn from among the poorest households. The studies also find some improvement in reaching poorer areas within provinces. About a third of the overall improvement came from better targeting of provinces; the rest came from better targeting of poor areas within provinces.<sup>5</sup>

However, a more recent assessment of the targeting performance of this program (Ronconi 2009) finds greater leakage and smaller income effects. It also finds some evidence that nontargeted beneficiaries were more politically connected.

A number of studies use data from rural India to examine whether participation in mandatory village assemblies (*gram sabhas*) called by elected village councils (*gram panchayats*) to discuss resource allocation decisions in the village improved the allocation of central transfer programs. These programs provide an array of government schemes, ranging from subsidized food through the public distribution system to housing schemes and free hospitalization to poor households. In collaboration with state government officials, through a census, the *gram panchayat* identifies households eligible to receive Below Poverty Line (BPL) cards. The list of BPL households, as well as the subsequent selection of beneficiaries for specific schemes, needs to be ratified at public *gram sabha* meetings. The Indian Planning Commission reports that there is a perception of significant mistargeting in the allocation of BPL cards.

Some evidence suggests that villages in India that hold a *gram sabha* do a better job of targeting the most disadvantaged.

Besley, Pande, and Rao (2005, 2007) find that villages that hold a *gram sabha* do a better job of targeting BPL cards to the most disadvantaged villagers. People without any formal schooling, for example, fare substantially better in villages that hold *gram sabhas*. However, not all villages hold such meetings, and among those that do, only about a fifth discuss beneficiary selection for public programs. Consequently, most local politicians in their sample (87 percent of the 540 surveyed) believed that they, rather than the *gram sabha*, were responsible for benefit allocation decisions.

Bardhan and others (2008) also find that villages that had greater *gram sabha* participation rates were more pro-poor in their allocation of benefits. Although they are careful to point out that this finding does not provide evidence of a causal impact of *gram sabha* meetings on targeting, they argue that it is consistent with the hypothesis that village meetings “formed a channel of accountability of *gram panchayats* to poor and low caste groups” (p. 7). Besley, Pande, and Rao (2007) also find support for the disciplinary effect of the *gram sabha* on capture. They show that the odds of a politician’s household receiving a BPL card were lower in villages in which a *gram sabha* was held.

These results are only suggestive, as the design of these studies does not allow the authors to determine why some villages hold meetings and others do not. Several studies using data from India have tried to identify village characteristics that predict the holding of *gram sabhas* as well as household characteristics associated with participation. Bardhan and others (2008) find that participation rates were higher in villages in which the proportion of landless and scheduled caste households was lower. Besley, Pande, and Rao (2007) find higher participation rates for the landless and low caste in villages with higher average levels of education.

Kumar (2007) looks at the effect of community participation on the targeting of BPL cards in India. Her data come from the state of Madhya Pradesh, where a participatory development project, the District Poverty Initiatives Project (DPIP), was initiated in 2001. She assesses the extent to which DPIP, which aims to build political awareness and confidence among the disadvantaged, affects the allocation of BPL cards to eligible households. Her results indicate that the targeting of BPL cards is indeed more pro-poor in DPIP villages, where a greater fraction of BPL cardholders are landless and belong to lower castes. (See also the discussion in chapter 6.)

Ravallion (2009a) examines the relationship between central and local targeting, using data from the implementation of Di Bao, a decentralized urban poverty reduction program in China. The program aims to provide all urban households with a transfer payment sufficient to bring their incomes up to a predetermined poverty line. The center set the guidelines and provided about 60 percent of the program's costs on average, making some effort to bear a larger share of the cost in poorer provinces.<sup>6</sup> Municipalities were allowed to set the eligibility threshold for benefits and identify beneficiaries.

The question of interest is whether poorer municipalities had incentives under these conditions to understate their poverty problems by setting lower thresholds. The analysis shows that poorer cities did indeed set lower poverty lines and thus had lower participation rates. As a result, equally poor families ended up with very different levels of access to the program, with the poor in the poorest cities typically faring worst. This problem greatly diminished the program's ability to reach the poor.

An important dimension of inducing greater civic engagement in the identification of beneficiaries is that local perceptions of need may not coincide with the ways the center determines program eligibility. This divergence in perceptions may account for some of the perceived leakage in transfer programs when such programs are assessed using means tests or other information that external agents can observe. The literature in this area is sparse, but the evidence suggests that local determination of need may take into account variables not observed by the center, possibly creating a divergence in notions of eligibility between the center and localities.

In a case study of famine relief efforts in Southern Sudan, Harragin (2004) finds that local ideas of how food should be distributed differed from the ideas of aid workers, resulting in a poorly designed project. Ethnographic and case study evidence supports the view that the mechanisms used to identify beneficiaries are crucial in determining how pro-poor decentralized targeting will be, especially when community members have unequal access to project implementers.

Alatas and others (2012) report on a field experiment designed to understand how community methods fare relative to a proxy means test in targeting resources to the poor.<sup>7</sup> They collected proxy means test information for all households in all sample villages, randomly varying its use in assigning eligibility. In a third of sample villages, only the proxy means test was used to assign eligibility; in another third,

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beneficiaries were selected through a community ranking exercise; in another third, the proxy means test was used to determine eligibility of people identified by the community. The authors find very little support for the benefits of community targeting over the proxy means test when poverty status is measured based on per capita expenditures. This finding is somewhat surprising given the substantial leakage and exclusion that can occur under even the best-designed proxy means test. One would expect that in very small communities like the ones the authors worked with, access to relevant information on recent shocks might at least improve coverage of the eligible based on per capita consumption.

The authors also find no evidence that meetings confined to the village elite produced worse targeting outcomes than meetings that included a more representative group. Furthermore, households more closely connected to elites were not more likely to benefit when meetings were confined to elites. Despite poorer targeting outcomes, community targeting resulted in higher satisfaction levels.

Alatas and others (2012) use data on poverty perceptions to make sense of these results. They check the correlation of a household's subjective ranking of itself and other households against rankings from the community targeting exercise and the proxy means test. They find a higher correlation of self-perception with the rankings obtained under community targeting. Taken together, they argue, their results suggest that communities employ a concept of poverty that is different from per capita expenditure and that this difference explains the ostensibly worse performance of community targeting. As communities use different criteria to ascribe poverty status, they contend, it is understandable that a strategy that valorizes their preferences yields greater satisfaction levels.

Gugerty and Kremer (2006) also find that the women's groups they study in Kenya reported more satisfaction with group leadership. There was little improvement in objective measures of group activity, however, and the women did not have better attendance rates than the comparison groups.

Although these results are interesting, it is difficult to know how to assess their validity. In the study by Alatas and others (2012), for example, the treatment provided a one-time transfer that was a little less than a third of the monthly transfer received by eligible households under the Indonesian government's main transfer program, the Bantuan Langsung Tunai (BLT), potentially limiting the gains from capture. Equally important, aware that this was a small study and distinct from



the BLT, village elites and government administrators may have found it opportune to demonstrate transparency. The careful design of the community-based targeting meeting, along with the very small and relatively homogeneous subvillages or neighborhoods that were selected for the study, may also have affected the results. Much of the evidence from studies of large-scale transfer programs, including programs in Indonesia, points to substantial heterogeneity in the manner in which community input is solicited and to significant capture of funds (see chapter 4).

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### Central versus Local Targeting of Public Goods

Several studies of social funds find pro-poor geographic targeting by the center in allocating local public goods. Some, however, find weaker central capacity to target the poor within eligible areas. Chase and Sherburne-Benz (2001) and Pradhan and Rawlings (2002), for example, find that investments made under the Zambia social fund (ZAMSIF) and the Nicaragua social fund were generally well targeted to both poor communities and poor households. In Zambia, however, targeting was effective only in rural communities; in urban areas, better-off communities and households were selected. A review of social fund projects by the World Bank's Independent Evaluation Group (2002) also finds this bias. Araujo and others (2008) find that geographic targeting at the level of the community appears to have worked well in Ecuador's social fund, with poorer communities more likely to be selected for subproject funding.

Paxson and Schady (2002) assess the poverty targeting of the Peruvian social fund using district-level data on expenditures and poverty. They find that the fund, which emphasized geographic targeting, reached the poorest districts but not the poorest households in those districts: better-off households were slightly more likely than poor households to benefit. Using propensity score matching techniques, Chase (2002) finds similar results in Armenia. Although the social fund was successful in targeting communities with the poorest infrastructure, these communities were not always among the poorest, and the fund was slightly regressive in targeting households in rural areas.

De Janvry, Nakagawa, and Sadoulet (2009) explore the relationship between decentralization and pro-poor targeting within districts under the third phase of ZAMSIF. Districts were grouped into three categories

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based on administrative capacity. In districts with the lowest capacity, targeting remained fully centralized. Districts with greater capacity were given progressively more control over resources, culminating in full decentralization of decision making for some.

Decentralization did not affect the allocation of funds across districts, but it did affect a district's capacity to allocate resources across its wards. Using two measures of welfare (school enrollment and an index of housing conditions), the authors find that the center's targeting of districts was not progressive—and was even somewhat regressive in some phases. In contrast, the within-district targeting of wards became more progressive over time in all districts, especially districts given greater discretion. A caveat regarding these results is that the districts that had greater discretion over resource allocation decisions also had greater managerial capacity. It is unclear, therefore, whether more progressive targeting in these districts reflected greater decentralization or greater capacity. Interestingly, within-district effects in the higher-capacity districts were driven almost entirely by wards with high literacy levels.

**A study in Tanzania finds that demand-driven application processes were strongly regressive.**

Baird, McIntosh, and Özler (2009) focus on the process by which Tanzania's Social Action Fund (TASAF) allocated subprojects within districts. Using administrative data on project submission and approval, they find that the demand-driven application process was strongly regressive, with many more applications originating from wealthier and more literate districts. The political affiliation of ward and district representatives also influenced the allocation of TASAF money. Wards that were aligned with the party in power were significantly more likely to apply; wards in which both the ward and the district representatives were from the opposition party were significantly less likely to apply. Ironically, a strongly pro-poor allocation of district-level budgets from the center managed to undo much of this regressivity in applications, leaving a mildly pro-poor program overall, although the poverty reduction objectives of the center were considerably attenuated.

Labonne and Chase's (2009) work on the KALAHI-CIDSS project in the Philippines also provides a good example of the tension between pro-poor targeting and a competitive demand-driven process of sub-project elicitation. As in other community-driven development and social fund projects, facilitators in KALAHI-CIDSS help communities identify priorities and prepare and submit proposals. After review at a municipal-level meeting, a subset of proposed projects is funded.

In the study, respondents were asked to name the three most pressing issues in the village before any project activities got under way. Combining these data with administrative data on projects proposed and accepted, the authors assessed whether the preferences of specific groups mattered at the project proposal and acceptance stage. Consistent with other studies, they find that the competitive subproject proposal and approval process led to fewer applications from poorer and less politically connected villages. In addition, while the village leader's preferences on both project type and location appeared to be influential in determining which projects were put forward, these preferences were much less likely to sway the outcome at the municipal level. In fact, as in Tanzania, municipal allocation rules undid some of the regressivity in proposed projects. Given the initial bias in proposed projects, however, municipal allocation rules had limited success, and funded proposals remained well aligned with the village leader's preferences. The influence of the village leader was much greater in villages with greater wealth inequality. Controlling for poverty, more unequal villages were also more likely to have their projects approved, indicating that local leaders in more unequal villages may also exercise greater influence over the inter-village approval process.

As discussed above, China's Di Bao program (Ravallion 2009a) suggests that the poorest communities may underparticipate or self-select out of programs that require them to foot part of the bill for private benefits or local public goods. This tendency may partly account for the lack of applications from poorer districts and wards in the TASAF program. A key similarity between the two programs is that eligibility criteria are decentralized and a portion of the funds come from the center, which progressively targets poorer localities (districts in TASAF and municipalities in Di Bao). Under TASAF, participation by poorer districts is depressed at the application stage, whereas under Di Bao, municipalities have an incentive to depress their participation rates in the program in the face of budget constraints. In both cases, the net effect is that despite progressive targeting from the center, the overall poverty impact of the program is attenuated. Chase (2002) also argues that mandatory community contributions in the Armenia Social Fund may have led to a selection bias against the poorest communities, which are often unwilling or unable to contribute.

In the TASAF and ZAMSIF studies, weak community capacity also appears to be a deterrent to participation. Unlike the Di Bao program,

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wealthier districts in TASAF or KALAHI-CIDSS were also not able to target their own poor better than poorer districts, suggesting greater capture of program benefits by the relatively well off.

## Sustainable Management of Common-Pool Resources

**Institutions for local resource governance have increased substantially over the past two decades . . .**

Local institutions for resource governance have increased substantially over the past two decades, at least in numbers, as national governments have created new institutional arrangements to engage local populations in the governance of natural resources (Stern, Dietz, and Ostrom 2003). Estimates place the share of the world's natural forests officially managed with some form of popular participation at about 12 percent (Sunderlin, Hatcher, and Liddle 2008)—and this figure probably significantly underestimates the actual figure, as it excludes forests that are officially managed by the state but actually managed by local communities and private individuals.

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This expansion has been accompanied by a more enfranchising view of decentralized natural resource management, which represents a major shift from the past. Historically, popular participation in the management of natural resources was closely associated with colonial efforts to extend control over local resources. In the case of forests, an expansion in local participation under colonial rule was precipitated by industrialization and higher prices for timber and other forest products. In the case of water for irrigation, local participation increased when colonial governments made large investments in irrigation infrastructure, which also created greater management needs.<sup>8</sup> Many newly independent nations chose to reverse this process, initially, by recentralizing and consolidating power at the center.

Decentralization efforts around natural resource management gained momentum in development policy circles only in the 1970s, largely under outside pressure from international aid organizations and donors, motivated by both concerns about the accountability of central governments and recognition of resource depletion and climate change.<sup>9</sup> By the 1980s, decentralized natural resource management had come to be associated with the broader project of poverty reduction<sup>10</sup> and the building of democratic local institutions (Ribot, Lund, and Treue 2010).<sup>11</sup>

The push for localizing natural resource management has thus paralleled the broader move toward participatory development over the past

two decades. A large body of literature, based largely on case studies, has been extremely influential in this process. It has established the pervasive presence of local institutions in the management of natural resources, with or without state support, and demonstrated the viability of community management as an alternative to either privatization or management by a centralized state bureaucracy.<sup>12</sup>

In practice, the local management of common-pool resources takes many institutional forms, and there is often substantial divergence between formal and de facto community control as well as the types of decision making transferred to local governments or user communities. The extent and type of central government involvement also varies a great deal with the value placed on the resource. The scale of national and international interest in a common-pool resource also depends on the size of the externality it creates. With forests, the interests of the global community can also be relevant; they can determine the form of management as well as the allocation of benefits. In contrast, in the case of irrigation water or pastures, the main concerns are likely to be capture by insiders and local incentives and capacity to maintain the resource base.

It is important to distinguish community-based natural resource management (CBNRM) and decentralization. Like community-driven development, CBNRM refers to the direct or indirect involvement of local communities at a relatively small scale to shape the use, distribution, and management of resources. Democratic decentralization—under which local representative authorities receive powers in the name of local citizens—can be considered a manifestation of CBNRM, but the devolution of powers to user groups, chiefs, NGOs, private corporations, or private individuals is not decentralization. Likewise, transfers to local line ministries (that is, deconcentration) is not a form of CBNRM.<sup>13</sup>

These distinctions are borne in mind in the literature review presented in this chapter. The review is selective, with a focus on the following questions: When does community engagement in resource management enhance resource sustainability (regenerated forests, increased forest cover, more sustainable fish and livestock harvesting, better water storage and use systems)? Is local management more inclusive and more equitable than central management or an unmanaged commons? In each case, to what extent is success shaped or constrained by preexisting community characteristics? Can local management systems be designed

**Community management of common-pool resources has come to be seen as a viable alternative to privatization or management by a centralized state bureaucracy.**

to overcome adverse local characteristics—that is, can design induce the right type and level of participation? How dependent is success on the role played by the central state?

The literature on community involvement in the management of natural resources is large and multidisciplinary, but most of it is based on case studies. Well-done case studies can add greatly to the understanding of processes; they are often less helpful, however, in establishing causal relationships between the structural features of communities, the institutions of governance established within them, and their impact on measures of system performance. The few research studies that use large datasets and attempt to deal with problems of selection into community management, are therefore highlighted in the discussion below.

### Local Management and Resource Sustainability

Much of the literature on CBNRM and decentralized resource management focuses on the conditions under which the commons can be better governed—that is, the conditions under which community participation leads to greater resource sustainability (see, for example, Wade 1985; Ostrom 1990; Baland and Platteau 1997). This focus is in large part driven by Hardin's concerns about the fate of an unregulated commons. Many case studies suggest the viability of community management of natural resources with or without state assistance (see Agrawal and Benson 2010 for a review). The verdict on government-initiated institutions for community resource management has been bleaker.<sup>14</sup>

However, several studies that use large data sets to examine the impact of government-initiated institutions of community forest management show that it may be possible for governments to successfully induce natural resource management on a large scale. A key point made by all of these studies is that there is considerable selection in community management of natural resources, because community takeover is usually voluntary. Case studies cannot deal with such selection or with spillover effects, which can also bias results considerably.

Edmonds (2002) uses data from Nepal to determine the impact on the level of extraction of wood for fuel of a government-initiated program that transferred management of forests to local user groups. The evidence suggests that there was a significant reduction in wood extraction in areas with forest user groups.<sup>15</sup>

Several studies based on large data sets suggest that it may be possible for governments to successfully induce natural resource management on a large scale.

Somanathan, Prabhakar, and Singh (2005) assess the impact of local forest councils (*van panchayats* [VPs]) on forest degradation in the Indian state of Uttaranchal. Unlike Edmonds, they use satellite-based measures of forest quality (principally predictors of canopy cover) over a large geographical region that included VP and non VP forests in Uttaranchal. This methodology circumvents the problem of using community reported measures of local forest quality. The authors assess the long-run impact of decentralized management by village councils on forest stocks. Their study is also the only one that compares the cost of state and community management.<sup>16</sup>

The results indicate that broadleaved forests, which are of much greater relevance for local use, improved significantly under VP management but that there was no improvement in pine forests (VP-managed pine forests did no worse than comparable state-managed forests). At the same time, community management was far more cost effective than state management. The authors' calculations suggest that transferring state forests to community management would generate annual savings equal to the value of the total annual production of firewood from state forests.

Baland and others (2010) also assess the impact of VPs on forest degradation in Uttaranchal, using a wider set of measures of forest quality. They find that VP management improved the extraction of wood for fuel and fodder but did not lead to broader improvements in forest quality, such as canopy cover or forest regeneration. Their results indicate that VPs had little impact on tree-cutting or timber extraction, which may be a much greater source of forest degradation than the extraction of wood for fuel and fodder. However, the improvement that did occur was not at the cost of neighboring non VP forest parcels.<sup>17</sup> Their findings suggest that community management is often a response to the degradation of local forests. If this is the case, then any simple comparison of community-managed forests with forests managed by the state, or not managed at all, will tend to show no or even negative impact, as Agrawal and Chhatre find in their study of the Indian Himalayas (2006).

The impact of inequality on collective action has been at the center of a number of theoretical and empirical studies of management by communities or users, particularly in the fisheries sector and in the management of irrigation. It has also been an important focus in the case study literature on common-pool resource management. Ostrom, Lam, and Lee (1994) and Ostrom (1990) show that farmer-managed irrigation schemes have more equitable water distribution, for example,

A study of India suggests that community management of state forests would generate annual savings equal to the value of total annual production of firewood from state forests.

Maintenance of irrigation systems tends to be worse in more unequal and heterogeneous communities . . .

but they do not compare the functioning of farmer-managed systems in more and less equal communities.

Studies that look explicitly at the impact of local inequality on the maintenance of irrigation systems find by and large that maintenance is worse in more unequal communities. Dayton-Johnson (2000) develops a model of cooperation in small irrigation systems, which he tests with data from a survey of Mexican irrigation societies. He finds that social heterogeneity and landholding inequality are consistently and significantly associated with lower levels of maintenance. Bardhan (2000) finds similar results in South India.

Dayton-Johnson and Bardhan (2002) attempt to reconcile views from the field study literature with Olson's (1965) view that inequality should be good for collective action. Their study pulls together data from a number of irrigation systems, including three large-scale studies from Nepal, southern India, and central Mexico. Overall, the findings suggest that however it is defined, heterogeneity weakens a group's ability to use social norms to enforce collective agreements and generally has a negative impact on cooperation. Moreover, even after controlling for social heterogeneity, inequality in the distribution of wealth continues to exercise a significant and largely negative effect. The authors conclude that although "Olson effects" are theoretically plausible under certain conditions, they do not seem to be operative in the irrigation systems they examine. They do find some evidence for a *U*-shaped relationship between inequality and collective action, with conservation possible only when inequality is very low or very high, not in between. In a similar vein, Bardhan, Ghatak, and Karaivanov (2007) show that when private inputs, such as land, are complementary in production with collective inputs, such as irrigation water, inequality in the ownership of private inputs tends to worsen maintenance.

. . . but adequate local discretion may be able to overcome problems created by inequality among resource users.

A number of studies note, however, that adequate local discretion can overcome problems created by inequalities among resource users. Adhikari and Lovett (2006) use data from forest user groups in Nepal to argue that successful collective action can be achieved even when inequalities among resource users exist, provided that communities can exercise discretion in creating institutions for resource management.

A great deal of forest conservation and regeneration has been achieved under community management in Nepal and some Indian states.

A number of other case studies of forestry management highlight the same point. Hobley (1996) finds that in some states in India, as well as in Nepal, a great deal of forest conservation and regeneration has been achieved under community management. Adhikari and Lovett (2006)



and Hobley (1996) report on cases in which user communities were able to exercise substantial discretion and had clear incentives to manage and preserve the resource.

In Africa, accounts of failure far outnumber accounts of success, except in Cameroon, Malawi, and Tanzania. Ribot, Lund, and Treue (2010), who review a large number of case studies, blame this failure on weak local governments and poorly thought-out donor programs. They note that donor-supported projects often fail to empower representative and downwardly accountable local bodies, relying instead on disenfranchising colonial practices oriented toward extraction and control (see also Ribot 2007; Ribot, Chhatre, and Lankina 2008).

These results suggest that successful collective action requires the establishment of clear and credible systems of accountability and that such rules may not be forthcoming in unequal communities, creating a space for central effort in setting the rules of the game. Dayton-Johnson and Bardhan's (2002) analysis provides an important insight. They note that heterogeneity affects not just the extent of cooperation, given a set of rules, but the type of rules chosen. Furthermore, not all rules are equally conducive to good performance or equity, and unequal communities are less likely to pick effective and equitable rules.

Ribot (2004) notes that when externalities are significant, it is particularly important that standards and rules be set at a higher level. If, for example, conversion is forbidden as a precondition for local control of the forests, incentives may need to be put in place that link conservation with livelihoods. In the absence of such incentives, there is no inherent reason to believe that local people will not sell off or convert forests if doing so is the most lucrative option.

### Is Local Management More Equitable?

Community management is expected to satisfy the twin goals of attaining resource sustainability and increasing equity in the distribution of benefits. But these objectives are not necessarily complementary. Ribot, Lund, and Treue (2010) argue that in much of Africa, the devolution of responsibilities to communities has been mainly about maintaining opportunities for rent-seeking or ensuring resource sustainability for the benefit of higher-level national groups or international interests, with the costs borne mainly by local inhabitants.

Donor-supported projects often fail to empower local bodies, relying instead on disenfranchising colonial practices oriented toward extraction and control.

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When local structures are not accountable to communities, decentralization can create perverse outcomes for the poorest and most vulnerable groups.

The poor may have greater motivation to maintain resources such as forests or pastures, because they depend on them for a larger share of their income.

Several other studies also suggest that decentralization can create perverse outcomes for the poorest and most vulnerable groups when local structures are not accountable to communities. In India, Kumar (2002) reports that the joint management of Sal (*Shorea robusta*) forests has, if anything, deepened poverty because, despite community participation in the management of these forests, the emphasis has remained on high forests and timber production, which originated under colonial rule as an aspect of “scientific forestry.” As the forest canopy closes, however, nonwood forest products, which are of particular importance for the poor, decline, deepening poverty.

In Tanzania, Lund and Treue (2008) find that the taxation and licensing system for the production of timber and charcoal that was introduced under decentralized forest management has created new entry barriers for the poorest producers, making them more dependent on town-based traders and village leaders. Wood (1999) argues that larger farmers in the more backward state of Bihar in India routinely negotiate preferential access to irrigation systems by paying bribes to local officials.

The poor are often more dependent than the nonpoor on access to natural resources. Jodha (1986, 2001) estimates that 15–25 percent of the incomes of the rural poor in India comes from natural resources. In their survey of a large number of studies of India and West Africa, Beck and Nesmith (2001) also find higher levels of reliance on common-pool resources among the landless poor. Gregerson and Contreras (1989) estimate that more than a third of the world’s population relies on local forests to meet basic household needs. Studies also indicate that the relatively better-off tend to benefit more from common-pool resources, although the poor are far more dependent on such resources (that is, the share of forest income in their total income is higher), perhaps indicating some scope for redistribution (Cavendish 2000; Campbell 2003; Fisher 2004; Narain, Gupta, and Van’t Veld 2005; Lund and Treue 2008). The products the poor derive from the forest—fuel, water, fodder, and food—also have few affordable market alternatives and thus also constitute an important safety net (Pattanayak and Sills 2001; McSweeney 2005). As a result, some researchers argue that poorer members of a community may have a greater motivation to maintain resources such as forests or pastures, given the right set of incentives, as the risk-adjusted return to doing so may be higher for them.

In practice, however, rules regarding access and fees are rarely changed when management becomes more local. One reason is that

the poor, who rely the most on the forest, are often also a minority group whose interests do not coincide with those of village leaders or the village majority. The choice of local institutions and the rules regulating such institutions are set by higher-level institutions that reflect a multitude of values and interests, ranging from concerns with resource sustainability, biodiversity, and carbon storage to the desire for a strategic political advantage or enhanced opportunities for rent-seeking. The choices these institutions make are influenced by national elites as well as a host of international interests, including bilateral and multilateral donors (Ferguson 1996; Blaikie 2006; Ribot, Lund, and Treue 2010). As a result, policies originally designed to favor elites under colonial structures are often maintained, even when countries officially promote popular participation in natural resource management. Mustalahti and Lund (2010), for example, find that despite official policies supporting community participation in forestry in the Lao People's Democratic Republic, Mozambique, and Tanzania, local communities were systematically prevented from sharing in the returns from commercially valuable forest resources. A number of other studies raise similar concerns regarding the disproportionate advantages obtained by the rich, powerful, and well connected (see, for example, Ribot 1995; Larson and Ribot 2007; Lund and Treue 2008).

Beck and Nesmith's (2001) review suggests that a process of progressive exclusion of the poor from natural resource-based livelihood sources may be underway even where conservation has been successful, as in India and Tanzania. They caution that unless management regimes are specifically designed to include poor people, CBNRM may end up as little more than donor-supported control by elites. Dasgupta and Mäler (1995) illustrates how this cycle can lead to an environmental poverty trap. Nerlove (1991) shows that increasing rates of deforestation may lead to greater population growth and even faster rates of deforestation.

Several studies caution against assuming that the introduction of simple participatory mechanisms can ensure downward accountability in the absence of clear mechanisms for ensuring compliance. Two case studies from Tanzania and Senegal are illustrative. Lund (2007) reports that a new requirement in Tanzania that elected forest committee members provide oral accounts of all forest-related incomes and expenditures at quarterly village assemblies led to greater equity in the distribution of forest-related incomes. However, as Ribot, Lund, and Treue (2010) note, such simple changes in rules, though powerful, may work only

**In practice, however, local management seems to disproportionately benefit the rich, powerful, and well connected.**

**Unless management regimes are specifically designed to include poor people, community-based natural resource management may end up as little more than donor-supported control by elites.**

Without credible sanctions, community members have no ability or capacity to monitor corrupt officials, who know that allegations of misappropriation can be denied or ignored with impunity.

Local governments or community user groups are often given management rights over forests that have few livelihood improvement opportunities . . .

. . . leaving them with the largely unfunded costs of management and with little by way of returns.

when there is clear support from higher tiers of government and commensurate mechanisms to sanction local leaders are in place. They note that in the Tanzanian case, a watchful donor and an involved district council and forest office provided this support. In contrast, they note that in Senegal, which lacked such support, community members had no ability or capacity to monitor corrupt officials, who knew that allegations of misappropriation could be denied or ignored with impunity.

Common-pool resources also vary widely in their potential impact on livelihoods and in the number of actors at various levels who have a stake in their use, conservation, and regeneration. Forests, for example, can generate tremendous value at the local and national level, but forest preservation and regeneration often yield large positive externalities at the global level. In contrast, the returns to small irrigation schemes are plausibly confined to a limited number of local actors. Communities that live in or near specific natural resources can therefore face very different incentives to engage, individually or collectively, in efforts to preserve or restore the resource base.

The question of who benefits from forest land is an important case in point. A common issue highlighted in the literature is that local governments or community user groups are often given management rights over forests that have few livelihood improvement opportunities. In contrast, private interests or the central state control productive forests. Even in countries like Tanzania, where there is significant decentralized forest management, most joint forest management agreements have been made in relation to the *montane* rainforests, where laws prohibit use in order to maintain national and international biodiversity. Where productive forests are under joint management, by village councils or community-based groups, they either yield low-value nontimber forest products for subsistence use (Topp-Jorgensen and others 2005; Meshack and others 2006) or are degraded or of low value with little by way of immediate livelihood opportunities, at least in the short run (Lund 2007; Mustalahti and Lund 2010). The result is that local communities are often required to bear the largely unfunded costs of management and with little by way of returns.

There are also issues about what constitutes the “community,” as the case of people who live on the borders of forests demonstrates. On the one hand, living near a forest can leave them more vulnerable to crop damage and livestock losses from protected forest wildlife. On the other hand, they can be restricted in expanding their farmland if the forest

border becomes “hard” (Lund and Treue 2008). Similar issues arise for pastoralist and agro-pastoralist groups, who are often not represented in community user groups or local councils.

Several studies question the assumption underlying the move toward CBNRM—namely, that viable and well-functioning local institutions exist to which decision-making power simply needs to be transferred. They argue that CBNRM is in the main a process of creating the necessary institutional structures at the local level, to which specific responsibilities can then be devolved. Although these new institutions may be based on historical forms, the creation of accountable institutions at the local level implies a much greater involvement of the state in resource governance arrangements. Thus, even where communities and local groups have long-standing rights to manage local resources, such rights require at least the implicit if not explicit sanction of the state. For resources that are deemed valuable—such as timber and fish—local rights typically exist as a result of explicit actions by government and state agencies (Ribot, Lund, and Treue 2010; Agrawal 2010). Agrawal (2010) notes that of the 400 million hectares of tropical forests currently under formal community control, more than half was transferred to community management in the past quarter century. Fujjie, Hayami, and Kikuchi (2005) look at the creation of irrigation association groups in the Philippines, which were formed as part of the broader decentralization process. They find that only 20 percent of the irrigation association groups included in their study had communal irrigation systems in existence before the National Irrigation Authority got involved (see also Mosse 2005 on India and Wilder and Lankao 2006 on Mexico).

State intervention thus seems to determine the impact of participation on natural resource management, equity, and local livelihoods, much as it does for other programs or reform processes that induce greater local participation. The distribution of responsibilities and resources between the center and the locality as well as the mandate local citizens have to protect, improve, monitor, and benefit from the natural resource are critical.

Baird (2006) highlights another significant issue: the impact of donor and government reporting requirements and incentive structures on the quality of local management. The central government in Lao PDR provided incentives to provinces to expand aquaculture ponds but not fish sanctuaries. In response, provinces met the central government’s quota by reporting fish sanctuaries as aquaculture ponds. Similarly, irrigation

**The existence of viable local institutions cannot be assumed. Such institutions need to be created through deliberate effort.**

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**Communities and local governments can obtain significant benefits if more effective management of the common-pool resource increases public revenues for local investment.**

reports in India provided by local officials to higher levels often inflate the areas covered by irrigation in order to “meet” targets (Wood 1999).

Communities and local governments can obtain significant indirect benefits if more effective management of the common-pool resource increases public revenues for local investment. Ribot, Lund, and Treue (2010) argue that such benefits can provide the right incentives for conservation when management of the forest itself is unlikely to be a lucrative venture. They argue that revenue raising is one of the most prominent outcomes of decentralized forest management in Africa. In Uganda, for example, local governments are entitled to keep 40 percent of the revenues from the management of national forest reserves (Muhereza 2006; Turyahabwe and others 2007), even though they are effectively sidelined as far as management of these reserves goes. Revenues have also increased substantially for rural communities in Cameroon and Tanzania in community forestry areas (Oyono and Efoua 2006; Oyono and Nzuzi 2006; Lund 2007). These funds are used to cover the direct costs of forest management as well as to fund public infrastructure and services such as roads, schools, and health clinics (Ribot, Lund, and Treue 2010), or to provide micro loans, as in Nepal (Pokharel 2009).

## Participation and the Quality of Local Infrastructure

Participatory development programs usually invest a good deal in building community infrastructure. The argument for doing so is twofold. First, lack of adequate infrastructure—connector roads, wholesale markets, irrigation channels, electricity, school buildings, sanitation, and the like—significantly constrains prospects for development, and this lack is far more acute in the poorest communities. Second, it is expected that devolving responsibility to the local level will produce projects that are not only better aligned with the preferences and needs of final users, but are also of higher quality, and more likely to be well maintained.

Ideally, participatory programs are expected to work with communities to ensure need, feasibility, and adequacy of scale; to monitor the project over the construction cycle; and to create systems for project maintenance. Most programs require some form of community co-financing as a mechanism for inducing greater community engagement and “ownership” of the project. Some also require upfront community commitment of resources for project maintenance. Many participatory

projects also restrict the menu of feasible subprojects, either overtly or de facto, to a small set of public goods (typically roads, culverts, and drainage systems; drinking water and sanitation facilities; and schools, and clinics). Although this appears to be contradictory to a demand-driven process of project selection, in practice, it may serve to restrict choice to a small set of public goods that communities are better able to maintain or where the opportunities for capture are limited.<sup>18</sup> Competition in the project selection process is also intended to weed out bad projects and to encourage communities to put in the requisite effort to align the proposed project with program objectives.

How successful are these efforts? Does local provision create infrastructure that is better designed, better constructed, and better maintained? Does this imply less capture? Are projects of better quality than similar types of infrastructure created by central line departments? How important are community characteristics such as wealth inequality, ethnic heterogeneity, remoteness, and low levels of education or poverty? Can the right incentives (such as interjurisdictional competition for funds) or the right investments (such as community capacity building) mitigate the impact of potentially negative community characteristics? Specifically, can local provision create “good” projects in “bad” communities, and do the poor gain as a result? The following subsections present the evidence on these questions.

### Bottom-up versus Top-down

Given the resources allocated to social funds of various types, surprisingly few studies compare the relative performance of subprojects built by local governments or community groups and subprojects built by central line departments. Even fewer simultaneously address the question of infrastructure quality and the distribution of benefits. Yet it is far from clear that benefits, even from well-designed and constructed projects, are more equitably distributed.

The first study to carefully assess this question used data from 132 infrastructure projects in 99 randomly selected rural communities across northern Pakistan, where the Agha Khan Rural Support Program (AKRSP) has promoted participatory rural development for more than 30 years. Khwaja (2004, 2009) compares infrastructure projects provided by the community, with AKRSP support, with similar projects provided by government line departments. His research yields three interesting findings. First, community engagement, with AKRSP

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Community engagement in Pakistan substantially improved project maintenance . . .

. . . but only when participation was confined to the nontechnical aspects of the project. Community involvement in technical decisions was detrimental.

facilitation, substantially improved project maintenance (the main outcome of interest) but only when participation was confined to the nontechnical aspects of the project. When communities got involved in technical project decisions, participation was detrimental. The intuition behind this claim is that decisions requiring local information are more likely to be sensitive to the community's investment, whereas decisions that require technical information should be more responsive to the external agency's investment. Second, communities were less able to maintain projects that were technically complex or new.<sup>19</sup> They did better when preexisting projects were refurbished or the project selected was one in which they had previous experience. Third, inequality in the incidence of project benefits (across both participatory and government provided projects) has a *U*-shaped effect on maintenance. As inequality in the distribution of project benefits increases, maintenance levels first fall then rise.<sup>20</sup> As Khwaja notes, under perfect inequality in the distribution of benefits, the project is effectively privatized, and maintenance no longer requires any coordination.<sup>21</sup> This *U*-shaped relationship between inequality and project maintenance is similar to the tradeoff between resource sustainability and wealth inequality in the literature on common pool resources.

Mansuri (2012a) uses data from the three largest provinces of Pakistan to provide further insights on the relationship between participation and project quality. Her study combines administrative, census, and survey data from 230 infrastructure projects in 80 villages.<sup>22</sup> About half of the projects were constructed by government line departments; while the rest were built by the community with support from the National Rural Support Program (NRSP).<sup>23</sup> The study assesses two aspects of project quality: design and construction, and current condition and maintenance. The first aspect, provides evidence of capture, in the narrow sense of theft and corruption, in construction, while the second reflects a communities' capacity for coordination and is therefore more comparable with Khwaja's (2004, 2009) work.

Compared with the northern areas, the rest of Pakistan has far greater levels of local inequality and ethnic heterogeneity. Land ownership, which is almost entirely hereditary, is extremely skewed, with the top 5 percent of landowners owning more than 40 percent of all land while more than half of rural households are landless. The caste (*zaat*) structure is also extremely hierarchical. Given these features, Mansuri's findings are encouraging.



Mansuri finds that participatory projects in the study villages appear to be better designed and constructed than comparable projects delivered by government line departments and the effects are economically large. This finding suggests that the scope for outright rent-seeking through the diversion of project funds can be considerably muted when infrastructure is provided with community engagement. NRSP-supported projects are also better maintained, in line with the evidence provided by Khwaja (2009). This may be due, at least in part, to NRSP's (and AKRSP's) approach to project maintenance. Maintenance costs are built into project costs at the proposal stage and although the community is entirely responsible for project maintenance postconstruction, NRSP (and AKRSP) continue to provide technical assistance as needed. This is very much in line with the following discussion on the importance of building community capacity to undertake resource management.

That said, project quality alone can reveal only so much about capture. If project benefits are effectively privatized at the local level, there may be little incentive to engage in the type of rent-seeking that could reduce the quality of project construction. The results here are far less encouraging. As discussed in chapter 4, Mansuri (2012b) finds that benefits from the participatory project are no better distributed than benefits from the relevant government project. In both types of projects, the share of the landless, the poor, and people from low castes was far below their share in the population.

### Can “Good” Programs Compensate for “Bad” Communities?

An important premise in the literature on participatory programs is that well designed and implemented projects can overcome adverse community characteristics. Specifically, that the challenge to collective action posed by local inequality, ethnic divides, and exclusionary practices of various types, can be overcome by inducing participation through a well-implemented program. Khwaja's (2009) analysis provides an encouraging assessment. Project characteristics, which include the participatory delivery mechanism facilitated by AKRSP, significantly outweigh community characteristics, suggesting that well-designed participatory efforts can, to a large degree, overcome the negative effects of wealth inequality and community heterogeneity. The study also finds that the quality of local leadership matters: projects in communities

The scope for outright rent-seeking through the diversion of project funds was considerably muted when infrastructure in Pakistan was provided with community engagement. . . .

. . . but benefits were no better distributed than in projects directed from the center.

Well-designed participatory efforts can overcome the negative effects of wealth inequality and community heterogeneity to a large degree.

in the northern areas of Pakistan that had more educated leaders, and leaders who were actively engaged in community affairs, were better maintained.<sup>24</sup>

Mansuri (2012a) finds that after controlling for participation (that is, facilitation by the NRSP), inequality does not affect project maintenance much. However, projects were far better maintained in communities with above average levels of schooling. The impact of inequality on construction quality is different, however. The quality of construction of NRSP-supported projects worsens significantly in villages that are more unequal, and this effect is amplified when projects are also more technically complex or are built on older preexisting (usually government-provided) projects. The study thus shows that although participation appears to dampen opportunities for rent-seeking, greater effort is required to ensure the quality of projects in more unequal communities.

A number of large participatory development programs use some form of interjurisdictional competition to improve community incentives to allocate funds in a more transparent and equitable manner. Grant funds from the central government can also induce competition across localities if they are tied to the achievement of specific outcomes, reform processes, and so forth.

Chavis (2009) is perhaps the only study that has looked at the impact of competition on the quality of infrastructure subprojects. The study used administrative data from the Indonesian Kecamatan Development Program (KDP), funded by the World Bank. Like other community-driven development programs, KDP involves communities in the allocation of funds for the construction of local public goods. In the KDP, each funded *kecamatan* (subdistrict) receives a block grant, based on population. The grants are allocated at the village level by a competitive process of project selection that is managed by an intervillage council with representation from each village. As a result, subdistricts with more villages face a greater competition for funds. Chavis proposes that this competitive pressure is plausibly exogenous and that it changes the process by which the block grant is allocated, inducing greater compliance with KDP rules and thus higher-quality projects in more competitive subdistricts.<sup>25</sup> He tests this hypothesis using administrative data on more than 3,000 road project proposals received in a single year (road projects typically account for almost half of all KDP subproject funds). The results indicate that in more competitive subdistricts, the set of

In more competitive subdistricts in Indonesia, the set of projects submitted and funded had larger community contributions, a more pro-poor allocation of project benefits, and lower unit costs.

projects submitted and funded had larger community contributions, a more pro-poor allocation of project benefits, and lower unit costs.

A potential limitation of using reported unit costs and distribution of beneficiaries at the time of proposal submission and approval is that there are no independent data against which these claims can be checked. Chavis attempts to overcome this problem by using corroborative evidence from an earlier study by Olken (2007), which shows a considerable amount of overinvoicing of labor and materials in the stated costs of KDP road projects (see discussion in chapter 3). Using data from this study, Chavis confirms that there is also less theft in road projects in more competitive subdistricts, bolstering the finding on lower reported unit road costs in project proposals.

Recall, however, that demand-driven application processes can be strongly regressive (see the first section of this chapter). Taken together, these results suggest that high project construction quality and maintenance do not imply an equitable distribution of resources. There can be a significant trade-off between equity and sustainability.

### Community Capacity and Project Quality

Several of the studies reviewed in the previous sections point to the relevance of building community capacity for project quality and maintenance. This section reviews studies that suggest that lack of community capacity is often the key constraint on project quality.

Katz and Sara (1997) cite inadequate technical support from project implementers as one of the key reasons for the failure of water projects in their global review. They note that in the absence of community supervision or management, projects were often left in the hands of private contractors, whose incentives can be suspect. Community members were unable to make informed choices about the type of project to build, monitor the work of contractors, or maintain projects after they were constructed without adequate training.

Isham and Kahkonen (2002) make similar points in their analysis of water projects in India, Indonesia, and Sri Lanka. They find that communities often require considerable support in understanding the technical aspects of projects.

Newman and others (2002) raise similar concerns in their evaluation of the Bolivian social fund. They find that water projects improved water quality only when community-level training was also provided.

Lack of community capacity is often the key constraint on project quality.

Communities often require considerable support in understanding the technical aspects of projects.

Water projects in Bolivia improved water quality and access to water only when community-level training was also provided.

Results of an experiment in Kenya suggest that water projects are better maintained when water management committees are given funds to carry out regular maintenance.

Large donors often support communities in the construction of projects . . .  
 . . . but provide little support for postconstruction activities.

They attribute the significant reduction in under-five mortality associated with the provision of health clinics to the fact that investments in health went beyond providing infrastructure to providing other necessary technical inputs as well. In contrast, education projects led to little change in education outcomes, because no resources were provided beyond the building of schools.

In a more recent study, Leino (2007) provides further support for this hypothesis from a field experiment in Kenya. The study, which allocated funds for maintenance to a random subset of water management committees, finds that water projects were better maintained when water management committees were given funds to carry out regular maintenance activities.

Very few studies attempt to assess the long-term sustainability of participatory infrastructure projects. Kleemeier (2000) is an exception. She looks at a rural piped water program in Malawi. Only half of the schemes, which were 3–26 years old, were performing well; the rest were performing poorly or had failed entirely. Moreover, the schemes that were in good working condition were either small or new. Kleemeier notes that her findings are an indictment not of the participatory process itself but of the lack of attention implementers paid to the weak link between communities and external agencies with the requisite technical capacity. Community groups were capable of making small repairs necessary to keep water flowing, but they were unable to undertake more substantive preventative maintenance and repairs. In the end, the water department had to send in government-employed monitoring assistants and supervisors to ensure that preventive maintenance was performed.

Kleemeier notes that CARE, a large international NGO, was confronted with much the same situation in Indonesia (see also Hodgkin and Kusumahadi 1993). Although it supported communities in the construction of projects, it provided little support for postconstruction activities. Although small and simple schemes can survive this neglect, larger schemes that require external technical inputs cannot. In a related study, Uphoff (1986) notes that local organizations can be effective only if they have adequate links with political and administrative centers.

## Community Engagement in Public Service Delivery

Much of the effort to improve accountability in the allocation of resources for public services focuses on expanding citizen oversight

and engagement. These efforts have taken a number of forms, ranging from the decentralization of service delivery to local governments and the signing of contracts with private providers and NGOs to programs that induce greater community participation in service provision and quality by transferring resources directly to community organizations.

The review of the evidence focuses on outcomes related to improvements in service quality, as measured by learning, school retention, infant and maternal mortality, and access to services. As Bardhan and Mookherjee (2005) caution, the distributional and welfare consequences of decentralized delivery are likely to be as important as the impact on service quality. In essence, if local governments or participatory programs are beholden to local elites, they may overprovide some services and undercharge for the services they do provide, leaving the poor to bear a disproportionate cost of service provision.

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### School-Based Management and the Decentralization of Education

The decentralization of education takes many forms. The review here divides the literature broadly into decentralization efforts directed at schools (generally referred to as “school-based management”) and the decentralization of education services to local governments.

School-based management is a form of decentralization in which decision making is devolved, either from a central line ministry or a lower-tier government, whether provincial or municipal, to the school or community. As with the devolution of authority in other domains, increased school and community discretion is expected to improve school quality (as measured by student performance and use of the school budget) and enhance satisfaction with the quality of service provision.

School-based management typically involves setting up a school management committee or council that includes the school principal, teachers, and members of the school community, in particular parents but also local leaders and other community members. School committees are usually tasked with monitoring school performance and providing oversight on the use of resources. Less frequently, such committees are granted authority over teacher hiring and firing and decisions about the curriculum and the allocation of school budgets.

Many developing countries have adopted school-based management programs over the past two decades, often as part of a larger effort to decentralize resource allocation and service delivery. The extent to which resources and decision-making authority are transferred, as well

as the agents to whom authority is transferred, varies widely. There is also a great deal of variation in the extent to which community and parent engagement is mandated, the form it takes, and the type of oversight local and higher-level governments provide.

Barrera-Osorio and Linden (2009) categorize school-based management approaches along two dimensions: who has the power to make decisions and the degree of decision making devolved to the school level. They note that “with so many possible combinations of these two dimensions, almost every school-based management reform is unique” (p. 4).

Bruns, Filmer, and Patrinos (2011) divide school-based management programs into three broad groups: strong versions, in which school councils have significant authority over both staffing and school budgets; intermediate versions, in which school councils have some say in curriculum but very limited authority over resources or staffing decisions; and weak versions, in which school councils are largely advisory in nature. They also provide a useful framework for understanding the channels through which school-based management can enhance accountability, highlighting four facets: increasing choice and participation, giving citizens a stronger voice, making information about school performance widely available, and strengthening school level incentives for effective service delivery for the poor (see Bruns, Filmer, and Patrinos 2011 for a comprehensive review of school-based management). The review here focuses on evidence for the second channel, insofar as studies can unpack multifaceted interventions to identify the impact of a specific component.

In all cases, the decentralization of education is expected to induce greater efficiency in the use of education budgets and create better performance incentives for local officials and school staff. The expectation is that decentralization can deliver improvements in a range of schooling outcomes, from enrollment and retention to better student performance on standardized tests, and that it can do so cost-effectively.

As with all decentralization efforts, there is the usual set of risks. Programs can be captured, with resources flowing to better-off locations or schools or siphoned off for private use. Local government agents may also lack the capacity to manage funds or make effective decisions regarding resource allocation, staffing, or curriculum. Theory would predict that both types of problems would tend to be worse in communities that are poorer, more unequal, or in which citizens are more alienated from the political process.

Caldwell (2005) notes that as with broader decentralization efforts, governments have supported school-based management for a variety of reasons. Governments on the left have initiated school management reforms as part of larger efforts to increase community empowerment. Governments on the right have often justified school-based management on the basis of greater freedom or more choice, which has also been interpreted as an effort to create a market among schools in public education systems.

These divergent motives have made school-based management politically contentious, with little agreement on what the expected outcomes should be. In recent years, however, a consensus has been forged that the primary purpose of school-based management is the improvement of educational outcomes. With this, evidence on the effects of school-based management on educational outcomes has also started to emerge. According to Caldwell (2005), early studies were marred by the lack of a clear objective for school-based management as well as by the lack of data. In contrast, what he calls third-generation studies, starting in the late 1990s, look at programs in which improvement in learning outcomes is a central objective and adequate data are available to assess impact.

Before examining the evidence, it is useful to point out that few, if any, studies are able to measure the extent or quality of community engagement or identify its influence on school management. Studies that do attempt to separate out community participation from other aspects of decentralization, such as school autonomy, tend to assume that the level of community or parent participation, usually self-reported, is independent of unobserved community or student characteristics that could influence outcomes. Similar assumptions are made about reported levels of school autonomy. Gunnarsson and others (2009) make an important point in this regard. They find that levels of reported school autonomy and parental participation are not only poorly correlated with each other but that both vary more within countries than between them.<sup>26</sup>

A smaller body of literature looks at the impact of decentralizing education to local governments. A general concern with studies that look at the impact of decentralization is that the scope, timing, and extent of decentralization usually depend on a number of political economy considerations that are neither evident *ex post* nor malleable *ex ante*. As such, strong assumptions about the plausible exogeneity of the timing or extent of decentralization are often required. The extent to which

A consensus has been forged that the primary purpose of school-based management is the improvement of educational outcomes.

The scope, timing, and extent of decentralization usually depend on a number of political economy considerations that are neither evident *ex post* nor malleable *ex ante*.

the results of such studies are credible depends in part on the extent to which panel data, along with some feature of the decentralization, can be used to construct a credible counterfactual against which outcomes under decentralization can be compared.

Overall, the evidence suggests that decentralization in any form improves school access. There is also some evidence that student retention rates and attendance improve and grade repetition is reduced. There is little evidence, however, of any improvement in learning outcomes.

Most evaluations do not cover the time periods typically associated with improvements in learning outcomes. As Bruns, Filmer, and Patrinos (2011) point out, much of the evidence from developed countries indicates that it can take up to eight years to see an impact on student learning. This lack of impact on student learning is consistent with a basic concern highlighted in chapter 2. Reform processes that attempt to change structures of authority and power may require longer time spans to realize gains than the timeline of impact studies allows. It may also be easier to observe gains in some dimensions than others. Outcomes may also worsen before they improve. Some studies, for example, show a decline in student quality at school entry, as children from less privileged backgrounds enter school for the first time. Their entry may partly account for the negligible improvement in learning despite improvement in attendance and school retention. Even in studies with longer time frames, however, results for learning outcomes are mixed, as shown below.

**Social fund–supported school infrastructure investments.** Although social funds have invested substantial resources in upgrading school infrastructure, only a few studies look at the impacts of such investments on schooling outcomes. The few that have find an improvement in school access. No study looks at learning outcomes.

Paxson and Schady (2002) find that the Peruvian social fund increased school attendance, particularly among younger children. Other researchers find similar results for social funds in Armenia (Chase 2002) and Zambia (Chase and Sherburne-Benz 2001); Chase and Sherburne-Benz also find that children were in more appropriate grades. Household expenditure on schooling in Zambia was also higher in communities that used social funds to rehabilitate schools, probably because of the higher fees charged by parent-teacher associations in such

Decentralization in any form seems to improve school access . . .

. . . but there is little evidence of any improvement in learning outcomes over the periods studied.

Reform processes that attempt to change structures of authority and power may require longer time spans to realize gains than the timeline of impact studies allows . . .

. . . and outcomes may actually worsen before they improve.

Several studies find that social funds increased school attendance, particularly among younger children.



schools. Although increased spending need not be welfare enhancing for poor households, the authors argue that taken together with improved attendance rates and grade-appropriate placement of children, it is indicative of unmet demand for schooling in these communities.

**School-based management.** Several countries have implemented strong versions of school-based management. An early program is the Educación con Participación de la Comunidad (Education with Community Participation [EDUCO]) program in El Salvador. Under this program, the state bore all schooling costs (tuition, uniforms, textbooks). Parents were expected to contribute time and labor to the school. Each school had an Association for Community Education (ACE), with elected parent members. The ACEs managed the school budget; they could hire and fire teachers and monitor teacher performance (Sawada and Ragatz 2005). Half of all rural students in grades 1–9 were enrolled in an EDUCO school by 2001 (Di Gropello 2006).

Jimenez and Sawada (1999, 2003) find that students in EDUCO schools had higher attendance and lower dropout rates than students in traditional schools. Attending an EDUCO school raised the odds of school retention by about 64 percent. As the decision to enroll in an EDUCO school is endogenous, the authors use the availability of EDUCO at the municipality level as an instrument for a school being in the EDUCO program. They attempt to isolate the channel through which the EDUCO effect is realized by adding a community participation variable to the estimation. This estimation yields a positive and significant effect, leading the authors to conclude that EDUCO worked mainly through community participation.

These results are interesting, but the empirical strategy is not convincing. In practice, any number of municipal characteristics could influence a municipalities' eligibility for the EDUCO program and thus the odds of a school entering the program. Similarly, any number of community characteristics could affect the odds of a school selecting into the program as well as the observed dropout effects.

Jimenez and Sawada (1999) and Sawada (1999) also find positive changes in teacher attitudes and behavior, particularly teacher absenteeism. Sawada and Ragatz (2005) uses propensity score matching to identify the impact of EDUCO on a range of outcomes. Their results also indicate lower teacher absenteeism. Community associations and

parents also report much greater influence over administrative processes, including teacher hiring and firing. There is also some, albeit limited, evidence of an improvement in student test scores. The authors note that EDUCO schools tend to be located in poorer, more remote, and more rural communities which could explain the lower comparative test scores.

**A school autonomy reform in Nicaragua that gave school councils decision-making authority had no impact on average student learning.**

A similar school autonomy reform in Nicaragua allowed school councils to hire and fire the school principal and make decisions about school maintenance and student learning. King and Özler (1998) look at the impact of the program on student test scores. They use matching methods to find comparable nonautonomous public and private schools. The study finds no impact of the reform on student learning on average. However, students performed better in schools that reported exercising greater de facto autonomy. The results, though interesting, are difficult to interpret, because the study cannot identify why some schools exercised greater autonomy. A subsequent study (King, Özler, and Rawlings 1999) that tried to determine which aspects of community decision making were responsible for the improved learning finds that the school council's autonomy over staffing decisions had the greatest impact.

In contrast Eskeland and Filmer (2002), who assess the decentralization of education in Argentina, find positive impacts of school autonomy but not of parental participation. They theorize that while greater school autonomy increases the ability of school officials to extract rents, greater participation by parents in schools can channel this discretionary power toward improved learning. The expectation is that community and parental engagement in schools can constrain rent-seeking by local officials or school administrators. The question is whether communities have the capacity, ability, or incentive to play this monitoring role, particularly in poorer and less developed areas, which may be most in need of education reform. Interestingly, they find that, consistent with their model, school autonomy has a larger impact on learning in communities that have higher levels of participation.

**In contrast, giving oversight power to community members in Kenya improved both teacher attendance and student performance.**

These results are broadly corroborated by a randomized experiment in Kenya that, among other things, increased community monitoring of teachers through local school committees. Duflo, Dupas, and Kremer (2008) find that giving oversight power to community members—in this case through local school committees—improved teacher attendance and student performance.<sup>27</sup>

Gunnarsson and others (2009) cast light on why the learning impacts of school autonomy and community participation are so mixed. They use data from eight Latin American countries to argue that local managerial effort, at the level of the school as well as the community, is likely to be endogenous. Their results demonstrate that correcting for the endogeneity of school autonomy and parental participation can completely reverse the positive and significant effects of school autonomy. Encouragingly, in their sample countries, the positive effect of community participation remains positive and is strengthened when the endogeneity of participation is addressed.

Chaudhury and Parajuli (2010) study a school-based management program in Nepal that transferred school management to the community. School management committees, composed of parents as well as “influential local citizens,” were given the authority to repost government teachers, hire and fire community-recruited teachers, and index teacher salaries to school performance. The committees were also given untied block grants to invest in school improvement. Exogenous variation in program participation, which was voluntary, was randomly induced in some communities through an advocacy group that persuaded treatment communities to participate in the program. Two years into the program, results show an increase in school access but no effect on learning.

In some school-based management programs, community groups play a more consultative role, with very limited discretion over budgets or teacher hiring and firing decisions. One such program is the Programa Escuelas de Calidad (Quality Schools Program [PEC]) in Mexico, which provides five-year grants of up to \$15,000 to schools that commit to invest in education quality. In exchange for PEC grants, schools need to prepare an education improvement plan in collaboration with parent associations. During the first years of the grant period, all investments must be made in upgrading school facilities and providing learning materials. The last installment of the grant can be used in part for teacher training and development. Participation in PEC is voluntary, but the program targets disadvantaged urban schools.

Using two years of nationally representative panel data, Skoufias and Shapiro (2006) find significant declines in dropout, grade repetition, and failure rates. Dropout rates decreased by 0.24 points, failure rates by 0.24 points, and repetition rates by 0.31 points.

A school-based management program in Nepal was associated with an increase in school access but not learning.

A school-based program in the Philippines appears to have had a positive but modest effect on learning.

Grade failure and grade repetition in Mexico declined following introduction of a school-based management program.

Murnane, Willet, and Cardenas (2006) use longitudinal data from all seven years of PEC, which allows them to control for pre-PEC trends in relevant outcomes in both PEC and non-PEC schools. Using only schools that entered PEC in the program's second year of operation and had similar historical trends as non-PEC schools, they find that PEC decreased dropout rates by about 6 percent over three years of participation. The largest effects occurred in states that were more developed.

A similar school-based program in the Philippines funded infrastructure along with teacher training, curriculum development, and the provision of textbooks. This program required schools to develop a five-year school improvement plan in partnership with the community. Khattri, Ling, and Jha (2010) evaluate the program using retrospective administrative data along with propensity score matching to identify counterfactual schools. They find positive but modest effects on learning.

The Apoyo a la Gestión Escolar (School Management Support [AGE]) program in Mexico provided parent associations with resources that could be used to rehabilitate and upgrade school infrastructure. The funds were subject to being audited annually on a random basis. Gertler, Patrinos, and Rubio-Codina (2007) find substantial positive effects of giving parent associations more management responsibilities.<sup>28</sup> Their results indicate a reduction in both grade failure and grade repetition of about 0.4 percentage points in AGE beneficiary schools. Given a mean failure rate of 10 percent and a mean repetition rate of 9.6 percent at baseline, these values imply about a 4 percent decrease in the proportion of students failing and the proportion of students repeating a grade. The effects are larger for schools that received benefits for more than one year.<sup>29</sup>

A couple of recent studies have examined interventions in India designed to induce greater community monitoring of school-based committees. Banerjee and others (2010) report on a randomized evaluation that had three intervention arms. The first arm provided information to villagers about the role of an existing institution, the village education committee. Baseline data indicated very little awareness of its existence, even among its own members. The second arm added to the first by also providing information on student test scores and how to evaluate a child's learning level. The third arm supplemented the first two arms by teaching volunteers in the village a simple technique for teaching children how to read in an after-school reading program. Each intervention arm was implemented in 65 villages; a fourth group of 85 villages formed the control group.

The authors find virtually no impact of the first and second arms of this intervention. Even village education committee members themselves were not significantly more likely to be aware that they were on the village education committee following the intervention. What effects the authors do observe appear to reflect a decline in awareness in the control group. The first two interventions also had no effect on children's learning. In villages that received the third intervention arm, however, children were 1.7 percent more likely to read letters and 1.8 percent more likely to read words or paragraphs. The authors note that this small increase should be viewed with some optimism, given the small number of children who attended the after-school reading program.

Pandey, Goyal, and Sundararaman (2011) present findings from another study that provided information to communities about their roles and responsibilities in school management in the Indian states of Karnataka, Madhya Pradesh, and Uttar Pradesh. At baseline, there were significant differences across states in test scores, teacher absence, and parental awareness of the village education committees. In line with Banerjee and others (2010), they find that only 8 percent of parents in Uttar Pradesh knew about the village education committee and only 2 percent could name its chair. In contrast, in Karnataka, 63 percent of parents were aware of the village education committee and 44 percent knew the name of its chair. The information campaign was also more intense and prolonged than the one studied by Banerjee and others (2010).<sup>30</sup> The findings also differ in important ways. Pandey, Goyal, and Sundararaman find significant gains in teacher attendance, teaching time, and the functioning of school committees. They also find higher levels of parental and community engagement and higher student math scores, with much larger impacts in the two lagging states, Uttar Pradesh and Madhya Pradesh. The emergence of some learning gains is encouraging. The percentage of children receiving benefits from government entitlement programs (cash stipends, uniforms, mid-day meals) also rose, although in the more backward states of Madhya Pradesh and Uttar Pradesh, these benefits were provided mainly to high-caste students.

**In India, inducing better monitoring of schools by providing more information and training to communities about school management has had mixed effects.**

**Decentralization of schooling to local governments.** Decentralization of schooling to municipal governments appears to have had little impact on average student learning, although there is some evidence of improvement in learning outcomes in wealthier and administratively

**Decentralization of schooling to municipal governments appears to have little impact on average student learning.**

**Average test scores in Argentina rose following decentralization . . .**

**. . . but all of the increase was concentrated in wealthier schools located in municipalities and provinces that had greater administrative capacity.**

more capable localities. Madeira (2007) finds that school decentralization in the Brazilian state of São Paulo increased dropout and failure rates across all primary school grades, widening the gap between “good” and “bad” schools ranked by their initial dropout rates. These negative effects occurred despite an increase in school resources and a reduction in class size and student teacher ratios. Worse yet, the negative effects were significantly larger for schools in poorer, more rural, and more unequal communities, and the effects intensified with the number of years the school was decentralized.<sup>31</sup>

Similar results emerge from a study by Galiani, Gertler, and Scharfrodsky (2008), who find an increase in average test scores in Argentina in schools that were decentralized. However, all of the increase was concentrated in wealthier schools located in municipalities and provinces that had greater administrative capacity. Decentralization actually decreased scores for schools in poorer areas and in municipalities that were in provinces that had run fiscal deficits before decentralization.

Kosec (2011) shows how preferences over public spending can differ systematically across localities that vary in initial wealth. The study focuses on investment in public preprimary education across municipalities in Brazil following legal changes that increased resources for education.<sup>32</sup> Kosec shows that poorer municipalities used significantly more resources to enhance the availability of public preprimary education, which then had a substantial payoff in student learning. In contrast, wealthier municipalities used the funds largely to enhance the quality of primary education. Investments in public preprimary education were lower in municipalities that were more unequal, suggesting that polarization can undermine the influence of the poor on public policy.

Madeira (2007) attributes some of the perverse learning effects in Brazil to the democratization of schooling, which expanded school access for less well-prepared students, especially in grades 1 and 2. Rodriguez (2006) assesses the impact of school decentralization in Colombia, using a strategy that compares the performance of students in public and private schools on standardized tests. She finds that once the change in the composition of children in public schools as a result of decentralization is accounted for, the average standardized test scores of public school students improved significantly more than the scores of students in private schools.<sup>33</sup>

Pradhan and others (2011) study an intervention aimed at strengthening school committees in Indonesia. They find that measures that increased linkages between schools and local government officials were the most effective in improving schooling outcomes and the legitimacy of the participatory process, particularly when combined with better accountability of the school committees themselves through open elections. In contrast, interventions that provided funds and training to incumbent school committee members had no effect. Moreover, even the most effective intervention (election with linkage) did not alter parental willingness to invest time or resources in the school committee though it did increase the amount of time parents devoted to homework, by about 80 minutes a week.<sup>34</sup>

A number of intermediate outcomes also improved. Specifically, the election intervention improved perceptions of school committee effectiveness by teachers, suggesting that elections may improve legitimacy. Elections also improved teacher motivation and effort. Elections alone increased teaching time by 0.63 hours a day, mostly in lesson preparation time. Elections plus linkage increased daily teaching time by 1.1 hours, mostly in time spent grading. The proportion of teachers observed in the classroom at the time of the survey decreased with the election intervention, however, which is puzzling. The authors also find no impact on student dropout or repetition rates in any arm, although they find some improvement in student learning in the linkage and election plus linkage arms.

The results from a companion qualitative study suggest an interesting tension. On the one hand, school committees appreciated receiving grants that were directly under their control and reported this control as the impetus for more face-to-face dialogue with the community. On the other hand, the grants seem to have resulted in greater conflict between the school committee and the principal (as might be expected). There were also some challenges in implementing elections, with school committees resisting changes in membership. When elections were conducted as designed, however, they enhanced community awareness and participation in school committee activities and legitimized the committee. Simply providing training to incumbent committee members had little effect, either qualitatively or quantitatively. The key finding in this study is that the linkage process created a partnership between the school committee and the village

**In Indonesia, partnership between school committees and village councils resulted in concrete actions by the village council and significant impacts that school committees could not have achieved alone.**

council that resulted in concrete actions by the village council and led to significant schooling impacts that school committees alone could not have achieved.

### **Community Engagement in Delivering Primary Health Care Services**

Many developing countries have experimented with community-based health care models. Often cited examples of success include Costa Rica and Jamaica, where community-level health education programs and community-based service provision are believed to have led to major reductions in mortality, despite fairly stagnant economic conditions (Riley 2005).

Community-based health service provision encompasses a wide range of programs. Most programs supply trained health care providers, who work at the community level and are often charged with activating communities in some fashion, usually through women's groups. The main focus of community-based health provision is on maternal and child care and household health behaviors. Most programs also rely on community volunteers or facilitators to build trust, mobilize local resources, coordinate group activities, or complement services provided by trained staff.

A number of randomized control trials yield evidence on the health impacts of such interventions. Most are small-scale interventions but some work directly with existing government health delivery systems or test mechanisms that can be scaled up through existing health delivery systems.

**A small but growing body of literature by and large confirms the potentially beneficial impact of community-based health programs, particularly for maternal and child health.**

This small but growing body of literature by and large confirms the potentially beneficial impact of community-based health programs, particularly for maternal and child health. A potential caveat is that the role of community engagement per se is often difficult to isolate, because most programs undertake a bundle of activities.

Only a few evaluations separate the role of community engagement from other bundled interventions. These studies find that community volunteers and health groups can positively affect both health behaviors and health outcomes—but only when they complement other inputs, such as trained health professionals and improved health services. There is also some evidence on the efficacy of transferring the management of community-based health programs to local governments and the role of public-private partnerships in the delivery of health services. The



findings suggest positive, significant, and economically large effects of decentralizing health service delivery to local governments. In contrast, the findings on public-private partnerships in the delivery of health services are more mixed.

The literature on community-based health delivery can be grouped into four categories: community engagement in the allocation of resources for health-related investments, community engagement in providing health-related services and information, community monitoring of health care providers, and decentralization of basic health services to local governments or NGOs. The literature on each category is reviewed below.

**Community engagement in resource allocation.** Communities often choose to allocate resources from social funds or community-driven development projects to upgrading or building primary health care facilities. Few evaluations have anything to say about the impact of such investments on health behaviors or outcomes. Among the few that do is an early study of social funds by Chase and Sherburne-Benz (2001), which finds an increase in the use of primary care services in communities that invested in a health facility constructed by ZAMSIF, the Zambia social fund. Under ZAMSIF, communities received social investment funds for investment in small infrastructure projects such as the rehabilitation of community health posts. Chase and Sherburne-Benz find that social fund beneficiaries were more likely to go first to a health post rather than a hospital when they sought treatment. They were also significantly more likely to report an illness, although they were no more likely than controls to seek treatment. The study also finds more limited evidence that the vaccination prevalence rate rose in areas with rehabilitated health posts.<sup>35</sup>

Arcand and Bassole (2008) find an increase in the use of basic health services and access to clean drinking water in communities that participated in the Programme National d'Infrastructures Rurales in Senegal. Access to basic health services rose 24 percentage points and access to clean drinking water 22 percentage points. The program was also associated with positive nutritional impacts (as measured by height for age, weight for age, and weight for height) for children, which were substantially larger for children from poorer households. The channel through which improvements occurred is not clear, however, as discussed next.

**Decentralizing health service delivery to local governments appears to produce positive, significant, and economically large effects.**

### Community engagement in the provision of health care services.

A number of randomized control trials have attempted to assess the effectiveness of demand-side interventions in primary health care. A randomized pilot study of Ghana's Community Health and Family Planning Project (Navrongo) casts some light on the added benefits of engaging community volunteers in the provision of health services (Binka and others 2007). One arm of the intervention tested the impact of adding community-based, volunteer-provided health services to the basic set of clinical services, along with revolving funds and user fees to ensure organizational sustainability. Trained supervisors from the community recruited community health volunteers, organized community supervision of their work, and managed essential health resources. User fees and revolving accounts sustained this work. A second arm deployed trained nurses to villages as "community health officers." A third arm engaged the community in ensuring that the trained nurses would be available. A fourth arm was held as the control. In the third arm, community members helped construct housing for nurses using volunteer labor, ensuring that nurses could reside in the village. They also provided other types of community assistance and supported services provided by resident nurses.

Working with chiefs, village elders, and community volunteers, community-based nurses in Ghana helped develop social insurance mechanisms that allowed formal care to substitute for traditional care.

The findings suggest that over an eight-year period, posting nurses to community locations reduced childhood mortality rates substantially relative to control areas. In contrast, volunteer services had no impact on child survival. However, where volunteers worked alongside trained nurses, outcomes were superior to the first two interventions. Working in concert with chiefs, village elders, and community volunteers, community-based nurses helped develop various types of social insurance mechanisms, such as deferred payment. These mechanisms allowed formal care to substitute for traditional care, reducing the delay in health seeking that tends to precipitate childhood mortality (see Nyonator and others 2005 for a detailed discussion). The authors interpret these results as reflecting the limited ability of volunteers alone to change entrenched behaviors like seeking traditional healers.

Linnemayr and Alderman (2011) evaluate an intervention in Senegal that focused on the provision of nutrition-related information to mothers of young children through a community-based mechanism. The nutrition intervention was undertaken as a pilot program within the Programme de Renforcement de la Nutrition, which included cooking workshops and a monthly community-level meeting on nutritional

practices, targeted at mothers. The program also provided vitamin and iron supplements, bednets, and deworming.

The pilot was randomized across 212 villages in three poor rural regions.<sup>36</sup> The results indicate significant improvements in health care practices in program villages but no effect on child growth measures, at least in the full sample of children. The one exception is children who were born or of breastfeeding age during the intervention. The nutritional status of these children rose significantly. Because of the bundled nature of the intervention, however, the role of each of its components remains unclear.

A number of studies assess the role of community facilitators in motivating better health practices. Manandhar and others (2004) report on one such study, in a district in Nepal. The sample consisted of 12 pairs of village development committees, one of which was randomly assigned to treatment.<sup>37</sup> The study collected baseline data on almost 29,000 eligible women from some 28,000 households. Follow-up data were collected two years after the intervention. In each intervention cluster, a local facilitator was recruited (nominated by the local community or identified by word of mouth or through an advertisement). The facilitator conducted a monthly women's group meeting in every ward (the level below the village development committee). Each facilitator held 10 group meetings. A number of issues were discussed in the meetings, including the identification and prioritization of health issues related to pregnancy and childbirth and potential solutions, including community-generated funds, stretcher schemes, and home visits by group members. The role of the facilitator was to activate and support the women's groups, not to provide health support. Health services were strengthened in both the control and intervention clusters, through the provision of supplies at local health facilities, the provision of newborn care kits, and the training of community health workers.

Over the two-year trial period, the neonatal mortality rate in intervention clusters fell 30 percent, though there was no difference in stillbirth rates. Maternal mortality also declined 80 percent (2 maternal deaths versus 11 in control clusters). There were significant improvements in health behaviors, such as antenatal care, the use of supplements, the share of births in health facilities with trained attendants, and use of clean kits. Birth attendants were more likely to wash their hands, and maternal and child illness was more likely to be treated at a health facility. Moreover, 95 percent of the groups remained active

after the trial period. These results were achieved with only 37 percent of newly pregnant women (8 percent of married women) ever attending the women's meetings.

Tripathy and others (2010) conducted a similar trial in Jharkhand and Orissa, two of India's poorest states, where neonatal and maternal mortality rates are higher than the national average. In treatment villages, local facilitators were trained to support women's groups, which met about 20 times in all over three years. Health committees were formed in both intervention and control clusters to discuss health entitlements from service providers, particularly for mothers and newborns.<sup>38</sup>

This intervention witnessed a 45 percent reduction in early neonatal deaths (0–6 days). By the third year of the trial, there was also a 57 percent reduction in moderate depression among mothers. There were no significant differences in health care-seeking behavior, but there were significant improvements in home care practices (use of safe kits, hand washing by birth attendants, boiling of threads used to tie the cord, and so forth). More infants were also exclusively breastfed at six weeks. The cost per life-year saved was about \$33 (\$48 with health-service strengthening activities). Although the availability of delivery kits increased in both control and intervention clusters, women's groups generated more uptake of the kits in intervention areas.

Olken, Onishi, and Wong (2011) evaluate a pilot program in Indonesia (PNPM Generasi) that provided block grants to villages to encourage investments intended to improve specific health and education indicators.<sup>39</sup> In some communities, the grant was incentivized, in that the amount of the grant the following year was based partially on the village's performance on each of the 12 targeted health and education indicators. The performance bonus was competitively allocated among villages within the same subdistrict. For the evaluation, program villages were randomly assigned to receive either the incentivized or the nonincentivized grant. The data come from three survey waves, conducted between 2007 and 2010.

The study finds that the program reached beneficiaries and had very significant effects on a range of intermediate behaviors, at both midline and endline. For health, the strongest intermediate impacts were on growth monitoring and the distribution of iron sachets to pregnant women. The intervention was also associated with a 9.6 percent reduction in malnutrition and a significant increase in prenatal visits and immunizations. Health impacts were also larger in incentivized areas.

**A program in Indonesia that gave block grants to villages to encourage them to improve specific health and education indicators achieved positive midline results . . .**

Incentives did not affect education indicators, however, and some health impacts also disappeared by endline. For example, the project had large impacts on reducing neonatal and infant mortality at midline, but these impacts disappeared by the endline. The endline results also show no impact on learning.

Importantly, nontargeted indicators also improved across the board, with an average improvement of 0.0362 standard deviation, with statistically significant improvements in indicators such as facility-based deliveries. The grant also appears to have been most effective in more disadvantaged areas.

In looking at the mechanisms through which the project worked, the authors suggest that Generasi appears to have had the greatest impact on community effort. It mobilized cadres working at village health posts and ratcheted up participation in meetings about health education and related topics. Households in Generasi areas also felt that both health and education services had improved.

In terms of overall service provision, however, there were no statistically significant impacts. If anything, there was a slight decrease in health provider inputs and effort and some increase in the prices charged by providers. There is also some evidence of deterioration in the quality of care. Combined with the fact that the main effects come from greater community effort in direct service provision, these results are disturbing from the point of view of sustainability, as is the finding that there was no impact of the program on any indicator of community outreach or monitoring and no spillover to other community activities.

**Community monitoring of health care providers.** Perhaps the best-known assessment of the efficacy of community monitoring in improving health service delivery is of a randomized citizen's report card project in Uganda (Bjorkman and Svensson 2007). The main objective of the project was to improve the quality of basic health services by improving community capacity to monitor service providers. The report card intervention was randomly assigned to half of 50 rural communities across 9 districts. Meetings of users and providers were held at which the information collected in the report cards was disseminated together with practical information on how best to use this information.<sup>40</sup>

The authors find large and significant improvements in a number of treatment practices, from staff absenteeism to waiting time and the quality of preventive care. They find a 16 percent increase in the use of health facilities, along with greater community satisfaction with

... but many results were not sustained.

Following the introduction of citizen report cards in Uganda, the under-five mortality rate fell 33 percent and vaccination rates and infant weight rose.

service providers. Some health outcomes also improved substantially. In particular, the under-five mortality rate fell 33 percent and vaccination prevalence rates and infant weight increased. During this period, there was no increase in government funding or investment in health facilities or services.

Given the size of the effect on under-five mortality, understanding the precise channel through which change occurred, as well as the role of community monitoring, is clearly of great value. The intervention suggests three competing channels through which service quality changes could have come about: greater community monitoring (a demand-side channel), provision of information to providers regarding their performance relative to expectations (a supply-side channel), and the bringing together of the community and providers (which could increase both the efficacy of information and community willingness to monitor). The authors test for the relevance of the demand- versus supply-side channels by replacing treatment indicators with measures of staff and community engagement as explanatory variables. They find that the coefficients on community engagement are positive, statistically significant, and larger than the coefficients on treatment indicators. In contrast, the coefficients on staff engagement are not significant or have the wrong sign. The authors posit that these results are more supportive of the demand-driven explanation. Although this finding is encouraging, the results are at best suggestive, as it is unclear precisely what the community or staff engagement variables are capturing.

An interesting descriptive study by Uzochukwu, Akpala, and Onwujekwe (2004) casts valuable light on potential hurdles in scaling up community engagement in service delivery. The authors report on the Bamako Initiative program in Nigeria, which aimed to strengthen primary health care by increasing community engagement. The program created village- and district-level health committees and gave them substantial authority. The committees' mandate was to supervise the activities of traditional birth attendants; select, supervise, and pay village health workers; manage revenues and profits from drug sales; set the remuneration of health workers; and make decisions about the level of user fees and rules for exemption. Despite very broad-based participation and awareness of its functions, the committee focused largely on ancillary functions, such as the provision of health education and a waste disposal system. It remained entirely outside all important decision-making processes, such as hiring and payment of staff, setting

user fees, or providing oversight over budgets. There was also some disconnect between reports from health facility heads and community members about the extent of community involvement, with health facility heads claiming far greater community engagement in planning and management decisions than community members did.

Few if any empirical studies collect this type of qualitative data that could help elucidate the channels through which participation works to improve outcomes and the potential constraints that could limit effective community engagement. Moreover, no careful empirical study has been conducted of the Bamako program that could bring these participation results together with results on service quality and health outcomes.

**Decentralization of basic health services to local governments or NGOs.** Decentralization of basic health care services to local governments appears to have been successful overall. The evidence suggests substantial gains on a number of child health outcomes as well as on a wider range of health behaviors. Some studies also find improvements in labor market outcomes and decreased fertility.

The devolution of health service provision to NGOs appears to have been less successful, although there is evidence of some positive outcomes. In particular, when programs are devolved to NGOs, improvements in health tend to be confined to outcomes specifically targeted by the program. There are also some perverse effects of the imposition of user fees.

Much of the evidence on the benefits of decentralized delivery of basic health services comes from a set of studies on Brazil's family health program, the Programa Saude da Familia (PSF). The PSF was first rolled out in 1994, as a small pilot initiative covering a few areas. By 2006, it had expanded into a nationwide program; by 2009, the program covered more than 90 percent of Brazilian municipalities.

Municipal governments manage the PSF, under the supervision of the Brazilian Ministry of Health. PSF teams—which usually consist of a doctor, a nurse, an assistant nurse, and six community health workers, as well as a dental and a social work professional in some cases—are responsible for monitoring the health status of about 3,000–4,500 people (about 1,000 households). Teams make home visits and perform community-based health promotion activities. All services are delivered free of charge to ensure access by the most disadvantaged. Assessments

Decentralization of basic health care services to local governments appears to have been successful overall.

Devolution of health service provision to NGOs appears to have been less successful, although there is evidence of some positive outcomes.

Assessments of Brazil's decentralized family health program find positive and economically large effects on health outcomes and behaviors.

of the program find positive and economically large effects on health outcomes, particularly for neonates, and health behaviors. They also find substantial gains in child school attendance, adult labor supply, and employment and a decline in fertility.

Macinko and others (2007) uses the differential adoption and expansion rates of the PSF as a quasi-experiment to assess the relationship between changes in PSF coverage over time and changes in health outcomes that are most likely to be sensitive to primary care. Their data cover six years (1999–2004) and include 557 Brazilian micro-regions in 27 states. Each micro-region includes several municipalities.

This study finds a significant reduction in postneonatal mortality (deaths of children from 30 days to 1 year) and mortality from diarrheal diseases. In exploring the mechanisms through which PSF might work, the authors note that areas with greater PSF coverage also have higher prevalence rates of behaviors stressed by community health workers, such as breastfeeding, use of oral rehydration therapy, and child immunizations. The authors provide a back of the envelope estimation of program costs of about \$30 per capita.<sup>41</sup>

A related study (Macinko, Guanais, and DeSouza 2006) finds high levels of satisfaction with PSF among users, with more than 75 percent reporting that child health services were of good quality. The presence of the program in a given municipality was also associated with better perceived health.

A potential limitation of the study by Macinko, Guanais, and DeSouza (2006) is that variation in the timing or rate of PSF adoption could be endogenous. Well-governed municipalities could decentralize health services early, for example, or municipalities with the worst outcomes could decentralize first. In either case, estimated impacts would be biased, with the direction of the bias not clear.<sup>42</sup>

Rocha and Soares (2009) also use the differential adoption and expansion rates of the PSF as a quasi-experiment. They use municipal panel data from 1995 to 2003. These data include information on a range of demographic and socioeconomic characteristics in addition to program coverage and mortality. Difference-in-difference estimates suggest a substantial decline in mortality, especially during the first year of life.<sup>43</sup> Municipalities that had been in the program for three years, for example, reduced infant mortality by 1.5 more infants per 1,000 live births than comparable municipalities that did not adopt PSF. Based



on the 1993 average infant mortality rate in Brazil of 27 per 1,000 live births, this difference corresponds to a 5.6 percent reduction in the infant mortality rate. For a municipality eight years into the program, infant mortality declined by 5.4 deaths per 1,000 live births, a 20 percent decline relative to the 1993 national average.<sup>44</sup> Gains were largest in the two poorest regions (the North and the Northeast), which also provided fewer public goods.<sup>45</sup> Gains were also larger in less urbanized municipalities and municipalities with less access to treated water and poorer sanitation systems. The largest impacts of the program on infant mortality were associated with complications during pregnancy; infectious diseases (diarrhea and other intestinal diseases, influenza); and respiratory diseases (asthma, bronchitis)—precisely the sorts of conditions for which the presence of a community-based health program would be most effective.

The authors also look at the effects of PSF on household behavior, using several rounds of census data. They find no effects on child labor supply. In contrast, they find that school enrollment was 4.5 percent higher eight years after PSF exposure. In addition, adult labor supply was 6.8 percentage points higher and employment 11 percentage points higher.

The other case on which there is robust evidence of improvements in infant mortality is Pakistan's Lady Health Worker Program (formally known as the National Program for Family Planning and Primary Health Care), introduced by the government in 1994. Lady health workers are typically young women who have at least eight years of schooling and live in the community they serve. They are given 15 months of training to deliver care in community settings.

Lady health workers make home visits and are expected to be available at their own home, which is known as a "health home." They provide antenatal care, contraceptive advice, growth monitoring, and immunization services, with each worker responsible for about 1,000–1,500 people (about 175 households). Although the program is a federal program, lady health workers report to basic health units and rural health centers, which are managed by provincial and district governments.

Bhutta and others (2011) present the results of a randomized cluster trial in which lady health workers in treatment villages were given additional training in group counseling; the promotion of specific

The program was also associated with increases in school enrollment, adult labor supply, and employment and a decline in fertility.

health behaviors; the establishment of linkages with traditional birth attendants; and the recognition of urgent care cases and the need to refer them to basic health units, rural health centers, or hospitals. In addition, the trial created volunteer community health committees in treatment villages, with the aim of promoting maternal and newborn care in the village. Community health committees were expected to conduct advocacy work with community elders and local political leaders, organize an emergency fund for transporting the sick to an appropriate facility, and help lady health workers conduct group education sessions.<sup>46</sup>

The study finds a 15–20 percent reduction in perinatal and newborn mortality in the intervention area. It also finds improvement in 16 household behaviors related to maternal and early newborn care, with gains rising over time. The largest improvements were in antenatal care and facility (instead of at-home) births.

The authors point out that these gains occurred despite implementation through the government health system rather than by workers employed directly by the research team, in a difficult to reach and underdeveloped area. Although lady health workers were unable to complete the full set of activities they were expected to engage in, they still managed to successfully deliver a package of preventive and promotive health care services. However, the authors stress, in order to be effective, community health workers and programs need close oversight.

This study points to the importance of carefully assessing the additional gain from organizing volunteer-based community health committees. Given that the largest gains were in facility births, the role of the community health committees in organizing transport may have been key, but the importance of transport is not clear from the study. The study also cannot separate the effect of the additional training provided to lady health workers from the effect of setting up community health committees.

Jokhio, Winter, and Cheng (2005) report on an earlier cluster-randomized trial in rural Pakistan that trained traditional birth attendants in antenatal and newborn care. Traditional birth attendants were also provided with clean delivery kits from primary health care centers and linked to lady health workers. Concurrently, outreach clinics were established in intervention clusters (two clinics in each of three clusters), where obstetricians conducted eight outreach sessions during the six-month trial.

Lady health workers in Pakistan successfully delivered a package of preventive and promotive health care services . . .

. . . but to be effective, they need close oversight.

The study finds a reduction in neonatal mortality of 30 percent, identical to the outcome in Nepal's experiment with women's groups and larger than the results from the lady health worker trial. However, the sample consists of only seven clusters, including both treatment and control areas. It also fails to distinguish the impact of training birth attendants, and hence using existing structures, from the impact of outreach clinics. In practice, however, 91 percent of the women in the intervention group received care from traditional birth attendants, with only 16 percent visiting outreach clinics.

The Projahnmo project in Bangladesh tested a model similar to the lady health worker program, with one difference (Baqui and others 2008). Two treatment arms were established, in order to test the efficacy of a home-based care model against a community-based care model. In both intervention arms, male and female community mobilizers held group meetings on birth and newborn care preparedness. Community resource people were enlisted to encourage women to attend these meetings and seek antenatal care.

In the home care intervention, one community health worker was recruited (by an NGO) per four villages with a total population of about 4,000 people. The community health worker was trained for six weeks in behavior change communication and the clinical assessment and management of illnesses in neonates. He or she was responsible for tracking pregnancies during routine surveillance activities, making scheduled antenatal and postnatal home visits, diagnosing illnesses for referral, and administering penicillin to neonates who could not be taken to health facilities for treatment. In the community care arm of the intervention, only group meetings with mobilizers and resource people were held; no home visits were made. However, female volunteers (including traditional birth attendants) were recruited to identify pregnant women, encourage them to attend meetings held by mobilizers, and receive routine antenatal and early postnatal care. These volunteers were responsible for about 18,000 people.

This study finds very significant improvements in neonatal mortality but only in the home care arm, which saw a 30 percent decline in neonatal mortality during the last 6 months of the 30-month trial (relative to the control arm). In the home care clusters, there was also a sizable and statistically significant improvement in the use of supplements during pregnancy, the use of clean equipment, and newborn care practices. In contrast, there was no significant improvement in health behaviors in

An intervention in Bangladesh that created community health groups had no impact on any outcomes.

In contrast, a home care intervention was associated with a 30 percent decline in neonatal mortality as well as improvements in other health outcomes.

the community care arm. Furthermore, each community health worker in this trial was responsible for 4,000 people, a ratio similar to the primary health care worker-to-population ratio in Bangladesh's health care system, suggesting an easy route for scaling up existing health infrastructure.

Two studies look at the impact of devolving primary health care provision to NGOs. Kremer and others (2006) evaluate the effects of a pilot program under which the Cambodian Ministry of Health contracted with NGOs to run public health facilities in 12 districts. The project, which ran from 1999 to 2003, covered 1.26 million people, about 11 percent of Cambodia's population. In some districts ("contracting in" districts), contracted NGOs were expected to work within the existing government system to procure drugs, equipment, and supplies and to use Ministry of Health personnel. They could request transfers of personnel but not hire or fire staff; their operating expenses were financed through the government budget. In others districts ("contracting out" districts), NGOs had full management authority. They could hire and fire staff; bring in health workers from other parts of the country; and procure drugs, supplies, and equipment from any source.<sup>47</sup> Staff members from the Ministry of Health were allowed to join the NGO by taking a leave of absence from the civil service. If fired by the NGO, they were allowed to return to government service in another district.<sup>48</sup>

The study finds that both contracting out and contracting in had significant positive effects on most measures of health center management, including the health center's hours of service, staff presence during unannounced visits, and availability of equipment, supplies, and vaccines.<sup>49</sup> The authors also look at the impact on the specific health outcomes targeted by the program. They find that both contracting in and contracting out had positive and significant effects on the use of public health facilities for curative care consultations, as well as on antenatal care, vitamin A distribution to children, and child immunization. In contrast, there was less systematic improvement in nontargeted outcomes, such as the treatment of diarrhea and knowledge about HIV risk factors.

Yoong (2007) studies the Rogi Kalyan Samiti (Patient Welfare Committee [RKS]) program, in the Indian state of Madhya Pradesh, which transferred control over some aspects of hospital management to a local NGO.<sup>50</sup> The study used the phased implementation of this transfer of authority to identify its impact on child immunization rates.

Using difference-in-difference estimates, the study finds that children ages 0–3 received significantly fewer appropriate vaccines per year of exposure after a hospital was transferred to the NGO. Interestingly, the reduction in immunization rates was confined to the relatively better-off, with no negative effect on the poor, who were exempt from the user fees charged by the NGO. It is useful to note that vaccination is not generally a candidate for decentralization, because of significant interpersonal and interjurisdictional externalities.<sup>51</sup>

## The Poverty Impact of Participatory Projects

Evidence on the poverty impacts of participatory development projects and decentralization reforms is scarce. This section draws some lessons from the little evidence there is, with some important qualifiers: the number of studies is small; the studies examine fairly disparate interventions; and, with a few exceptions, outcomes are typically assessed within a relatively short time span, even though, as discussed in chapter 3, some outcomes, such as changes in income or assets, are likely to be realized only over much longer time periods. It is also unclear whether most projects operate at a scale that could plausibly affect average poverty levels in program communities or even effect a permanent change in the income or assets of participating households.

Participatory projects provide a bundle of interventions, of which the encouragement or facilitation of participation is but one. Most provide resources for local public goods, productivity-enhancing investments, or private transfers, and many provide all three, often bundled with some form of microcredit. All of these interventions inject resources into communities and could thus have an independent effect on income.

Many community-driven development programs are also moving decisively toward greater support for livelihood activities. Such projects tend to encompass a broad array of productive activities, including crop production and nontraditional agricultural activities, such as aquaculture and medicinal plants, livestock, agro-forestry, fishing, and fish farming. Most programs also support postproduction activities, which can include agro-processing enterprises as well as rural marketing services. Projects usually provide some type of grant to eligible members or groups for productive investments, which can be either individual or collective and often include a training component, which may cover

**Evidence on the poverty impacts of participatory development projects and decentralization reforms is scarce.**

**Participatory projects provide a bundle of interventions.**

project formulation, skill enhancement, or the basics of business management and marketing. Many projects include innovative multisectoral programs, including linkages with government line ministries at many levels. Careful evaluations of these efforts would add much to the knowledge base on the effectiveness of participatory poverty reduction programs.

**The evidence on the impact of participatory projects on poverty is mixed . . .**

**. . . and most studies find that income gains disappear over time or survive only for subgroups, which are not always the poorest or most disadvantaged.**

The literature reviewed below provides a mixed picture. Some studies find improvements in assets or income, other do not. Studies that present longer-term results tend to find that income gains either disappear or survive only for specific subgroups, not always the poorest or most disadvantaged. There are also concerns about evaluation strategies. The review excludes studies that use extremely poor data or an evaluation strategy that is flawed in a fundamental way.

An evaluation of the long-running KALAHI-CIDSS program in the Philippines finds a 5 percent increase in consumption, concentrated among poor households (Labonne 2011).<sup>52</sup> The program was also associated with higher labor force participation rates for both men and women and greater income diversification, as evident in reported participation rates at midline (2006), particularly for women. Interestingly, during the financial downturn, the participation rate for both men and women fell significantly, but mainly in control areas. The program thus appears to have had a protective effect on employment and participation rates, particularly for women.

Reported impacts are likely to be significantly biased, however—and the bias is likely to be in the direction of finding positive income impacts, since the results do not correct appropriately for sample size or initial differences between program and control groups.<sup>53</sup>

A careful evaluation of the KDP program in Indonesia (Voss 2008) finds no impact on average household consumption. However, there are significant gains among households in the bottom quintile of the consumption distribution and similar losses for households in the top quintile.<sup>54</sup> In the matched household sample, per capita consumption by the bottom quintile rose about 5 percent. The author carefully demonstrates that the estimated impact is likely to be robust to problems in the data.

A potential problem with this study is that the 2002 survey (SUSENAS) appears to have mismeasured household consumption. As a result, households whose consumption was erroneously understated in 2002 registered an increase in consumption in 2007, and households

**A careful evaluation of the KDP program in Indonesia concludes that it led to significant consumption gains by the bottom quintile.**

whose consumption was erroneously overstated in 2002 registered consumption losses. This concern is not significant when looking at average changes, because program placement and mismeasurement are not likely to be correlated. It is a concern when disaggregating the data into quintiles using 2002 poverty status or per capita consumption, because the quintile level estimates may be biased. The authors use two alternative strategies to demonstrate that this bias is unlikely to be large.<sup>55</sup> Interestingly, the study finds no impact on the consumption of other disadvantaged groups, such as households with low levels of education or households headed by women, which suffer from more severe poverty, suggesting that consumption growth in the bottom quintile was concentrated among poor households near the poverty line.

A randomized evaluation of GoBifo, another World Bank–funded project, in Sierra Leone also finds no impact on household income four years after project inception (Casey, Glennerster, and Miguel 2011).<sup>56</sup> The evaluation sample included 238 villages, half of which were randomly held as controls. The baseline evaluation was conducted in 2005 and the follow-up in 2009.

GoBifo provided block grants of \$4,667 (roughly \$100 per household) to rural communities for construction of local public goods and for skills training and small business start-up capital. The project required village development committees to submit development plans for grant use to district councils through ward development committees for review and approval. The government implemented the project. Community facilitators supported GoBifo communities by encouraging inclusive decision making; greater participation of marginalized groups, such as women and youth; and transparent budgeting practices.

The results indicate some gains in household assets, such as housing quality and durables, as well as impacts on intermediate outcomes, such as the number of petty traders in the village and the range of goods available for sale. However, the authors do not discuss whether these gains accrued to poor or otherwise disadvantaged households. It is not clear whether this study collected detailed consumption data.

The Programme National d'Infrastructures Rurales (PNIR) was implemented in 90 of the poorest *communautés rurales* in Senegal.<sup>57</sup> Its main objective was to support the decentralization and fiscal reform process by providing resources for rural infrastructure investments which were allocated using a participatory mechanism. At the village level, the program set up a community development committee (*Comité de*

*Concertation et de Gestion*), with mandated inclusion of women and other marginalized groups.

Evaluation of the program used a quasi-experimental approach (Arcand and Bassole 2008). Eligibility for PNIR was based on an index of access to basic services at the *communauté rurale* level, allowing the authors to choose control communities using the same set of indicators and regional controls.<sup>58</sup>

The evaluation finds no reduction in household poverty, as measured by consumption expenditures, when villages that received the program are compared with controls, regardless of whether the program village received any PNIR funding. This comparison comes closest perhaps to a test of the impact of participation per se on income, as PNIR villages should differ from controls only in the community mobilization effort of PNIR rather than because of project funds. This comparison does find significant improvements in the nutritional status of children (as measured by weight for age, height for age, and weight for height), however, with larger gains for poorer households. It also finds improvements in access to clean drinking water, which rose 22 percentage points, and basic health services, which rose 24 percentage points. It is unclear what drove these improvements, however.

When the study confines attention to program villages and compares outcomes for households in villages with completed projects with outcomes in villages without completed projects, it finds large and significant impacts on consumption, particularly for the poor, but no impact on child nutrition. This finding suggests that nutritional gains do not vary because of investments in local public goods, whereas income and consumption do. These results are less robust than results that compare PNIR communities to control communities since it is unclear what determines the odds of a PNIR village actually getting a project.<sup>59</sup> The study also finds that poverty is reduced only in villages that invested in income-generating agricultural projects and, curiously, in schools rather than in drinking water or public health facilities.

An evaluation of the District Poverty Initiative Program (DPIP) in Andhra Pradesh (Deininger and Liu 2009) also yields mixed results. The authors use two rounds of data, from 2004 and 2006, collected from three districts in the state (Anantapur, Adilabad, and Srikakulam) to evaluate program impacts. As all the municipalities (*mandals*) in their sample benefitted from DPIP, they construct a counterfactual using years in the program. Specifically, control *mandals* are *mandals* that

**Analysis of India's District Poverty Initiative Program finds no change in consumption or nutrition.**



entered the program two and half years after treatment *mandals* and so have fewer years of exposure to the program. The sample includes 41 programs and 10 controls *mandals*, selected through propensity score matching to eliminate bias because of initial selection.<sup>60</sup> The authors assess program impact on household consumption, nutritional intake, and nonfinancial assets. Using the full sample of matched households, they find no change in consumption or nutrition, though there was a significant (16 percent) improvement in nonfinancial assets.

DPIP began in 2001, with the objective of using women’s self-help groups, which had been organized in Andhra Pradesh under earlier development projects, to promote economic and social empowerment.<sup>61</sup> The bulk of DPIP support was directed at building the capacity of self-help groups and providing them with a one-time grant to promote microcredit and savings through a “community investment fund.”<sup>62</sup> The presence of women’s self-help groups was an important factor in the selection of the first DPIP districts.

Confining attention to self-help group participants, the authors find an 11 percentage point increase in consumption, a 10–12 percentage point increase in nutrition, and a 23 percentage point increase in non-financial assets. This comparison is valid only insofar as self-help group membership was driven by the same factors in the old and new DPIP districts. The widespread prevalence of self-help groups in the old DPIP districts much before the program was initiated, casts some doubt on this. That said, the results suggest that benefits were confined largely to members, which seems sensible given that benefits were mainly in the form of transfers to organized self-help groups (the project created no public goods). Disaggregating by poverty status, the authors find that benefits were entirely concentrated among the poor, with the greatest benefits going to the poorest.

Four other studies find little or no impact on poverty. Park and Wang (2009) evaluate China’s Poor Village Investment Program—a community-based poverty alleviation program initiated in 2001 that financed investments in infrastructure projects in “poor” villages.<sup>63</sup> Projects were to be selected through a participatory mechanism. The study finds no impact of the project on mean income or consumption growth—although income and consumption among the better-off rose significantly.<sup>64</sup> For the nonpoor, per capita household income rose 6.6 percent and per capita consumption expenditure rose 8.8 percent.<sup>65</sup> The program also reduced the odds of migration by nonpoor households

China’s flagship community-based poverty alleviation program had no impact on mean income or consumption growth . . .

. . . although there were substantial positive effects on income and consumption among the better-off.

by 5.2 percent. In contrast, there was no effect on the migration odds of the poor.

The study uses panel data on some 666 eligible villages and 5,500 households surveyed in 2001 and 2004. The identification strategy relies on the gradual phasing in of planned investments within designated poor villages. Hence, the main concern for identification is not the potential bias because of village selection but the bias induced by the timing of program investments. The authors use propensity score matching with time-invariant variables, or variables measured before the start of the program, to deal with this problem.<sup>66</sup>

The implied transfer of wealth to the relatively better off is considerable, given the authors' estimates that in 2004 the central government allocated some Y 32.7 billion (about \$4 billion)—more than 5 percent of the central government budget—to poverty investment programs.

An evaluation of the Southwest China Poverty Reduction Project (SWP) provides a rare longer-run perspective on program impact (Chen, Mu, and Ravallion 2009). The SWP was introduced in 1995 in the counties of Guangxi, Guizhou, and Yunnan with the explicit goal of achieving a large and sustainable reduction in poverty in the poorest villages in these counties.<sup>67</sup> Like other participatory programs, the SWP included a bundle of interventions along with community-based participation in the selection of beneficiaries and activities. Within selected villages, it was expected that virtually all households would benefit from infrastructure investments such as improved rural roads, power lines, and piped water supply. Broad-based benefits were also expected from improved social services, including upgrading village schools and health clinics and training teachers and village health care workers. People with school-age children also received tuition subsidies, as a conditional cash transfer. Individual loans were available for investments in a wide range of productive activities, ranging from investments in yield improvement and animal husbandry to nonfarm enterprises. Microloans accounted for more than 60 percent of all disbursements.

The project yielded sizable and statistically significant improvements in mean household income in participating villages during the project cycle. But four years after the project had ended, these gains had largely disappeared.<sup>68</sup> The only group that was able to sustain income gains were initially poor but relatively well-educated households, which may have been genuinely credit constrained because of poverty. Given the numerous interventions bundled in this program, the authors do not

The Southwest China Poverty Reduction Project yielded sizable improvements in mean household income in participating villages during the project cycle . . .

attempt to isolate the effects of community participation. Given the observed heterogeneity in long-term gains, they do attempt to infer the potential impact of using participatory practices to identify beneficiaries for loans. They conclude that the weak overall performance of the project may have been caused by a participatory beneficiary selection process that apparently favored the better-educated overall but, perhaps because of program capture, failed to provide enough opportunities for the educated poor.

The authors also point to a broader concern with the assessment of the longer-term impacts of programs that are geographically placed, even when program assignment is random. Additional funding from participatory programs could simply displace local government spending in project areas, or governments could increase funding in non-project areas. There is some evidence for such displacement in their study areas. Comparison villages appear to catch up with project villages. Early gains in project villages disappeared as enrollment in control villages rose, for example. The authors note that this process may account, in part, for the smaller long-term impacts they observe, but the size of the bias introduced does not indicate that it could fully account for the absence of an average income impact over the longer term.

Fearon, Humphreys, and Weinstein (2009) study a community-driven reconstruction project implemented by the International Rescue Committee in post conflict northern Liberia. This careful study finds no impact of the project on livelihoods or access to public goods or services. The authors also find no evidence that the community-driven reconstruction program reduced the need for households in treatment communities to walk to key services. However, they do find that school-age children and young adults in treatment communities had higher school attendance rates, and there was a significant increase in female employment (see also the discussion of this study in chapter 6).

Two recent studies use randomized designs to study World Bank-funded community-driven development programs that provide support to individuals to obtain skills and business training and to establish or expand microenterprises. Blattman, Fiala, and Martinez (2011) assess the Youth Opportunities Program, implemented under the Northern Uganda Social Action Fund (NUSAF). This program provided substantial grants (worth almost 1.5 years of salary) to young adults chosen by lottery. About 60 percent of the grant was invested in vocational training or productive assets, with a substantial portion of the rest used

... but four years after the project had ended, these gains had largely disappeared.

Additional funding from participatory programs could simply displace local government spending in project areas, or governments could increase funding in nonproject areas.

A participatory project in postconflict northern Liberia had no apparent impact on livelihoods or access to public goods or services.

for working capital, savings, and consumption. The results at midline suggest a significant increase in the number of hours worked as well as a 50 percent increase in net income. Given the interest rates facing young adults, these investments would likely not have been made in the absence of grant funding, underscoring the need to expand access to capital markets for the poor and for young people, who lack assets as well as employment experience.

Gine and Mansuri (2012) assess a program to provide business training and microloans to members of rural community organizations established by the National Rural Support Program (NRSP) and funded by the Pakistan Poverty Alleviation Fund (PPAF). Many community organization members already had some experience with microcredit loans from NRSP.

Community organizations were randomized into two groups, one of which was offered the opportunity to obtain eight days of business training at no cost. About two-thirds of people offered training took it. Both groups were also offered the opportunity to apply for a loan that was about five times the size of the standard loan (the base loan was about Rs. 20,000, about six to seven months of daily wage labor earnings for one household member). Access to the loan was randomized through a lottery in which about half of applicants were chosen.

Gine and Mansuri find that business training reduced business failure and that the best businesses survived. Training also raised consumption, increased income (by about 12 percent), and improved business practices. However, the gains were confined largely to men.<sup>69</sup> Uptake of the loan was modest, with less than a third of eligible members applying, and the authors find no additional income gain for lottery winners.

Alwang, Gacitua-Mario, and Centurion (2008) report on PRODECO, a project that supports group-based income-generating activities in the southern departments of Itapua, Misiones, and Neembucu in Paraguay. Its main objectives are to empower marginalized groups and to strengthen local government capacity to identify, design, implement, and monitor community development projects. PRODECO provides grants to eligible groups for productive investments. Groups are formed in targeted communities by “development agents,” which can be NGOs or public sector employees. Once the income-generating activity is identified, groups are trained in project formulation, technical skills related to the project, and business management and marketing basics. Approved projects can receive up to \$30,000.<sup>70</sup>

**Business training in Pakistan reduced business failure, raised consumption and income, and improved business practices . . . . . but the gains were confined largely to men.**

The evaluation finds significant poverty impacts, but the design of the evaluation is unclear. Survey data were collected on participant and nonparticipant households. However, the authors do not specify how this sample was created. The authors then use a matching technique as well as an instrumental variables strategy to deal with selection. They do not discuss the matching variables or indicate when they were measured. The district-level instrument is a measure of political participation through voting; it is unclear how it can deal with selection at the household level. The second instrument is ownership of a refrigerator. Use of this measure ostensibly exploits the targeting criteria of the project, but as the data come years after the project is implemented, it is unclear why household assets years after the program was implemented should satisfy the exclusion restriction. Moreover, the data suggest that program participants are more likely than nonparticipants to own a refrigerator. Finally, the evaluation says nothing about the participatory process through which projects were identified, approved, and ultimately run.

A qualitative study by Marcus (2002) underscores the lack of longer-term sustainability of participatory efforts. Marcus's study includes a desk review of three social funds and an analysis of qualitative data from beneficiary communities. The projects reviewed were implemented by Save the Children in Mali, Mongolia, and Tajikistan. The review finds that, on balance, project investments were not sustainable, particularly for the poorest, once targeted assistance in the form of school fees and food subsidies was phased out.

## Conclusions

The literature on decentralized targeting identifies a trade-off between the advantages of local information and the hazards of local capture. On balance, the evidence appears to indicate that local capture can overwhelm the benefits of local information.

Project design and implementation rules also play a critical role in determining whether participatory programs are captured. Demand-driven, competitive application processes can exclude the weakest communities and exacerbate horizontal inequities. Under some conditions, co-financing requirements—which have become the sine qua non of participatory projects—can exacerbate the exclusion of the poorest

**Participatory project investments in Mali, Mongolia, and Tajikistan were not sustainable, particularly for the poorest.**

**On balance, the evidence appears to indicate that local capture can overwhelm the benefits of local information.**

**Demand-driven, competitive application processes can exclude the weakest communities and exacerbate horizontal inequities.**

**Co-financing requirements—which have become the sine qua non of participatory projects—can exacerbate the exclusion of the poorest households and communities and attenuate the impacts of poverty reduction programs.**

**On balance, the evidence suggests that greater community involvement tends to improve resource sustainability and the quality of infrastructure.**

households and communities and attenuate the impacts of poverty reduction programs.

Community contributions and a demand-driven competitive project approval process are expected to generate higher-quality projects that are better aligned with community needs. They are also expected to enhance the sustainability of community infrastructure by giving beneficiaries a real stake in maintaining local public goods. At the same time, if the most disadvantaged among the eligible have the least capacity to propose viable projects and are thus more likely to opt out of the process altogether, the intended poverty reduction impacts of the program are attenuated and cross-community inequities in capacity and resources can increase.

The political relationship between the center and localities also matters, as do the incentives of local politicians under democratic decentralization. The objectives of the center and localities can diverge widely.

### **Involving Communities**

On balance, the evidence suggests that greater community involvement tends to improve resource sustainability and the quality of infrastructure. However, four concerns permeate the literature:

- Inequality tends to reduce both efficiency and equity, and there can be important tradeoffs between resource sustainability and equity.
- Transferring management responsibilities for a resource or an infrastructure scheme does not usually involve handing over control to a cohesive organic entity with the requisite capacity; often it requires creating local management capacity. In the absence of deliberate efforts to create such capacity and provide resources for ongoing maintenance and management, investments in infrastructure are largely wasted and natural resources poorly managed.
- Clear mechanisms for downward accountability are critical. The literature is rife with cases in which decentralization is used to tighten central control and increase incentives for upward accountability rather than to increase local discretion. The absence of robust mechanisms for downward accountability tends to go hand in hand with complex reporting and planning

requirements, which are usually beyond the capacity of local actors and become a tool for retaining control and assigning patronage. Most of these requirements are holdovers from past rules designed to extract resources from local rather than benefit communities.

- Communities need to benefit from the resources they manage. For natural resources that create substantial externalities, the benefit should be commensurate with the size of the externality created by the resource and should at least compensate communities for the alternative uses to which they could put the resource for immediate gain. These concerns imply considerable engagement of higher-tier governments or implementing agencies in building local capacity, monitoring outcomes, and setting the broad parameters under which management is devolved—with a view to enhancing downward rather than upward accountability while leaving sufficient discretion at the local level.

### Decentralizing Delivery of Education and Health

The evidence on the extent to which decentralizing the delivery of education and health has improved service access for the poor and other disadvantaged groups and led to improvements in service quality is mixed. Because efforts to engage communities in improving basic health services or primary schools usually also involve a substantial injection of funds for other activities (trained health personnel, upgraded facilities, stipends, uniforms, school meals), unpacking the impact of community engagement is difficult. The few studies that try to do so suggest that encouraging community participation can be beneficial when projects also provide technical support, such as community-based trained health personnel, or make investments in upgrading health and school facilities.

The evidence also suggests that the most successful programs are implemented by local governments that have some discretion and are downwardly accountable. Devolving programs to NGOs works less well, on average. Interventions that provide information to households and communities about the quality of services in their community as well as government standards of service tend to improve outcomes even when no additional resources are expended.

**The most successful programs are implemented by local governments that have some discretion and are downwardly accountable.**

A few studies find that projects with large livelihood components perform better than other participatory projects, but more evaluations are needed.

### Improving Livelihoods

Few studies of participatory poverty reduction programs find clear poverty impacts. Some positive income effects emerge for subgroups, although in most cases the methodology used to generate these results is questionable. There is some evidence, however, that projects with larger livelihood components (credit, skills) perform better than other participatory projects, at least in the short run. Given this potential, such projects should be carefully evaluated.

### Notes

1. Leakage occurs when benefits accrue to people other than the intended beneficiaries. Undercoverage occurs when some intended beneficiaries cannot be covered, because of budget constraints.
2. A poverty monitoring tool allows eligibility to be enforced through an administrative process, using indicators of household or community welfare that are intended to proxy for income, which is costly and often difficult to observe. The process usually involves some type of means test based on easily observed and verified aspects of a household's or community's poverty status, such as demographic and socioeconomic characteristics that are expected to be strongly correlated with relative deprivation.
3. Although private transfers can also include some stipulations to contribute labor (as in the case of workfare programs) or undertake specific behaviors (such as vaccinating one's children or enrolling them in school), the benefits are largely internalized by the household in the form of income or gains from improved health and schooling. This is not the case for the provision of free labor for a nonexcludable local public good, as the labor-providing household can internalize only a fraction of the benefits.
4. As Galasso and Ravallion (2005) note, the requirement that all *thanas* (municipalities or county subdivisions) participate in the program is likely to have constrained the scope for pro-poor geographic targeting at the center. Such political economy constraints tend to be a common feature of social programs.
5. Despite their higher allocations, the provinces were initially less able to target their poor areas, possibly because wealthier areas were better able to propose and co-finance feasible projects. In response, a project monitoring tool was developed to continuously update targeting performance at the district level. Ravallion (2000) shows that this simple but powerful tool—which can be adapted for regular project monitoring and evaluation—was able to substantially improve the intraprovincial targeting of the poor.
6. Because data on the shares obtained by provinces are not available, it is unclear how successful this effort was.



7. Proxy means tests are increasingly being used to target beneficiaries precisely because of concerns about program capture. They tend to impose uniform eligibility requirements, with some regional variation, leaving little room for discretion in the identification of beneficiaries at the local level.
8. Mustafa (2007), for example, views British colonial water development projects in India and Pakistan as an effort to increase the power of the state and ensure security. British authorities sought to “increase government control of the local populations by encouraging them to take up settled agriculture and thereby minimize the security threat they might pose to the power of the state.” Mosse (2001) emphasizes that political control has always been a component of decentralized task management in India; it was part of a political process that allowed chiefs to maintain and extend their control.
9. These developments were reflected in the title of the Eighth World Forestry Congress—“Forests for People”—held in 1978. The same year, both the Food and Agriculture Organization and the World Bank presented policy papers indicating the change in focus (Hobley 1996; Arnold 1998; Wardell and Lund 2006; see also Dasgupta 2009).
10. In 1992, the Rio Declaration and Agenda 21 called for participatory natural resource management strategies as means of increasing efficiency and equity in natural resource use and management. The emphasis on poverty reduction was strengthened even more in the United Nations Millennium Declaration (United Nations 2000).
11. Forestry, for example, historically focused on establishing plantations and woodlots. The handing over of rights to existing natural forests to rural communities emerged only in the 1980s (Arnold 1998).
12. Scholarship on common property regimes spans many disciplines. Anthropologists, resource economists, environmentalists, historians, political scientists, rural sociologists, and others have contributed to the growing body of literature, which also comprises political ecological, ethnographic, and historical approaches. Although Ostrom’s work has clearly been the most influential in this regard, Dasgupta, Agarwal, Ribot, Bardhan, and others have also made important contributions. Recent empirical work on the commons draws significantly on theories of property rights and institutions. For a review of some of this literature, see; Bates (1989); Libecap (1989); Eggertsson (1990); North (1990); and the introduction in Ensminger (1992), which discusses the early foundations of this literature in the work of Coase (1960), Cheung (1970), Commons (1970), and Alchian and Demsetz (1972).
13. As Ribot, Lund, and Treue (2010) note, democratic decentralization is specifically about including whole populations—all citizens—in decision making based on representative authority, whereas CBNRM defines a community for each intervention (the user group, “stakeholders,” fishers). Under CBNRM, the mode of representation of the “community” is variously defined through appointed committees, elected committees, stakeholder forums, participatory processes, customary chiefs, project

- personnel, and so forth. In contrast, democratic decentralization involves transfers to elected local government authorities, and the community is defined simply as the citizens who live in the jurisdiction.
14. See also Morrow and Hull's (1996) study of the Yanesha Forestry Cooperative in Peru.
  15. As the paper relies on a single cross-section and forest user groups were not placed randomly, the author uses a number of creative econometric strategies, including the use of administrative data to control for heterogeneity in the placement of forest groups. The results remain robust. The main outcome measure is self-reported collections of firewood and fodder.
  16. Their empirical strategy involves comparing adjacent VP and non-VP forest parcels in order to control for unobservable community characteristics. They also control for a number of geographical attributes (such as slope, aspect, altitude, and distance from the village) that affect forest quality.
  17. The study uses a large sample of randomly selected forest parcels and objective measures of forest quality, including canopy cover, height, girth, species of trees, and lopping and regeneration rates. The authors deal with unobserved heterogeneity in the existence of a VP by comparing conditions in VP and non-VP forest patches that are adjacent to a particular village. This methodology allows them to control for time-invariant characteristics of local geography, climate, and communities. They address the potential for negative externalities to neighboring non-VP forests by including controls for distance to the nearest VP forest.
  18. Khwaja (2009), for example, notes that communities often report choosing a particular type of project simply because they believed that it was one the external agency could or would approve; asking for a different type of project, they believed, would lead to not getting any project at all.
  19. Project complexity was measured by whether the project required cash or skilled labor and the community's experience in maintaining such a project.
  20. Controlling for inequality in wealth (land ownership), an increase in the heterogeneity index from the first to the third quartile (0.25–0.43) is associated with a 7 percent drop in maintenance.
  21. The argument is that as a member's share of project returns increases, her share of maintenance costs may not increase commensurately if free riding is possible and maintenance costs are increasing. However, as inequality in returns increases further, people with substantial shares may become willing to bear the necessary maintenance costs, perhaps by contracting out the work.
  22. Survey data included engineers' assessments of the quality of project construction, the physical condition of the project on the survey date, and beneficiary assessments of project performance. Information on household landholdings, assets, caste, education, and other characteristics for all households in study villages came from the census.
  23. The NRSP operates much like the Agha Khan Rural Support Program. Both are now substantially funded by an apex institution, the Pakistan Poverty Alleviation Fund, which is financed by the World Bank.

24. An increase in the quality of the leader from the first to the third quartile increased the quality of maintenance by almost 8 percentage points.
25. The exogeneity argument relies on the fact that both the subdistrict and the village are administrative units based on population and geography and are thus not likely to be influenced by the presence of the KDP. However, it is not clear that the number of villages per subdistrict is uncorrelated with other unobserved subdistrict characteristics, such as ethnic heterogeneity or geography, which could exert an independent effect on project quality. For example, location and geography could influence local labor market conditions, the cost of materials and transportation, construction methods, and pre-KDP stocks of village infrastructure. Similarly, if ethnic/religious identity is part of the calculation in setting administrative boundaries, subdistricts with greater ethnic diversity could have a larger number of more homogeneous villages. If such villages are also more cohesive, with higher levels of village monitoring, average project quality could be higher in subdistricts that comprise more villages. Given the limitations this study faces in relying exclusively on administrative data from the KDP, it deals with these issues well.
26. Gunnarsson and others (2009) use data from eight Latin American countries. They find that differences across countries explain just 9 percent of the variation in school autonomy and 6 percent of the variation in community participation, although cross-country differences in mandated levels of autonomy and participation are substantial. Educational systems are highly nationalized in Bolivia and the Dominican Republic; more locally managed in Brazil, Chile, and Colombia; and somewhere in between in Argentina and Peru. Interestingly, the two countries with the greatest parental participation, Colombia and the Dominican Republic, are at opposite ends of the range of legal centralization. Cuba has both extremely low levels of autonomy and participation and extremely high educational achievement.
27. The program they evaluate sought to address the challenges created by the introduction of free primary education in Kenya and the associated influx of new students with varying levels of academic preparation.
28. A second component of this program was a training program for parent associations, which provided training in the management of school funds and in the participatory management process. The authors do not evaluate this component, which was introduced at a later stage.
29. The authors use the gradual phasing in of the intervention to identify average treatment effects using a pipeline approach. An index of school quality (which included student density; teacher student ratio; and failure, repetition, and dropout rates) was used to target schools for AGE. The authors use this index to check whether schools that received AGE during the study period were similar at baseline to schools that received AGE later. They also use school fixed effects and a school-specific linear time trend. Although this strategy cannot deal with unobserved time-variant school characteristics that are correlated with both the timing of AGE treatment and the quality outcomes of interest, the authors argue correctly that such

unobserved time-variant school characteristics are unlikely to be driving the results. The authors also find little evidence that changes in unobserved student ability drove the results. Not only did they find no effect on the dropout rate in treatment schools but, compared with preintervention trends, enrollment levels actually improved.

30. The film, poster, and calendar conveyed information on the detailed roles and responsibilities of the three state-specific school oversight committees. The intervention was conducted in three rounds in each *gram panchayat* (village council), separated by a period of two to three weeks. Each round consisted of two to three meetings in different neighborhoods of the *gram panchayat*. The campaign also included the distribution of posters and take-home calendars and the convening of neighborhood meetings to ensure participation by members of disadvantaged castes. The tools were the same in all three states (the information communicated was state specific, pertaining to the School Development and Monitoring Committee (SDMC) in Karnataka, the parent-teacher association in Madhya Pradesh, and the village education committee in Uttar Pradesh). In addition to the information campaign treatment in each of the three states, a second treatment was tested only in Karnataka. The only dimension in which the second treatment was different from the first was that the film had an additional one- to two-minute component at the end. To increase awareness about the economic benefits of schooling, this component showed average wages in the state for different levels of schooling and encouraged the audience to become involved in monitoring outcomes at the school.
31. The school reform in the state of São Paulo allowed municipalities to take over any primary or secondary school. During the period of the study, municipal governments took over more than half of all state-run schools. The author uses this gradual takeover to identify the impact of school decentralization on intermediate outcomes. As municipal governments could decide which schools to decentralize, the impact of school decentralization cannot be assessed without accounting for this selection effect. The direction of the bias is unclear, as municipalities could choose to decentralize either the best- or the worst-performing schools in order to show the greatest impact from decentralization. The author deals with this problem by using an eight-year school panel. The data include a large number of time-variant characteristics for each school and its community and span the period before and after decentralization, allowing the author to conduct robustness checks, including a check for parallel trends, to deal with the potential bias caused by initial selection.
32. Municipal governments in Brazil are required to provide primary education; preprimary education is offered on an optional basis, with substantial variation in provision levels. Kosec uses changes in the law that occurred in 1998 (FUNDEF) and 2007 (FUNDEB) and panel data on municipal education policy over a 13-year period (1995–2008).
33. Both Galiani, Gertler, and Schargrodsy (2008) and Rodriguez (2006) rely on variation in the timing of decentralization across provinces to identify the impact of decentralization.

34. School committees were randomly assigned to receive or not receive a grant. All funded school committees then received one of three interventions: training, democratic election of school committee members, or a facilitated collaboration between the school committee and the village council (linkage), yielding eight study arms in all. The sample included 520 schools in 9 districts and 44 subdistricts in the provinces of Java and Yogyakarta; 100 schools were left as controls. The data come from three surveys: a baseline (administered in 2007), a midterm (administered in early 2008), and an endline (administered in late 2008).
35. The study uses a combination of pipeline and matching methods to estimate the impact of social fund investments.
36. There was considerable deviation from assigned status. To deal with this problem, the authors report estimates of impact using assigned treatment status (that is, “intent to treat”) as well as actual treatment status, using assigned status as an instrument as well as an input into the propensity score in a matching approach.
37. A village development committee has a population of about 7,000. Forty-two village development committees were matched into 21 pairs on the basis of ethnic composition and population density; 12 random pairs were selected for the study (1 intervention and 1 control cluster in each pair).
38. The sample comes from 36 rural clusters in 3 districts (12 per district), with a total population of 228,000. Eighteen clusters were randomly allocated to the treatment group, the other 18 were held as controls. All women 15–49 who had given birth during the study period (July 2005–July 2008) could participate; women could enter anytime if they gave birth. Baseline mortality rates were established over a nine-month period.
39. The grants—whose average size ranged from \$8,500 in 2007 to \$18,200 in 2009—could be used for a range of health-related activities, including hiring extra midwives or teachers for the village, subsidizing the costs of prenatal and postnatal care to women, providing supplementary meals to children, offering scholarships, improving health or school facilities, and rehabilitating roads to improve access to health and education facilities during the rainy season. Activities had to be used to support one of the 12 indicators of health and education service delivery identified by the program, which included antenatal and postnatal care, childbirth assisted by trained birth attendant, immunization, school enrollment, and school attendance, among others.
40. Facilitators from local NGOs led three meetings: a meeting with community members, a meeting with the staff of the relevant health facility, and a meeting that brought the community and health facility staff together. At the community meeting, facilitators provided community members with an assessment of the performance of the relevant primary health care facility, both in absolute terms and relative to other local providers and the government standard for health service delivery at the dispensary level. Communities were then encouraged to identify the key problems and the best way to monitor the provider. The health facility staff meeting was held at the health facility. At this meeting, the facilitators contrasted

information on the quality of service provision they had obtained from the baseline survey with the information provided by the facility. At the third meeting, community representatives and health facility staff developed a shared action plan, or a contract, outlining what needed to be done and how and when it would be done, as well as who would be responsible. After the initial meetings, the community was expected to monitor the provider. However, facilitators supported this process through follow-up meetings. These meetings took place during the facilitator's day-to-day interaction with the community-based organizations in the village.

41. In 2005, federal government transfers to municipalities totaled R\$5.7 billion (about \$2.6 billion), which represents about \$14 per person covered. This figure does not include the municipal contributions, which varied from zero to almost 100 percent.
42. The authors add micro-region fixed effects as well as a number of other time-variant regional variables to reduce potential selection problems; they do not test for parallel trends before the study period, however, without which the conditional exogeneity of program expansion rates cannot be assumed.
43. The authors do a careful job of dealing with selection issues. To deal with time-invariant differences across municipalities, such as differences in initial mortality rates or health service quality, they add municipal fixed effects to the difference-in-difference specification. Time-variant differences, such as the occurrence of health shocks, are more problematic. The authors include state-specific time dummies to deal with this issue. Because the number of municipalities was large, they could not use municipality-specific time trends. Instead, they add a wide range of municipality variables, including immunization coverage, health and education infrastructure, and municipality population. They cluster standard errors at the municipality level.
44. For mortality of children ages 1–4, the coefficients correspond to reductions of 6.4 percent (0.07 in absolute terms) for municipalities three years into the program and 25 percent (0.28 in absolute terms) for municipalities eight years into the program.
45. In the North, a municipality eight years into the program is estimated to experience a reduction of 15.0 infant deaths per 1,000 live births. The reduction in the Northeast is 13.8 per 1,000 live births.
46. Sessions were to be held quarterly, in a local household, with adolescent girls, women of reproductive age, and older women. Lady health workers and traditional birth attendants were expected to facilitate these sessions using materials specifically developed for this purpose, including a docudrama on pregnancy and newborn care.
47. The 12 districts selected for the study were randomly assigned to three groups: four were eligible to receive “contracting-in” bids, four were eligible to receive “contracting-out” bids, and four served as a comparison group. The authors collected data on individual health care outcomes and care-seeking behavior from a random sample of 30 villages in each of the 12 districts involved in the contracting project. About 20,000 people in 3,700

households were included in the samples. A baseline survey was conducted in 1997; a full follow-up was conducted in 2003. Although the same villages were sampled in both survey years, within villages a new random sample of households was taken each time. The data are thus a panel at the village level and a repeated cross-section at the household level. In treated districts, the management of government health care services was put out to competitive bid by qualified organizations, such as NGOs and private firms. For each district, the organization with the highest combined score on the technical quality of the proposal and price was awarded a contract to manage the district's government health care service. In the end, only international NGOs, firms, and universities submitted bids. All the winners were international NGOs. The comparison districts continued to be managed by local employees.

48. In the end, only a few staff members were fired. Salaries in the “contracting in” districts were based on the civil service pay structure, plus additional amounts decided by the contractors that could be raised from user fees. In “contracting-out” districts, NGOs were free to implement the pay structure of their choosing.
49. Not all districts in the initial treatment groups were actually treated. The authors report “treatment on treated” effects using assignment to treatment as an instrument.
50. Each hospital continued to receive the same line-item grants from the state government to ensure prereform levels of funding. The RKS also raised its own money through user fees, the leasing of hospital property, loans, and donations. It had full autonomy over the use of hospital assets but no authority over government-appointed doctors.
51. It identified transfer of control as the date at which the RKS became active, as reflected in the date at which it started to collect revenue. It aggregated RKS activity at the district level and grouped districts into high- and low-exposure, within which it measured exposure as the number of years in a high-exposure district. The estimation includes district and cohort fixed effects as well as controls for maternal demographics and child characteristics.

The poor are identified as holders of Below Poverty Line (BPL) cards, issued by the government for a range of poverty-related benefits.

52. Participating municipalities receive an annual grant, equivalent to ₱300,000 for each *barangay* (the smallest administrative unit, often a village). The grant is then allocated competitively among *barangays* in the municipality. The annual per capita allocation is about ₱300. The project was implemented in the poorest quartile of municipalities. The study uses propensity score matching to create comparison municipalities. As the program was provided at the municipal level, matching was done at the municipal level. The final sample included 16 municipalities, half of which received the program and half of which served as controls. Comparison municipalities were clearly better off at baseline, but a check for parallel trends finds no significant differences between treatment and control municipalities once standard errors are corrected for intramunicipality

- correlation. Data were collected at three points in time: baseline (2003), midline (2006), and endline (2010).
53. Since treatment assignment was at the municipal level while analysis was at the household level, a correction needs to be done to account for the intraclass correlation of standard errors at the municipal level. Given the small number of municipalities included in the study, this correction is likely to substantially increase standard errors. Although this correction is made for the parallel trends estimation—wiping out all differences between treatment and control municipalities, as one might expect—no standard error correction is reported for the impact results.
  54. The author uses propensity score matching methods to create a matched sample of 300 treatment and control subdistricts. The treated subdistricts were drawn from treated subdistricts in the 2002 SUSENAS survey, which also serves as the baseline, in conjunction with the 2003 PODES village census. Control subdistricts were drawn from non-KDP subdistricts in the same survey that did not benefit from similar government programs. A matched sample of about 6,000 households was also created using available household characteristics. The follow-up data were collected in 2007.
  55. The baseline and midline surveys were also conducted at different times, with the follow-up overlapping Ramadan, the Muslim month of fasting, followed by the Eid festival, when consumption is higher, particularly among the poor.
  56. Chapter 6 discusses the study's findings on social cohesion and collective action.
  57. A *communauté rurale* is an administrative unit with 42 villages on average and a population of about 13,000.
  58. The study uses data from 36 *communautés rurales*, half of which were controls. The sample includes 71 villages, 750 households, and 1,000 children. Analysis is done at the village, household, and child level, using baseline and follow-up data. Village, household, and child fixed effects are included, depending on the level of analysis. The authors check for parallel trends across treatment and control communities in the key outcome variables before PNIR and cannot reject the null hypothesis of similar trends. However, this check for parallel trends is run at the level of the *communauté rurale*, whereas the analysis is conducted at the child, household, and village level.
  59. Political influence variables at the village level are used as instruments to deal with potential selection in project awards. A concern with this strategy is that it is not clear whether political influence affects village outcomes only through its effects on accessing PNIR funds. If political influence can also be used to attract other public or private resources to the village, the exclusion conditions necessary for the use of political influence variables as instruments would be violated.
  60. The authors do not check for parallel trends in outcome variables before program inception. It is therefore unclear whether the propensity score matching exercise and difference-in-difference technique can take care of selection bias from time-invariant or time-variant sources.



61. A typical program self-help group consists of 10–15 members who meet regularly to discuss social issues and activities, make a small deposit into a joint account, and make decisions on loans.
62. In later years, the program also tried to increase the availability of rice to low-income households through bulk purchases from the public distribution system and resale to poor village households at a discounted price. Rice was provided as an in-kind loan for self-help group members. The provision of grain as in-kind credit when needed was also expected to boost meeting attendance, saving, and repayment.
63. The program covered 148,000 villages officially designated as poor, which represent about 21 percent of all villages in rural China. Some 140 million people (about 15 percent of China's rural population) live in these villages.
64. The authors find a substantial increase in overall spending on public infrastructure in program villages with completed projects. This increased spending occurred because of larger investments by both the government and the village community, suggesting that community financing was used to leverage government funds, as is the practice in community-driven development projects. Interestingly, however, the program had no effect on what the authors describe as village *corvée* labor. It is not clear whether the supply of such labor failed to increase because villages were not required to contribute labor to the projects or because villagers responded by reducing labor on other communal activities. There is also some heterogeneity in the financing of infrastructure investments in western versus nonwestern regions. The increase in investment was twice as large in nonwestern villages, entirely because of larger contributions from the community, including village labor. In contrast, communal labor inputs were reduced in western villages that began investments under the project.
65. Of the 588 villages in the matched sample, 552 had at least one poor household, 484 had at least one nonpoor household, and 448 villages had both nonpoor and poor households. The restricted sample included the 448 villages with both types of households. A comparison of results for nonpoor and poor households using the restricted sample is analogous to controlling for village fixed effects, as the authors compare the average change in income for the village poor (nonpoor) with the average change for the village poor (nonpoor) in the matched village. As villages with both nonpoor and poor households are more heterogeneous with respect to poverty, a comparison of estimates for the restricted and full samples also suggests how program impacts may vary along this dimension.
66. By the end of 2004, 55 percent of poor villages (366 sample villages) had completed plans and 37 percent (244 sample villages) had begun investments based on the plans. According to the authors, a main reason why most villages had yet to begin planned investments three years after the program began was that county governments generally concentrated annual program allocations in a subset of villages. The decision to fund village plans sequentially rather than simultaneously reflected practical concerns, such as economies of scale in investments and the fixed costs associated with supervising the design and implementation of plans in

each village. The village data confirm that the increase in treated villages over time reflected the gradual expansion of investments in new villages within rather than across counties.

67. Some 1,800 of a total of 7,600 villages were selected in the three counties, using specific and objective criteria.
68. As program placement was targeted based on geography and poverty, the authors obtain a counterfactual set of villages by selecting randomly from non-SWP villages in the same counties and then using propensity score matching methods to arrive at a plausible counterfactual.
69. Neither study includes data on the longer-term sustainability of impact from the grant or skills and business training.
70. Targeting of the poorest was ensured through a two-step process. In the first stage, the poorest districts in the three departments were identified using a poverty map. In the second stage, households were screened based on eligibility criteria (in rural areas, households could not own more than two cows or farm more than 10 hectares; in all areas, households could not own an air conditioner, a refrigerator, or a four-wheel vehicle). Participatory targeting was not used to identify beneficiaries, despite the participatory intent of the program.

## References

- Adhikari, B., and J. C. Lovett. 2006. "Institutions and Collective Action: Does Heterogeneity Matter in Community-Based Resource Management?" *Journal of Development Studies* 42(3): 426–45.
- Agrawal, A. 2010. "Environment, Community, Government." In *In the Name of Humanity*, ed. I. Feldman and M. Ticktin, 190–217. Durham, NC: Duke University Press.
- Agrawal, A., and C. Benson. 2010. "Local Resource Governance Institutions: Outcomes and Explanations." Background paper for Policy Research Report, World Bank, Washington, DC.
- Agrawal, A., and A. Chhatre. 2006. "Explaining Success on the Commons: Community Forest Governance in the Indian Himalaya." *World Development* 35: 149–66.
- Agrawal, A., A. Chhatre, and R. Hardin. 2008. "Changing Governance of the World's Forests." *Science* 320: 1460–62.
- Alatas, V., A. Banerjee, R. Hanna, B. A. Olken, and J. Tobias. 2012. "How to Target the Poor: Evidence from a Field Experiment in Indonesia." *American Economic Review* 102(4): 1206–40.
- Alchian, A., and H. Demsetz. 1972. "Production, Information Costs, and Economic Organization." *American Economic Review* 62: 777–95.
- Alderman, H. 2002. "Do Local Officials Know Something We Don't? Decentralization of Targeted Transfers in Albania." *Journal of Public Economics* 83(3): 375–404.

- Alwang, J., E. Gacitua-Mario, and V. Centurion. 2008. "Economic and Social Impacts on Participating Households of a Community-Driven Development Project in Southern Paraguay." World Bank, Washington, DC.
- Araujo, M. C., F. H. G. Ferreira, P. Lanjouw, and B. Özler. 2008. "Local Inequality and Project Choice: Theory and Evidence from Ecuador." *Journal of Public Economics* 92(5–6): 1022–46.
- Arcand, J.-L., and L. Bassole. 2008. "Does Community Driven Development Work? Evidence from Senegal." CERDI–CNRS, Université d'Auvergne, France.
- Arnold, M. 1998. "Managing Forests as a Common Property." Working Paper 136, Food and Agricultural Organization, Rome.
- Baird, I. G. 2006. "Strength in Diversity: Fish Sanctuaries and Deep-Water Pools in Laos." *Fisheries Management and Ecology* 13(1): 1–8.
- Baird, S., C. McIntosh, and B. Özler. 2009. *The Squeaky Wheels Get the Grease: Applications and Targeting in Tanzania's Social Action Fund*. Development Economics Research Group, World Bank, Washington, DC.
- Baland, J. M., P. Bardhan, S. Das, and D. Mookherjee. 2010. "Forests to the People: Decentralization and Forest Degradation in the Indian Himalayas." *World Development* 38(11): 1642–56.
- Baland, J. M., and J. P. Platteau. 1997. "Coordination Problems in Local-Level Resource Management." *Journal of Development Economics* 53 (1): 197–210.
- Banerjee, A. V., R. Banerji, E. Duflo, R. Glennerster, and S. Khemani. 2010. "Pitfalls of Participatory Programs: Evidence from Randomized Experiments in Education in India." *American Economic Journal: Economic Policy* 2(1): 1–30.
- Baqui, A. H., S. El-Arifeen, G. L. Darmstadt, S. Ahmed, E. K. Williams, H. R. Seraji, and I. Mannan. 2008. "Effect of Community-Based Newborn-Care Intervention Package Implemented Through Two Service-Delivery Strategies in Sylhet District, Bangladesh: A Cluster-Randomised Controlled Trial." *Lancet* 371: 1936–44.
- Bardhan, P. 2000. "Irrigation and Cooperation: An Empirical Analysis of 48 Irrigation Communities in South India." *Economic Development and Cultural Change* 48(4): 847–65.
- Bardhan, P., M. Ghatak, and A. Karaivanov. 2007. "Wealth Inequality and Collective Action." *Journal of Public Economics* 91(9): 1843–74.
- Bardhan, P., S. Mitra, D. Mookherjee, and A. Sarkar. 2008. "Political Participation, Clientelism, and Targeting of Local Government Programs." Discussion Paper, Economic Research Unit/2008-03, Indian Statistical Institute, Calcutta.
- Bardhan, P., and D. Mookherjee. 2005. "Decentralization, Corruption, and Government Accountability: An Overview." In *International Handbook of Economic Corruption*, ed. S. Rose-Ackerman. Northampton, MA: Edward Elgar Publishing.
- Barrera-Osorio, F., and L. L. Linden. 2009. "The Use and Misuse of Computers in Education: Evidence from a Randomized Experiment in Colombia." Policy Research Working Paper 4836, World Bank, Washington, DC.

- Bates, R. 1989. *Toward a Political Economy of Agrarian Development in Kenya*. Cambridge, U.K.: Cambridge University Press.
- Beck, T., and C. Nesmith. 2001. "Building on Poor People's Capacities: The Case of Common Property Resources in India and West Africa." *World Development* 29(1): 119–33.
- Besley, T., and R. Kanbur. 1993. "The Principles of Targeting." In *Including the Poor*, ed. M. Lipton and J. Van der Gaag, 67–90. Washington, DC: World Bank.
- Besley, T., R. Pande, and V. Rao. 2005. "Participatory Democracy in Action: Survey Evidence from Rural India." *Journal of the European Economic Association* 3(2–3): 648–57.
- . 2007. "Just Rewards? Local Politics and Public Resource Allocation in South India." Development Economics Paper, London School of Economics and the Suntory and Toyota International Centres for Economics and Related Disciplines, London.
- Bhutta, Z. Q. A., S. Soofi, S. Cousens, S. Mohammad, Z. A. Memon, I. Ali, and A. Feroze. 2011. "Improvement of Perinatal and Newborn Care in Rural Pakistan Through Community-Based Strategies: A Cluster-Randomised Effectiveness Trial." *Lancet* 377: 403–12.
- Binka, F. N., A. A. Bawah, J. F. Phillips, A. Hodgson, M. Adjuik, and B. Macleod. 2007. "Rapid Achievement of the Child Survival Millennium Development Goal: Evidence from the Navrongo Experiment in Northern Ghana." *Tropical Medicine and International Health* 12: 578–83.
- Bjorkman, M., and J. Svensson. 2007. "Power to the People: Evidence from a Randomized Field Experiment of a Community-Based Monitoring Project in Uganda." Policy Research Working Paper 4268, World Bank, Washington, DC.
- Blaikie, P. 2006. "Is Small Really Beautiful? Community-Based Natural Resource Management in Malawi and Botswana." *World Development* 34(11): 1942–57.
- Blattman, C., N. Fiala, and S. Martinez. 2011. "Can Employment Programs Reduce Poverty and Social Instability? Experimental Evidence from a Ugandan Aid Program (Mid-Term Results)." Yale University, New Haven, CT.
- Bruns, B., D. Filmer, and H. A. Patrinos. 2011. *Making Schools Work New Evidence on Accountability Reforms*. Washington, DC: World Bank.
- Caldwell, B. J. 2005. *School-Based Management*. Education Policy Series. Paris: International Institute for Educational Planning (IIEP) and International Academy of Education (IAE).
- Campbell, T. 2003. *Quiet Revolution: Decentralization and the Rise of Political Participation in Latin American Cities*. Pittsburg, PA: University of Pittsburg Press.
- Casey, K., R. Glennerster, and E. Miguel. 2011. "Reshaping Institutions: Evidence on External Aid and Local Collective Action." NBER Working Paper 17012, National Bureau of Economic Research, Cambridge, MA.
- Cavendish, W. 2000. "Empirical Regularities in the Poverty-Environment Relationship of Rural Households: Evidence from Zimbabwe." *World Development* 28(11): 1979–2003.

- Chase, R. S. 2002. "Supporting Communities in Transition: The Impact of the Armenian Social Investment Fund." *World Bank Economic Review* 16(2): 219–40.
- Chase, R. S., and L. Sherburne-Benz. 2001. "Household Effects of Community Education and Health Initiatives: Evaluating the Impact of the Zambia Social Fund." World Bank, Social Development Unit, Washington, DC.
- Chaudhury, N., and D. Parajuli. 2010. "Giving It Back: Evaluating the Impact of Devolution of School Management to Communities in Nepal." World Bank, Washington, DC.
- Chavis, L. 2009. "Decentralizing Development: Allocating Public Goods via Competition." Kenan-Flagler Business School, University of North Carolina, Chapel Hill.
- Chen, S., R. Mu, and M. Ravallion. 2009. "Are There Lasting Impacts of Aid to Poor Areas?" *Journal of Public Economics* 93(3–4): 512–28.
- Cheung, S. 1970. "The Structure of a Contract and the Theory of Non-Exclusive Resources." *Journal of Law and Economics* 13(1): 49–70.
- Coady, D. 2001. "An Evaluation of the Distributional Power of Progres's Cash Transfers in Mexico." FCND Discussion Paper, International Food Policy Research Institute, Washington, DC.
- Coase, R. H. 1960. "The Problem of Social Cost." *Journal of Law and Economics* 3(1): 1–44.
- Commons, J. R. 1970. *The Economics of Collective Action*. Madison, WI: University of Wisconsin Press.
- Dasgupta, P. 2009. "Trust and Cooperation among Economic Agents." *Philosophical Transactions of the Royal Society* 364: 3301–09.
- Dasgupta, P. and K. G. Mäler. 1995. "Poverty, Institutions, and the Environmental Resource-Base." In *Handbook of Development Economics*, vol. III(A), ed. J. Behrman and T. N. Srinivasan, 2371–63. Amsterdam: North-Holland.
- Dayton-Johnson, J. 2000. "Choosing Rules to Govern the Commons: A Model with Evidence from Mexico." *Journal of Economic Behavior & Organization* 42(1): 19–41.
- Dayton-Johnson, J., and P. Bardhan. 2002. "Inequality and Conservation on the Local Commons: A Theoretical Exercise." *Economic Journal* 112(481): 577–602.
- Deininger, K., and Y. Liu. 2009. "Longer-Term Economic Impacts of Self-Help Groups in India." Policy Research Working Paper 4886, World Bank, Washington, DC.
- De Janvry, A., H. Nakagawa, and E. Sadoulet. 2009. "Pro-Poor Targeting and Electoral Rewards in Decentralizing to Communities the Provision of Local Public Goods in Rural Zambia." University of California, Berkeley.
- Di Gropello, E. 2006. "A Comparative Analysis of School-Based Management in Central America." Working Paper 72, World Bank, Washington, DC.
- Duflo, E., P. Dupas, and M. Kremer. 2008. "Peer Effects, Pupil-Teacher Ratios, and Teacher Incentives: Evidence from a Randomized Evaluation in Kenya." Online Working Paper CCPR 055-08, California Center for Population Research, University of California, Los Angeles.

- Edmonds, E. V. 2002. "Government-Initiated Community Resource Management and Local Resource Extraction from Nepal's Forests." *Journal of Development Economics* 68(1): 89–115.
- Eggertsson, T. 1990. *Economic Behavior and Institutions*. Cambridge, U.K.: Cambridge University Press.
- Ensminger, J. 1992. *Making a Market: The Institutional Transformation of an African Society*. New York: Cambridge University Press.
- Eskeland, G. S., and D. Filmer. 2002. "Autonomy, Participation, and Learning in Argentine Schools: Findings and Their Implications for Decentralization." Policy Research Working Paper 276, World Bank, Washington, DC.
- Fearon, J. D., M. Humphreys, and J. M. Weinstein. 2009. "Can Development Aid Contribute to Social Cohesion after Civil War? Evidence from a Field Experiment in Post-Conflict Liberia." *American Economic Review* 99(2): 287–91.
- Ferguson, J. 1996. *The Anti-Politics Machine. Development, Depoliticization, and Bureaucratic Power in Lesotho*. Cambridge, U.K.: Cambridge University Press.
- Fisher, M. 2004. "Household Welfare and Forest Dependence in Southern Malawi." *Environment and Development Economics* 9(2): 135–54.
- Fujiie, M., Y. Hayami, and M. Kikuchi. 2005. "The Conditions of Collective Action for Local Commons Management: The Case of Irrigation in the Philippines." *Agricultural Economics* 33(2): 179–89.
- Galasso, E., and M. Ravallion. 2005. "Decentralized Targeting of an Antipoverty Program." *Journal of Public Economics* 89(4): 705–27.
- Galiani, S., P. Gertler, and E. Schargrodsky. 2008. "School Decentralization: Helping the Good Get Better, but Leaving the Poor Behind." *Journal of Public Economics* 92: 2106–20.
- Gertler, P., H. Patrinos, and M. Rubio-Codina. 2007. "Empowering Parents to Improve Education: Evidence from Rural Mexico." Policy Research Working Paper 3935, World Bank, Washington, DC.
- Gine, X., and G. Mansuri. 2012. "Money or Ideas? A Field Experiment on Constraints to Entrepreneurship in Rural Pakistan." World Bank, Washington, DC.
- Gregerson, H. M., and A. H. Contreras. 1989. *Economic Analysis of Forestry Projects*. Rome: Food and Agriculture Organization.
- Gugerty, M. K., and M. Kremer. 2006. *Outside Funding and the Dynamics of Participation in Community Associations*. Cambridge, MA: Harvard University Press.
- Gunnarsson, V., P. F. Orazem, M. A. Sanchez, and A. Verdisco. 2009. "Does Local School Control Raise Student Outcomes? Evidence on the Roles of School Autonomy and Parental Participation." *Economic Development and Cultural Change* 58: 25–52.
- Harragin, S. 2004. "Relief and an Understanding of Local Knowledge: The Case of Southern Sudan." In *Culture and Public Action*, ed. V. Rao and M. Walton, 307–27. Stanford, CA: Stanford University Press.

- Hobley, M. 1996. "Institutional Change within the Forestry Sector: Centralized Decentralization." Working Paper 92, Overseas Development Institute, London.
- Hodgkin, J., and M. Kusumahadi. 1993. "A Study of the Sustainability of Care-Assisted Water Supply and Sanitation Projects, 1979–1991." Associates in Rural Development, Burlington, VT.
- Isham, J., and S. Kahkonen. 2002. "Institutional Determinants of the Impact of Community-Based Water Services: Evidence from Sri Lanka and India." *Economic Development and Cultural Change* 50(3): 667–91.
- Jalan, J., and M. Ravallion. 2003. "Estimating the Benefit Incidence of an Antipoverty Program by Propensity-Score Matching." *Journal of Business and Economic Statistics* 21(1): 19–30.
- Jimenez, E., and Y. Sawada. 1999. "Do Community-Managed Schools Work? An Evaluation of El Salvador's Educo Program." *World Bank Economic Review* 13(3): 415–41.
- . 2003. "Does Community Management Help Kids in Schools? Evidence Using Panel Data from El Salvador's Educo Program." Faculty of Economics, University of Tokyo.
- Jodha, N. S. 1986. "Common Property Resources and Rural Poor in Dry Regions of India." *Economic and Political Weekly* 21(27): 1169–81.
- . 2001. *Common Property Resources in Crisis*. New Delhi: Oxford University Press.
- Jokhio, A. H., H. R. Winter, and K. K. Cheng. 2005. "An Intervention Involving Traditional Birth Attendants and Perinatal and Maternal Mortality in Pakistan." *New England Journal of Medicine* 325: 2091–99.
- Katz, T., and J. Sara. 1997. "Making Rural Water Supply Sustainable: Recommendations from a Global Study." World Bank, Washington, DC.
- Khattari, N., C. Ling, and S. Jha. 2010. "The Effects of School-Based Management in the Philippines: An Initial Assessment Using Administrative Data." Policy Research Working Paper 5248, World Bank, Washington, DC.
- Khwaja, A. I. 2004. "Is Increasing Community Participation Always a Good Thing?" *Journal of the European Economic Association* 2(2–3): 427–36.
- . 2009. "Can Good Projects Succeed in Bad Communities?" *Journal of Public Economics* 93(7–8): 899–916.
- King, E. M., and B. Özler. 1998. "What's Decentralization Got to Do with Learning? The Case of Nicaragua's School Autonomy Reform." World Bank, Development Economics Research Group, Washington, DC.
- King, E. M., B. Özler, and L. B. Rawlings. 1999. "Nicaragua's School Autonomy Reform: Fact or Fiction?" Working Paper 19, Impact Evaluation of Education Reforms Series, World Bank, Washington, DC.
- Kleemeier, E. 2000. "The Impact of Participation on Sustainability: An Analysis of the Malawi Rural Piped Scheme Program." *World Development* 28(5): 929–44.
- Kosec, K. 2011. "Politics and Preschool: The Political Economy of Investment in Pre-Primary Education." Policy Research Working Paper Series 5647, World Bank, Washington, DC.

- Kremer, M., E. Bloom, E. King, I. Bhushan, D. Clingingsmith, B. Loevinsohn, R. Hong, and J. B. Schwartz. 2006. *Contracting for Health: Evidence from Cambodia*. Cambridge, MA: Harvard University Press.
- Kumar, N. R. 2007. "Pro-Poor Targeting and Participatory Governance: Evidence from Central India." Working Paper dp-176, Institute for Economic Development, Department of Economics, Boston University, Boston, MA.
- Kumar, S. 2002. "Does 'Participation' in Common Pool Resource Management Help the Poor? A Social Cost-Benefit Analysis of Joint Forest Management in Jharkhand, India." *World Development* 30: 763–82.
- Labonne, J. 2011. "The KALAHI–CIDSS Impact Evaluation: A Synthesis Report." World Bank, Washington, DC.
- Larson, A., and J. C. Ribot. 2007. "The Poverty of Forestry Policy: Double Standards on and Uneven Playing Field." *Journal of Sustainability Science* 2(2): 189–204.
- Leino, J. 2007. "Ladies First? Gender and the Community Management of Water Infrastructure in Kenya." Graduate Student and Research Fellow Working Paper 30, Harvard University, Center for International Development, Cambridge, MA.
- Libecap, G. 1989. *Contracting for Property Rights*. New York: Cambridge University Press.
- Linnemayr, S., and H. Alderman. 2011. "Almost Random: Evaluating a Large-Scale Randomized Nutrition Program in the Presence of Crossover." *Journal of Development Economics* 96: 106–14.
- Lund, J. F. 2007. "Is Small Beautiful? Village Level Taxation of Natural Resources in Tanzania." *Public Administration and Development* 27(4): 307–18.
- Lund, J. F., and T. Treue. 2008. "Are We Getting There? Evidence of Decentralized Forest Management from the Tanzanian Miombo Woodlands." *World Development* 36(12): 2780–800.
- Macinko, J., M. F. M. De Souza, F. C. Guanais, and C. C. D. S. Simoes. 2007. "Going to Scale with Community-Based Primary Care: An Analysis of the Family Health Program and Infant Mortality in Brazil, 1999–2004." *Social Science & Medicine* 65: 2070–80.
- Macinko, J., F. C. Guanais, and M. D. M. De Souza. 2006. "Evaluation of the Impact of the Family Health Program on Infant Mortality in Brazil, 1990–2002." *Journal of Epidemiology and Community Health* 60: 13–19.
- Madeira, R. 2007. "The Effects of Decentralization on Schooling: Evidence from the São Paulo State Education Reform." Department of Economics, Boston University, Boston, MA.
- Manandhar, D. S., D. Osrin, B. P. Shrestha, N. Mesko, J. Morrison, K. M. Tumbahangphe, and S. Tamang. 2004. "Effect of a Participatory Intervention with Women's Groups on Birth Outcomes in Nepal: Cluster-Randomised Controlled Trial." *Lancet* 364: 970–79.
- Mansuri, G. 2012a. "Bottom up or Top Down: Participation and the Provision of Local Public Goods." World Bank, Poverty Reduction and Equity Unit, Washington, DC.



- . 2012b. “Harnessing Community: Assortative Matching in Participatory Community Organizations.” World Bank, Poverty Reduction and Equity Unit, Washington DC.
- Marcus, R. 2002. “Social Funds as Instruments for Reducing Childhood Poverty: Lessons from Save the Children’s Experience.” *Journal of International Development* 14(8): 653–66.
- McSweeney, K. 2005. “Natural Insurance, Forest Access, and Compounded Misfortune: Forest Resources in Smallholder Coping Strategies before and after Hurricane Mitch, Northeastern Honduras.” *World Development* 33(9): 1453–71.
- Meshack, C. K., B. Ahdikari, N. Doggart, and J. C. Lovett. 2006. “Transaction Costs of Community-Based Forest Management: Empirical Evidence from Tanzania.” *African Journal of Ecology* 44(4): 468–77.
- Morrow, C. E., and R. W. Hull. 1996. “Donor-Initiated Common Pool Resource Institutions: The Case of the Yanesha Forestry Cooperative.” *World Development* 24(10): 1641–57.
- Mosse, D. 2001. “People’s Knowledge, Participation, and Patronage: Operations and Representations in Rural Development.” In *Participation: The New Tyranny*, ed. B. Cooke and U. Kothari. London: Zed Books.
- . 2005. *Cultivating Development: An Ethnography of Aid Policy and Practice*. London: Pluto Press.
- Muhereza, F. 2006. “Decentralizing Natural Resource Management and the Politics of Institutional Resource Management in Uganda’s Forest Sub-Sector.” *Africa Development* 31: 67–101.
- Murnane, R. J., J. B. Willet, and S. Cardenas. 2006. “Did the Participation of Schools in Programa Escuelas De Calidad (PEC) Influence Student Outcomes?” Working Paper, Harvard University Graduate School of Education, Cambridge, MA.
- Mustafa, D. 2007. “Social Construction of Hydro-Politics: The Geographical Scales of Water and Security in the Indus Basin.” *Geographical Review* 97(4): 484–501.
- Mustalahti, I., and J. F. Lund. 2010. “Where and How Can Participatory Forest Management Succeed? Learning from Tanzania, Mozambique, and Laos.” *Society & Natural Resources* 23(1): 31–44.
- Narain, U., S. Gupta, and K. Van’t Veld. 2005. “Poverty and Environment: Exploring the Relationship Between Household Incomes, Private Assets, and Natural Assets.” Discussion Paper 05-18, Resources for the Future, Washington, DC.
- . 2008. “Poverty and Resource Dependence in Rural India.” *Ecological Economics* 66(1): 161–76.
- Nerlove, M. 1991. “Population and the Environment: A Parable of Firewood and Other Tales.” *American Journal of Agricultural Economics* 73(4): 1334–47.
- Newman, J., M. Pradhan, L. B. Rawlings, G. Ridder, R. C. And, and J. L. Evia. 2002. “An Impact Evaluation of Education, Health, and Water Supply Investments by the Bolivian Social Investment Fund.” *World Bank Economic Review* 16(2): 241–74.

- Nkonya, E., D. Phillip, T. Mogue, J. Pender, M. K. Yahaya, G. Adebowale, T. Arokoyo, and E. Kato. 2008. "From the Ground Up Impacts of a Pro-Poor Community-Driven Development Project in Nigeria." Discussion Paper 00756, International Food Policy Research Institute, Washington, DC.
- North, D. C. 1990. *Institutions, Institutional Change, and Economic Performance*. Cambridge, U.K.: Cambridge University Press.
- Nyonator, F. K., J. K. Awoonor-Williams, J. F. Phillips, T. C. Jones, and R. A. Miller. 2005. "The Ghana Community-Based Health Planning and Services Initiative for Scaling Up Service Delivery Innovation." *Health Policy and Planning* 20(1): 25–34.
- Olken, B. 2007. "Monitoring Corruption: Evidence from a Field Experiment in Indonesia." *Journal of Political Economy* 115(2): 200–49.
- Olken, B. A., J. Onishi, and S. Wong. 2011. "Indonesia's PNPM Generasi Program: Final Impact Evaluation Report." World Bank, Social Development Department, Washington, DC.
- Olson, M. 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, MA: Harvard University Press.
- Ostrom, E. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. New York: Cambridge University Press.
- Ostrom, E., W. F. Lam, and M. Lee. 1994. "The Performance of Self-Governing Irrigation Systems in Nepal." *Human Systems Management* 13(3): 197–207.
- Oyono, P. R., and S. Efova. 2006. "Qui représente qui? Choix organisationnels, identités sociales et formation d'une élite forestière au Cameroun." *Africa Development* 31(2): 147–82.
- Oyono, P., and F. Nzuzi. 2006. "Au sortir d'une longue 'nuit' institutionnelle, nouvelles transactions entre les politiques forestières et les sociétés rurales en RD Congo post-conflit." *Afrique et Développement* 31(2): 183–214.
- Pandey, P., S. Goyal, and V. Sundararaman. 2011. "Does Information Improve School Accountability? Results of a Large Randomized Trial." Discussion Paper 49, World Bank, Washington, DC.
- Pandey, S. K., and E. C. Stazyk. 2008. "Antecedents and Correlates of Public Service Motivation." In *Motivation in Public Management: The Call of Public Service*, ed. J. L. Perry and A. Hondeghem, 101–17. Oxford, U.K.: Oxford University Press.
- Pandey, S., B. Wright, and D. Moynihan. 2008. "Public Service Motivation and Interpersonal Citizenship Behavior in Public Organizations: Testing a Preliminary Model." *International Public Management Journal* 11(1): 89–108.
- Park, A., and S. Wang. 2009. "Community-Based Development and Poverty Alleviation: An Evaluation of China's Poor Village Investment Program." Draft background paper for the 2006 China Poverty Assessment, World Bank, Washington, DC.
- Pattanayak, S. K., and E. O. Sills. 2001. "Do Tropical Forests Provide Natural Insurance? The Microeconomics of Non-Timber Forest Product Collection in the Brazilian Amazon." *Land Economics* 77(4): 595–613.

- Paxson, C., and N. R. Schady. 2002. "The Allocation and Impact of Social Funds: Spending on School Infrastructure in Peru." *World Bank Economic Review* 16(2): 297–319.
- Pokharel, R. P. 2009. "Pro-Poor Programs Financed through Nepal's Community Forestry Funds: Does Income Matter?" *Mountain Research and Development* 29: 67–74.
- Pradhan, D. S. M., A. Beatty, M. Wong, A. Alishjabana, A. Gaduh, and R. P. Artha. 2011. "Improving Educational Quality through Enhancing Community Participation: Results from a Randomized Field Experiment in Indonesia." Faculty of Economics and Business Administration, University of Amsterdam.
- Pradhan, M., and L. B. Rawlings. 2002. "The Impact and Targeting of Social Infrastructure Investments: Lessons from the Nicaraguan Social Fund." *World Bank Economic Review* 16(2): 275–95.
- Ravallion, M. 2000. "Monitoring Targeting Performance When Decentralized Allocations to the Poor Are Unobserved." *World Bank Economic Review* 14(2): 331–45.
- . 2009a. "Decentralizing Eligibility for a Federal Antipoverty Program: A Case Study for China." *World Bank Economic Review* 23(1): 1–30.
- . 2009b. "How Relevant Is Targeting to the Success of an Antipoverty Program?" *World Bank Research Observer* 24(1): 205–31.
- Ribot, J. C. 1995. "From Exclusion to Participation: Turning Senegal's Forestry Policy Around?" *World Development* 23(9): 1587–99.
- . 2004. *Waiting for Democracy: The Politics of Choice in Natural Resource Decentralizations*. Washington, DC: World Resources Institute.
- . 2007. "Institutional Choice and Recognition in the Consolidation of Local Democracy." *Democracy* 50: 43–49.
- Ribot, J. C., A. Chhatre, and T. Lankina. 2008. "Institutional Choice and Recognition in the Formation and Consolidation of Local Democracy." *Conservation and Society* 6(1): 1–11.
- Ribot, J. C., J. Lund, and T. Treue. 2010. "Forestry and Democratic Decentralization in Sub-Saharan Africa: A Review." Background paper prepared for Policy Research Report, World Bank, Washington, DC.
- Riley, J. C. 2005. *Poverty and Life Expectancy: The Jamaica Paradox*. Bloomington, IN: Indiana University Press.
- Rocha, R., and R. R. Soares. 2009. "Evaluating the Impact of Community-Based Health Interventions: Evidence from Brazil's Family Health Program." Global Development Network, New Delhi.
- Rodriguez, C. 2006. "Households' Schooling Behavior and Political Economy Trade-Offs After Decentralization." Working Paper, Universidad de los Andes, Colombia.
- Ronconi, L. 2009. "Estimates of the Benefit Incidence of Workfare." *Journal of LACEA Economia (Latin American and Caribbean Economic Association)* 8587.
- Sawada, Y. 1999. "Community Participation, Teacher Effort, and Educational Outcome: The Case of El Salvador's Educo Program." Working Paper 307, William Davidson Institute, University of Michigan, Ann Arbor, MI.

- Sawada, Y., and A. Ragatz. 2005. "Decentralization of Education, Teacher Behavior, and Outcomes." In *Incentives to Improve Teaching*, ed. E. Vegas. Washington, DC: World Bank.
- Skoufias, E., and J. Shapiro. 2006. "The Pitfalls of Evaluating a School Grants Program Using Non-Experimental Data." Policy Research Working Paper 4036, World Bank, Washington, DC.
- Somanathan, E., R. Prabhakar, and B. Singh. 2005. "Does Decentralization Work? Forest Conservation in the Himalayas." Indian Statistical Institute, New Delhi.
- Stern, P. C., T. Dietz, and E. Ostrom. 2003. "The Struggle to Govern the Commons." *Science* 302: 1907–12.
- Sunderlin, W. D., J. Hatcher, and M. Liddle. 2008. "From Exclusion to Ownership? Challenges and Opportunities in Advancing Forest Tenure Reform." Rights and Resources Initiatives, Washington DC.
- Topp-Jorgensen, E., M. K. Poulsen, J. F. Lund, and J. F. Massao. 2005. "Community-Based Monitoring of Natural Resource Use and Forest Quality in Montane Forests and Miombo Woodlands of Tanzania." *Biodiversity and Conservation* 14(11): 2653–77.
- Tripathy, P., N. Nair, S. Barnett, R. Mahapatra, J. Borghi, S. Rath, and S. Rath. 2010. "Effect of a Participatory Intervention with Women's Groups on Birth Outcomes and Maternal Depression in Jharkhand and Orissa, India: A Cluster-Randomised Controlled Trial." *Lancet* 375: 1182–92.
- Turyahabwe, N., C. J. Geldenhuys, S. Watts, and J. Obua. 2007. "Local Organizations and Decentralised Forest Management in Uganda: Roles, Challenges, and Policy Implications." *International Forestry Review*. 9(2):581–96.
- United Nations. 2000. "Millennium Declaration." United Nations, New York.
- Uphoff, N. 1986. *Local Institutional Development: An Analytical Sourcebook with Cases*. Sterling, VA: Kumarian Press.
- Uzochukwu, B. S. C., C. O. Akpala, and O. E. Onwujekwe. 2004. "How Do Health Workers and Community Members Perceive and Practice Community Participation in the Bamako Initiative Programme in Nigeria? A Case Study of Oji River Local Government Area." *Social Science and Medicine* 59: 157–62.
- Voss, J. 2008. "Impact Evaluation of the Second Phase of the Kecamatan Development Program in Indonesia." World Bank, Jakarta.
- Wade, R. 1985. "The Market for Public Office: Why the Indian State Is Not Better at Development." In *The Economics of Corruption and Illegal Markets*, ed. G. Fiorentini and S. Zamagni. Cheltenham, U.K.: Edward Elgar Publishing.
- Wardell, D. A., and C. Lund. 2006. "Governing Access to Forests in Northern Ghana: Micro-Politics and the Rents of Non-Enforcement." *World Development* 34(11): 1887–906.

- Wilder, M., and P. R. Lankao. 2006. "Paradoxes of Decentralization: Water Reform and Social Implications in Mexico." *World Development* 34: 1977–95.
- Wood, G. 1999. "Private Provision after Public Neglect: Bending Irrigation Markets in North Bihar." *Development and Change* 30(4): 775–94.
- World Bank. 2002. "Social Funds: Assessing Effectiveness." Operations Evaluations Department, World Bank, Washington, DC.
- Yoong, J. 2007. "Does Decentralization Hurt Childhood Immunization?" Department of Economics, Stanford University, Stanford, CA.

